

Pertanika Journal of
**SOCIAL SCIENCES
& HUMANITIES**

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PERTANIKA JOURNAL OF SOCIAL SCIENCES & HUMANITIES

About the Journal

Overview

Pertanika Journal of Social Sciences & Humanities is the official journal of Universiti Putra Malaysia. It is an open-access online scientific journal. It publishes original scientific outputs. It neither accepts nor commissions third party content.

Recognised internationally as the leading peer-reviewed interdisciplinary journal devoted to the publication of original papers, it serves as a forum for practical approaches to improve quality in issues pertaining to social and behavioural sciences as well as the humanities.

Pertanika Journal of Social Sciences & Humanities currently publishes 6 issues a year (*March, April, June, September, October and December*) periodical that considers for publication original articles as per its scope. The journal publishes in **English** as well as in **Bahasa Malaysia** and it is open for submission by authors from all over the world.

The journal is available world-wide.

Aims and scope

Pertanika Journal of Social Sciences & Humanities aims to develop as a pioneer journal for the social sciences with a focus on emerging issues pertaining to the social and behavioural sciences as well as the humanities. Areas relevant to the scope of the journal include Social Sciences—architecture and habitat, consumer and family economics, consumer law, education, media and communication studies, political sciences and public policy, population studies, psychology, sociology, and tourism; Humanities—arts and culture, dance, language and linguistics, literature, music, philosophy, and sports.

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Pertanika Journal of Social Sciences & Humanities was founded in 1993 and focuses on research in social and behavioural sciences as well as the humanities and its related fields.

Vision

To publish journal of international repute.

Mission

Our goal is to bring the highest quality research to the widest possible audience.

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We aim for excellence, sustained by a responsible and professional approach to journal publishing. Submissions can expect to receive a decision within 120 days. The elapsed time from submission to publication for the articles averages 180 days. We are working towards decreasing the processing time with the help of our editors and the reviewers.

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Pertanika Journal of Social Sciences & Humanities is now over 33 years old; this accumulated knowledge and experience has resulted the journal being abstracted and indexed in Journal Citation Reports (JCR, Clarivate), SCOPUS (Elsevier), BIOSIS, Google Scholar, MyCite and ISC. In addition, Pertanika JSSH is recipient of “CREAM” Award conferred by Ministry of Higher Education (MoHE), Malaysia.

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The abbreviation for Pertanika Journal of Social Sciences & Humanities is *Pertanika J. Soc. Sci. & Hum.*

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Most scientific papers are prepared according to a format called IMRAD. The term represents the first letters of the words *Introduction*, *Materials and Methods*, *Results*, *And Discussion*. IMRAD is simply a more 'defined' version of the "IBC" (*Introduction*, *Body*, *Conclusion*) format used for all academic writing. IMRAD indicates a pattern or format rather than a complete list of headings or components of research papers; the missing parts of a paper are: *Title*, *Authors*, *Keywords*, *Abstract*, *Conclusions*, *References*, and *Acknowledgement*. Additionally, some papers include *Appendices*. For manuscripts in **Bahasa Malaysia**, the title, abstract and keywords should be written in both **English** and **Bahasa Malaysia**.

The *Introduction* explains the scope and objective of the study in the light of current knowledge on the subject; the *Materials and Methods* describes how the study was conducted; the *Results* section reports what was found in the study; and the *Discussion* section explains meaning and significance of the results and provides suggestions for future directions of research. The manuscript must be prepared according to the journal's **Instruction to Authors** (http://www.pertanika.upm.edu.my/Resources/regular_issues/Regular_Issues_Instructions_to_Authors.pdf).

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Authors who complete any submission are notified with an acknowledgement containing a manuscript ID on receipt of a manuscript, and upon the editorial decision regarding publication.

Pertanika follows a **double-blind peer -review process**. Manuscripts deemed suitable for publication are sent to reviewers. Authors are encouraged to suggest names of at least 3 potential reviewers at the time of submission of their manuscripts to *Pertanika*, but the editors will make the final selection and are not, however, bound by these suggestions.

Notification of the editorial decision is usually provided within 120 days from the receipt of manuscript. Publication of solicited manuscripts is not guaranteed. In most cases, manuscripts are accepted conditionally, pending an author's revision of the material.

As articles are double-blind reviewed, material that may identify authorship of the paper should be placed only on page 2 as described in the first-4-page format in *Pertanika*'s Instruction to Authors (http://www.pertanika.upm.edu.my/Resources/regular_issues/Regular_Issues_Instructions_to_Authors.pdf).

The journal's peer review

In the peer review process, 2 or 3 referees independently evaluate the scientific quality of the submitted manuscripts. At least 2 referee reports are required to help make a decision.

Peer reviewers are experts chosen by journal editors to provide written assessment of the **strengths** and **weaknesses** of written research, with the aim of improving the reporting of research and identifying the most appropriate and highest quality material for the journal.

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1. The journal's Chief Executive Editor and the Editor-in-Chief examine the paper to determine whether it is relevance to journal needs in terms of novelty, impact, design, procedure, language as well as presentation and allow it to proceed to the reviewing process. If not appropriate, the manuscript is rejected outright and the author is informed.
2. The Chief Executive Editor sends the article-identifying information having been removed, to 2 to 3 reviewers. They are specialists in the subject matter of the article. The Chief Executive Editor requests that they complete the review within 3 weeks.

Comments to authors are about the appropriateness and adequacy of the theoretical or conceptual framework, literature review, method, results and discussion, and conclusions. Reviewers often include suggestions for strengthening of the manuscript. Comments to the editor are in the nature of the significance of the work and its potential contribution to the research field.

3. The Editor-in-Chief examines the review reports and decides whether to accept or reject the manuscript, invite the authors to revise and resubmit the manuscript, or seek additional review reports. In rare instances, the manuscript is accepted with almost no revision.

Almost without exception, reviewers' comments (to the authors) are forwarded to the authors. If a revision is indicated, the editor provides guidelines to the authors for attending to the reviewers' suggestions and perhaps additional advice about revising the manuscript.

4. The authors decide whether and how to address the reviewers' comments and criticisms and the editor's concerns. The authors return a revised version of the paper to the Chief Executive Editor along with specific information describing how they have addressed the concerns of the reviewers and the editor, usually in a tabular form. The authors may also submit a rebuttal if there is a need especially when the authors disagree with certain comments provided by reviewers.
5. The Chief Executive Editor sends the revised manuscript out for re-review. Typically, at least 1 of the original reviewers will be asked to examine the article.
6. When the reviewers have completed their work, the Editor-in-Chief examines their comments and decides whether the manuscript is ready to be published, needs another round of revisions, or should be rejected. If the decision is to accept, the Chief Executive Editor is notified.
7. The Chief Executive Editor reserves the final right to accept or reject any material for publication, if the processing of a particular manuscript is deemed not to be in compliance with the S.O.P. of *Pertanika*. An acceptance notification is sent to all the authors.

The editorial office ensures that the manuscript adheres to the correct style (in-text citations, the reference list, and tables are typical areas of concern, clarity, and grammar). The authors are asked to respond to any minor queries by the editorial office. Following these corrections, page proofs are mailed to the corresponding authors for their final approval. At this point, **only essential changes are accepted**. Finally, the manuscript appears in the pages of the journal and is posted on-line.

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ABSTRACTING AND INDEXING OF PERTANIKA JOURNALS

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Foreword

Welcome to the fifth issue of 2025 for the *Pertanika Journal of Social Sciences and Humanities (PJSSH)*!

PJSSH is an open-access journal for studies in the field of Social Sciences and Humanities published by Universiti Putra Malaysia Press. It is independently owned and managed by the university for the benefit of the world-wide science community.

This issue contains 15 articles; all are regular articles. The authors of these articles come from different countries namely Indonesia, Malaysia, Philippines, Republic of Türkiye, and the Kingdom of Saudi Arabia.

A regular article titled “Pre-Retirement Withdrawal Patterns and Determinant Factors: A Case Study of Malaysian Employee Provident Fund Members” sought to investigate the impact of pre-retirement withdrawal on the savings balance among Malaysian EPF members between the ages of 55 and 59, focusing on withdrawal patterns, motivations, and demographic factors that influence the likelihood of making a pre-retirement withdrawal. The results reveal a potential challenge to retirement security for many EPF members. The detailed information of this article is presented on page 1803.

An article entitled “Philanthropic Fundraising in Higher Education: Alumni Engagement, Brand Equity, and Social Impact” explores the influence of alumni engagement, university brand equity, and the social impact of philanthropic institutions on alumni’s philanthropic intentions towards their alma mater. The findings reveal alumni engagement (AE), brand equity (BE), and the social impact of campus philanthropic institutions (SI) significantly influence alumni philanthropic intention (PI). The study emphasizes that alumni philanthropy becomes a key pillar of higher education financing in the future. Further details of the study can be found on page 1845.

Fajar Adinugraha and colleagues investigate the effectiveness of indigenous knowledge-oriented instructional modules to promote biodiversity literacy. Their study highlights the significant role of the IKIM module in improving biodiversity literacy, demonstrating its effectiveness in integrating western science and indigenous knowledge. The findings indicated that the experimental group exhibited a more pronounced enhancement in biodiversity literacy scores than the control group. The results also suggest that IKIM enhances biodiversity literacy and aids contextual efforts to mitigate its loss. Detailed information of this article is presented on page 2073.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

All the papers published in this edition underwent Pertanika's stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers and Editorial Board Members of PJSSH, who have made this issue possible.

PJSSH is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

Editor-in-Chief

Puvaneswaran Kunasekaran

Pre-Retirement Withdrawal Patterns and Determinant Factors: A Case Study of Malaysian Employee Provident Fund Members

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ABSTRACT

Retirement savings provide a crucial safety net and pave the way for financial independence in old age. The Employee Provident Fund (EPF) in Malaysia, a national retirement savings scheme, provides members with a pre-retirement withdrawal option, which may cause depleted savings for members. What are the withdrawal patterns, and how much has this impacted the contributor? The study investigates the impact of pre-retirement withdrawal on the savings balance among Malaysian EPF members between the ages of 55 and 59, focusing on withdrawal patterns, motivations, and demographic factors that influence the likelihood of making a pre-retirement withdrawal using data from a nationwide survey conducted in 2015-2016. Findings reveal that the majority of members had modest savings of less than RM100,000. They mostly use partial withdrawals, with the largest withdrawals coming from those with the smallest savings. Buying property and renovating houses are the primary reasons for withdrawal. The study identifies ethnicity and education level as important predictors of pre-retirement withdrawal behaviour. These active withdrawals significantly reduce retirement savings, potentially leading to delayed retirement, extended work hours, and an increased risk of poverty in old age. The findings highlight a potential challenge to retirement security for many EPF members. The incidence of withdrawals, particularly among those with lower savings, raises concerns about the need for governmental initiatives that

encourage rational savings behaviour. Focusing on a financial literacy campaign can help educate members about the present bias and repercussions from pre-retirement withdrawals, thus allowing them to make informed decisions and proper financial planning.

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INTRODUCTION

Global development in the past century has led to higher living standards, improved physical health, and increased longevity. The rise in life expectancy is prevalent across most regions worldwide, and the ageing trend is advancing universally. Over the recent decades, the proportion of elderly individuals has displayed an upward trajectory, with projections indicating a continuous rise. According to data from the World Health Organization (WHO) in 2020, the global population of individuals aged 60 and above has surpassed that of children aged 5 and below. The WHO projects this figure to increase from 1 billion in 2020 to 1.4 billion by 2030 (WHO, 2022). It is estimated that by 2030, around one in six individuals globally will be aged 60 or older. This phenomenon, known as population ageing, is occurring rapidly in developed nations such as Japan, where over 30% of the population is currently aged over 60. Malaysia began experiencing population ageing in 2020, with the percentage of individuals aged 65 and above recorded at 7.0%, compared to 5.0% in 2010, and is estimated at 7.7% in 2024. The number is projected to reach 14.5% by 2040 (Department of Statistics Malaysia [DOSM], 2016, 2021, 2024a). Additionally, most low- and middle-income countries are witnessing rapid shifts in age demographics, with individuals aged 60 and above from these countries projected to make up two-thirds of the global population by 2050 (WHO, 2022).

Population ageing is the gradual shift between age groups in which older individuals constitute a proportionally larger share of the overall population. The demographic trend of ageing poses challenges to existing socioeconomic structures, labour force availability, healthcare demand, and the consumer market composition (Chang & Hsu, 2017). The ramifications of population ageing are concerning, particularly with the rise in the senior dependency ratio on social security systems. In light of these challenges, many developing nations maintain mandatory retirement regulations beginning as early as 55, with a ceiling of 60 years, despite limited social protection measures for seniors (Abd Samad & Mansor, 2013). Social transformations and economic uncertainties heighten apprehensions regarding the capacity of the current social security system, notably pensions and retirement funds, to offer sufficient financial support during retirement. The objective is to prevent elderly individuals from falling into poverty post-retirement due to insufficient savings, increased living expenses, and diminishing familial support. Therefore, a robust social protection strategy that is integrated into a broader framework is imperative to ensure sustainable and enhanced living standards in old age.

Emerging Issues and Challenges in Retirement Savings

One of the major challenges facing social security is that more than half of the world's working population lacks adequate social security coverage (International Labour

Organization [ILO], 2024). This issue is exacerbated by the increasing elderly population, highlighting the need for financial security through social security programs. Pension coverage in Asia typically ranges from 10% to almost 100%, with many regions experiencing stagnation (ILO, 2001). In addition to structural challenges, social security systems are grappling with concerns about shrinking contribution funds due to factors such as an ageing workforce, informal employment, and job losses amid economic hardships. There is widespread apprehension regarding the adequacy of retirement savings based on individuals' contributions during their working years and whether the savings will sustain them throughout retirement. The primary fear is that the savings may not suffice to cover living expenses, especially for individuals earning low wages in passive salary systems. In addition, demographic shifts will disproportionately affect women, who typically have longer life expectancies, lower incomes, and less participation in the formal labour market. With a decline in formal job opportunities and economic instability, workers are increasingly responsible for meeting a significant portion of their social security needs, potentially diminishing their quality of life in old age.

Retirement savings are crucial for supporting financial stability, ensuring independence in old age, and reducing reliance on social protection programs. Savings usually begin by setting aside a portion of one's monthly salary, often with contributions from the employer, and are

typically placed in a retirement account like a provident fund. The aim is to amass enough savings to cover future living expenses and sustain one's standard of living. While most retirement savings plans permit regulated withdrawals, some exceptions allow for early access under specific conditions, like a minimum contribution period or purposes such as loan settlement, education, or medical expenses. Early access to retirement savings may impact retirement income adequacy (Bateman et al., 2023; Butrica et al., 2010; Hajkowicz et al., 2012). In certain cases, an early withdrawal may incur a tax penalty, making it less ideal. Regrettably, due to the economic impact of the COVID-19 pandemic, many countries, including Malaysia, have temporarily modified withdrawal regulations to allow early access to retirement savings (OECD, 2020).

Malaysia is moving toward becoming an ageing country. The percentage of people aged 60 and above has increased from 10.7% in 2020 to 11.6% in 2024 (DOSM, 2021, 2024a). Factors such as rising life expectancy and decreasing fertility rates will drastically raise the number of older individuals. The DOSM (2023) reported that in 2023, life expectancy at 60 has increased for males and females, up to 18.3 years and 21.1 years, respectively. Consequently, males can live up to 78.3 years, and females can live up to 81.1 years. Over the last four decades, Malaysia has observed a significant decline in the total fertility rate (TFR) from 4.9 children per woman in 1970 to 1.7 in 2020. The TFR dropped below

the replacement level of 2.1 children from 2013 onward (DOSM, 2024b). Despite the decline in the fertility rate, Malaysia's total population continues to grow, partly due to increased life expectancy. It is also worthwhile to note that the DOSM (2016, 2021) projected that the working age group would decrease from 69.7% in 2020 to 66.9% in 2040.

There have been several studies conducted on the Malaysian social security system that address the concerns and challenges of retirement savings sufficiency due to the population ageing (Darmaraj & Narayanan, 2019; Ibrahim & Nordin, 2020; Jaafar et al., 2019; Taher et al., 2020). Most of these studies highlight the worrying issue of depleted savings among members of the Employees Provident Fund (EPF), Malaysia's largest provident fund institution that provides a social security scheme for private sector employees, non-pensionable public sector, and self-employed individuals. The savings scheme operates on a defined contribution (DC) plan where both employees and employers contribute at a prescribed rate. The EPF Act of 1991 allows for both partial and full withdrawals. Full withdrawals are only permitted when a member reaches the age of 55 or 60 in cases of incapacitation, departure from the country, or in case of death. On the other hand, partial withdrawals are allowed after reaching the age of 50 for purposes such as education, house purchase, house construction, housing loan, hajj pilgrimage, medical expenses, or if the savings exceed RM1 million. Before the

COVID-19 pandemic, the EPF reported 78.9% of partial withdrawals as opposed to 21.1% of full withdrawals in 2019 (EPF, 2019).

Many countries rely on retirement savings to ensure stable consumption that meets individual needs in retirement. The United States is known for high liquidity in its defined contribution pension system compared to other developed countries (Beshears et al., 2015). Various studies have investigated early access to retirement savings in the US, mainly through 401(k) plans. Approximately 40% of withdrawals are linked to adverse events such as job loss, poor health, home purchases, and college expenses (Butrica et al., 2010). Research shows that demographics (Beshears et al., 2011) and liquidity constraints (Lu et al., 2017) significantly influence withdrawal decisions. In Singapore, a study by Agarwal et al. (2020) found that individuals tend to withdraw a considerable portion of their retirement savings upon reaching 55, primarily to settle credit card debts. Notably, several ASEAN countries, like Thailand and Indonesia, permit early withdrawal during job termination (Yusuf et al., 2014).

As mentioned earlier, the objective of a provident fund is to help members prepare for retirement comfortably. However, most provident funds allow partial or pre-retirement withdrawals, contributing to reduced savings among members (Khan et al., 2017; Yusuf et al., 2014). This practice raises concerns about whether savings will be adequate for retirement and if members will have enough time to replenish their

savings post-withdrawal. With the projected increase in life expectancy at the retirement age of 60 to at least 18 to 21 years, members have a limited window to enhance their savings. They need an additional 10 to 5 years to improve their savings before turning 60 if they made partial or full withdrawals at ages 50 and 55, respectively. Numerous studies have addressed retirement savings withdrawal, particularly pre-retirement withdrawal (Hassan et al., 2018; Koutronas & Ismail, 2016; Mohd Jaafar et al., 2021; Vaghefi et al., 2017; Yusuf et al., 2014). These studies consistently recommend a thorough review of pre-retirement withdrawal policies and a reform of the application process to minimize the impact of such withdrawals and ensure retirement savings adequacy.

Theoretical Background and Framework

Examining the pension system through the lens of social security policy reveals the broader implications for financial security, income inequality, and the role of government in ensuring equitable retirement outcomes. The study draws from theoretical frameworks based on the Intertemporal Choice Theory (Fisher, 1930), which examines how individuals make decisions that involve trade-offs between present and future consumption. The theory assumes that individuals allocate financial resources rationally over time based on expected future income and interest rates. The Life-Cycle Hypothesis (Modigliani, 1986) extends this framework by proposing that

individuals plan savings and consumption to maintain a stable living standard by saving during working years and spending post-retirement to ensure financial security. While these classical models assume rational and progressive decision-making, empirical evidence suggests that individuals often deviate from such action due to behavioural biases and cognitive limitations (Benartzi & Thaler, 2013; Lee & Hanna, 2020). Expanding on this perspective, Laibson (1997) introduced and modelled the concept of hyperbolic discounting, then later contextualised by Frederick et al. (2002) in the broader behavioural approach to intertemporal choice, emphasising the role of present bias and hyperbolic discounting.

Unlike the traditional exponential discounting model, hyperbolic discounting suggests that people disproportionately favour immediate rewards over future benefits. This tendency leads to suboptimal financial decisions, such as premature withdrawals from retirement savings, even when delaying withdrawal would result in greater long-term financial security (Nabeshima et al., 2025). The concept is particularly relevant to the defined contribution (DC) pension system because retirement planning requires individuals to make long-term financial commitments that may conflict with their immediate financial needs. In the context of DC pension, it implies that many individuals either delay enrolling in pension plans, contribute less than optimal amounts, or withdraw funds prematurely. Individuals do not save enough for retirement because

they underestimate future needs, prioritise immediate consumption, or lack financial literacy (Benartzi & Thaler, 2007). Furthermore, unexpected life events such as job loss, health issues, or economic downturns can disrupt long-term savings plans, further challenging the assumption of rational financial behaviour. A study by Innocenti et al. (2024) suggests that individuals facing financial difficulties are less likely to prioritise retirement well-being or invest in supplementary pension funds.

A study by Awang et al. (2020) among EPF members highlights the implications of early withdrawals on long-term savings, emphasising the need for improved financial literacy. While financial planning is crucial, understanding the underlying patterns of withdrawal behaviour and the influence of demographic factors is essential. This paper contextualises the behavioural economics framework to examine the pre-retirement withdrawal pattern. The focus is specifically on members aged 55 to 59, representing a critical transition period leading to retirement, during which individuals must navigate a financial trade-off between preserving savings for post-retirement security and withdrawing funds for present needs. This age group is in a unique position as they approach retirement, highlighting the urgency of financial planning. The study investigates the impact of pre-retirement withdrawal on savings adequacy by examining withdrawal patterns and motivations, and also evaluating the likelihood of individuals making pre-retirement withdrawals based

on demographic profiles, including gender, ethnicity, education level, and employment status. These assessments can help identify financial vulnerabilities in the pre-retirement phase, such as the adequacy of savings and the behavioural rationale behind withdrawal decisions. The findings offer valuable insights for policymakers on necessary adjustments to contribution structures, withdrawal regulation, and targeted financial literacy programs. Ultimately, the study aims to empower well-informed financial decisions and promote financial security for future retirees.

The structure of the paper is as follows: Section 2 describes the method used, Section 3 reports the results, and Section 4 discusses the main findings. The last section includes a conclusion, implications of the study, limitations, and suggestions for further research.

METHODS

Data Source

The study involved a sample of 771 EPF members, selected randomly through face-to-face interviews at 19 EPF branches nationwide from December 2015 to March 2016. The sample included individuals aged 55 and above. The Social Wellbeing Research Centre (SWRC) at the University of Malaya supervised and conducted the data collection process (Awang et al., 2020). The study focused on pre-retirement withdrawal cases, which are when EPF members withdraw funds before reaching the retirement age of 60. The sample concentrated on individuals aged 55 to 59,

a period when many members opt for pre-retirement withdrawals. All withdrawals, whether partial or full, made before age 60 are categorised as pre-retirement withdrawals. Hence, the analysis involved a subset of 473 cases from the total 771 sample.

Methodology

The analysis commences with descriptive statistics to explore and describe the data for preliminary analysis and the presentation of results in frequency and percentage. These include examining savings, withdrawals, and the balance of EPF funds. Furthermore, cross-tabulations investigate the relationship between withdrawal categories and amounts with selected demographic variables. Meanwhile, logistic regression analysis assesses the measurement properties and tests the proposed relationship model between dependent and independent variables. The model analysis aims to test the hypothesis on the relationship between the likelihood of pre-retirement withdrawal decisions and demographic profiles. Based on previous studies, demographic profiles such as gender, ethnicity, education level, and working status are believed to influence financial decision-making practices, particularly in the context of retirement savings (Beshears et al., 2011; Butrica et al., 2010). The proposed model considers withdrawal categories as the dependent variable with a dichotomous response, while categorical demographic profiles are the independent variable treated using dummy coding. A summary description of

the variables is in Table 1. The model is constructed in the following equation form:

$$\ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$$

The model describes the relationship between the likelihood of withdrawal (p) and a linear combination of predictor variables (X). Here, α is the constant intercept coefficient, while β represents the regression coefficient for each X. The significance of the predictor variables in the model can be determined using the Wald and likelihood ratio tests. The Hosmer-Lemeshow test evaluates the goodness of fit of the model by comparing observed and predicted outcomes (Hosmer Jr et al., 2013). This analysis does not necessitate the assumption of normal distribution for the

Table 1
Description of variables for logistic regression model

Variable	Coding
Dependent (Y)	
Withdrawal	0 = No 1 = Yes
Independent (X)	
Gender (X ₁)	0 = Male (Reference) 1 = Female
Ethnicity (X ₂)	0 = Malay (Reference) 1 = Chinese 2 = Indian 3 = Others
Education Level (X ₃)	0 = None/Primary (Reference) 1 = Secondary 2 = Form 6 / Diploma 3 = Degree and above
Working Status (X ₄)	0 = Not working (Reference) 1 = Still working

variables (Harrell, 2015). The data analysis is conducted using SPSS version 25.

RESULTS

Demographic Profile

Table 2 shows a total of 473 respondents selected from the survey data, focusing on those aged 55 to 59 (Mean = 56.7), with the majority being male (64.9%) and female (35.1%). The ethnic profile shows Malays (55.4%) with the highest participation, followed by Chinese (29.2%), Indian (13.5%), and others (Kadazan & Iban) (1.9%). Furthermore, the majority of them completed secondary education (56.7%), while 15.9% held a diploma and 14.2% held a degree. Only 13.3% reported having no primary education. Additionally, more than half (67.4%) were still employed at the time.

Table 2
Demographic profile of respondents (n = 473)

Demographic variable	f	%
Gender		
Male	307	64.9
Female	166	35.1
Ethnicity		
Malay	262	55.4
Chinese	138	29.2
Indian	64	13.5
Others	9	1.9
Education Level		
None / Primary	63	13.3
Secondary	268	56.7
Form 6 / Diploma	75	15.9
Degree and above	67	14.2
Working Status		
Not working	154	32.6
Still working	319	67.4

Savings, Withdrawal, and Balance of EPF Fund

According to the 1991 EPF Act, members have two withdrawal options: partial and full. Although partial withdrawals can be made for specific purposes before the age of 55, full withdrawals can start at 55 years, as long as there is a remaining balance.

Based on the data in Table 3, a higher percentage of members opted for partial withdrawals (42.1%) compared to full withdrawals (30.0%). The majority of members have savings of less than RM25,000 (26.2%), while only a quarter have RM200,000 or more saved up (25.2%). The distribution of withdrawal amounts follows a similar pattern to savings, with most withdrawals happening below RM25,000 (25.6%) and a small percentage above RM200,000 (10.1%). Furthermore, a large portion of members (27.9%) chose not to withdraw any funds. As a result of withdrawing funds before retirement, a substantial number of members (22.2%) ended up with a zero balance, while the majority (26.6%) had less than RM25,000 in savings by the time they turned 60.

Withdrawal Category by Demographic

The analysis of withdrawal categories based on selected demographic variables such as gender, ethnicity, education level, and working status reveals various trends. The results in Table 4 show females have a higher percentage of full withdrawals (31.9%) compared to males (29.0%), while the reverse is true for partial withdrawals. The prevalence of full withdrawals is

Table 3
Savings, withdrawal, and balance of EPF fund

Amount (RM)	Savings		Withdrawal		Balance	
	f	%	f	%	f	%
Zero Balance	NA	NA	NA	NA	105	22.2
< 25,000	124	26.2	121	25.6	126	26.6
25,000 – 49,999	52	11.0	52	11.0	45	9.5
50,000 – 99,999	68	14.4	54	11.4	56	11.8
100,000 – 199,999	85	18.0	52	11.0	59	12.5
≥ 200,000	119	25.2	48	10.1	63	13.3
No response	25	5.3	14	3.0	19	4.0
No withdrawal	NA	NA	132	27.9	NA	NA
Total	473	100.0	473	100.0	473	100.0
Withdrawal Category			f	%		
Full withdrawal			142	30.0		
Partial withdrawal			199	42.1		
No withdrawal			132	27.9		
Total			473	100.0		

Table 4
Withdrawal category by demographic

Demographic variable	Withdrawal category f (%)		
	Partial	Full	No
Gender			
Male	135 (44.0)	89 (29.0)	83 (27.0)
Female	64 (38.6)	53 (31.9)	49 (29.5)
Ethnicity			
Malay	103 (39.3)	106 (40.5)	53 (20.2)
Chinese	73 (52.9)	17 (12.3)	48 (34.8)
Indian	20 (31.3)	14 (21.9)	30 (46.9)
Others	3 (33.3)	5 (55.6)	1 (11.1)
Education Level			
None / Primary	21 (33.3)	11 (17.5)	31 (49.2)
Secondary	114 (42.5)	86 (32.1)	68 (25.4)
Form 6 / Diploma	32 (42.7)	26 (34.7)	17 (22.7)
Degree and above	32 (47.8)	19 (28.4)	16 (23.9)
Working Status			
Not working	51 (33.1)	60 (39.0)	43 (27.9)
Still working	148 (46.4)	82 (25.7)	89 (27.9)

highest among other ethnic groups (55.6%), followed by Malay (40.5%) and Indian (21.9%). In contrast, Chinese individuals have the highest proportion of partial withdrawals (52.9%), followed by Malays (39.3%). Moreover, individuals with a diploma (34.7%) and a degree (47.8%) show the highest rates for full and partial withdrawals. Finally, non-working members exhibit a higher rate of full withdrawals (39.0%), while working members show a higher rate of partial withdrawals (46.4%).

Withdrawal Amounts by Demographic

Table 5 shows the analysis for the distribution of withdrawal amounts across different demographic variables using chi-square test

statistics. There is a significant association between education level and withdrawal amount. Individuals with primary education had a higher proportion (80.6%) of withdrawing less than RM25,000, whereas those with a degree showed a higher proportion (34%) for making withdrawals of at least RM200,000. On the other hand, there is no significant association between withdrawal amounts across gender, ethnicity, and working status.

Utilisation of Withdrawal

In total, 341 respondents made 459 withdrawals related to seven forms of utilisation, as presented in Table 6. The responses indicate that the majority of

Table 5
Withdrawal amount by demographic

Demographic variable	Withdrawal amount f (%)					Chi-Square Test
	<RM25K	RM25K -RM49K	RM50K -RM99K	RM100K - RM199K	≥ RM200K	
Gender						7.85
Male	72 (33.6)	30 (14.0)	42 (19.6)	36 (16.8)	34 (15.9)	
Female	49 (43.4)	22 (19.5)	12 (10.6)	16 (14.2)	14 (12.4)	
Ethnicity						12.89
Malay	66 (33.2)	34 (17.1)	32 (16.1)	34 (17.1)	33 (16.6)	
Chinese	37 (42.0)	10 (11.4)	18 (20.5)	13 (14.8)	10 (11.4)	
Indian	15 (46.9)	7 (21.9)	4 (12.5)	4 (12.5)	2 (6.3)	
Other	3 (37.5)	1 (12.5)	0 (0.0)	1 (12.5)	3 (37.5)	
Education Level						55.81*
None / Primary	25 (80.6)	3 (9.7)	1 (3.2)	2 (6.5)	0 (0.0)	
Secondary	73 (38.2)	28 (14.7)	40 (20.9)	30 (15.7)	20 (10.5)	
Form 6 / Diploma	14 (25.5)	11 (20.0)	9 (16.4)	10 (18.2)	11 (20.0)	
Degree and above	9 (18.0)	10 (20.0)	4 (8.0)	10 (20.0)	17 (34.0)	
Working Status						1.14
Not working	42 (38.9)	15 (13.9)	16 (14.8)	19 (17.6)	16 (14.8)	
Still working	79 (36.1)	37 (16.9)	38 (17.4)	33 (15.1)	32 (14.6)	

*Note: Significant at $\alpha = 0.05$

members use the money to purchase a property or renovate a house (26.6%). Additionally, 20.7% utilise it for children’s education, while 16.6% use it for various related expenses such as children’s weddings, travel, and daily living costs. Furthermore, the utilisation also includes repaying loans for a house or car (13.7%), investing in a unit trust (10.7%), and performing hajj or umrah (9.4%). On the other hand, only a small portion of respondents use the funds for medical expenses (2.4%).

Table 6
Utilisation of withdrawal

Code	Utilisation	f	%
U1	Buy a property or renovate a house	122	26.6
U2	Settle a loan for a house or a car	63	13.7
U3	Children's education	95	20.7
U4	Medical expenses	11	2.4
U5	Invest in a unit trust	49	10.7
U6	Hajj or umrah	43	9.4
U7	Other	76	16.6
Total		459	100.0

Evaluation of Logistic Regression Model

Assessing the Likelihood of Making a Pre-Retirement Withdrawal

According to the model results in Table 7, the logistic regression model predicts the likelihood of withdrawal using predictors such as gender, ethnicity, education level, and working status, with all predictors being dummy-coded. The log likelihood that individuals would engage in pre-retirement withdrawals is significantly related to

ethnicity and education level. In terms of the exponential beta ($\text{Exp}(\beta)$) value, individuals of Chinese and Indian descent are less likely to withdraw compared to Malay individuals, with 0.5 times and 0.3 times lower probability, respectively. However, the likelihood of other ethnicities is not significantly different from that of Malay individuals. Additionally, education level indicates that the higher the level, the higher the likelihood of withdrawal compared to the reference indicator. For instance, individuals with secondary education have a 2.7 times greater likelihood, those with a form 6/diploma have a 3.1 times greater likelihood, and those with a degree have a 3.0 times greater likelihood compared to those with no education or only primary education.

Model Goodness of Fit Test and Validation

The overall test (Table 7) of the model fit was assessed by the Omnibus test result ($\chi^2(8) = 37.183; p < 0.05$), indicating that the model coefficient is statistically significant. Conversely, the Hosmer-Lemeshow ($\chi^2(8) = 6.859; p > 0.05$) suggests a good fit between the data and the model (Hosmer Jr et al., 2013). Two additional descriptive measures of pseudo R^2 value using Cox’s (1989) R^2 and Nagelkerke’s (1991) R^2 indicate that the explained variation in the dependent variable for this model ranges from 7.6% to 10.9%. The classification result in Table 8 shows the validity of predicted probabilities, indicating that the prediction success for the cases involved in developing the model

Table 7
Logistic regression analysis of likelihood for pre-retirement withdrawal

Independent variables	β	S.E.	Wald	df	Sig.	Exp(β)	95% C.I. for Exp(β)
Constant	0.601	0.336	3.202	1	0.074	1.825	
Male							Reference
Female	-0.184	0.230	0.638	1	0.425	0.832	0.530 – 1.307
Malay							Reference
Chinese	-0.756	0.242	9.726	1	0.002	0.469	0.292 – 0.755
Indian	-1.239	0.301	16.967	1	0.000	0.290	0.161 – 0.522
Others	0.542	1.077	0.254	1	0.614	1.720	0.208 – 14.191
None / Primary							Reference
Secondary	0.995	0.299	11.115	1	0.001	2.706	1.507 – 4.858
Form 6 / Diploma	1.128	0.385	8.582	1	0.003	3.088	1.452 – 6.567
Degree and above	1.095	0.394	7.736	1	0.005	2.988	1.382 – 6.462
Not working							Reference
Still working	-0.048	0.235	0.041	1	0.839	0.954	0.602 – 1.510
Test			χ^2	df	Sig.	R ²	
Omnibus Test of Model Coefficients			37.183	8	0.000		
Hosmer and Lemeshow Test			6.859	8	0.552		
Cox R ²						0.076	
Nagelkerke R ²						0.109	

Table 8
Classification table for logistic regression model

Observed	Predicted		% Correct
	No	Yes	
No	18	114	13.6
Yes	14	327	95.9
Overall %			72.9

is relatively high. The model correctly classifies an overall prediction success rate of 72.9%. It makes a correct prediction rate of 95.9% for those making withdrawals, compared to 13.6% for those not.

DISCUSSION

The study investigated savings and pre-retirement withdrawals among individuals aged 55 to 59. The data analysis uses the

EPF scheme to represent retirement savings scenarios, which includes examining savings, pre-retirement withdrawal amounts, and the probability of members making withdrawals based on demographic characteristics. The findings revealed that a large proportion of members had savings below RM100,000 at age 55, falling short of the recommended minimum retirement savings threshold of RM240,000 suggested by EPF for basic retirement needs (EPF, 2024). This raises concerns about their ability to maintain living standards after retirement. While many opted for partial withdrawals, members with lower savings tended to withdraw proportionally more than those with higher savings. The shortfall may reflect behavioural patterns consistent

with present bias in the Intertemporal Choice Theory, which explains a tendency for individuals to place greater weight on immediate outcomes over future consequences (Fisher, 1930; Frederick et al., 2002). This pattern aligns with Butrica et al. (2010), who found that individuals with smaller balances are more likely to withdraw savings than those with larger balances. Research suggests that individuals with inadequate savings are at risk of falling into old-age poverty after retirement, particularly when they deplete a substantial portion of their savings through pre-retirement withdrawal (Fuentes et al., 2025). This study found approximately 40% of members to be in this potentially vulnerable group. Furthermore, data showed a higher rate of full withdrawals among female members, a finding that may have long-term negative consequences since women generally have longer life expectancies, lower incomes, and earlier retirement. These factors compound financial vulnerability in later life (Mitchell & Lusardi, 2015). Although the EPF permits pre-retirement withdrawals, the findings underscore the importance of financial planning and raise the need for more targeted guidance, especially for individuals at risk of underfunding their retirement.

The paper also examines the utilisation of savings withdrawals. Many members use the money to buy a property or renovate a house. This trend reflects a common preference for asset accumulation as individuals approach retirement, though such decisions can significantly reduce available retirement savings. A similar pattern is observed in the

United States, where approximately 9.5% of individuals have used retirement savings for house purchases (Purcell & Topoleski, 2009). Through the lens of Intertemporal Choice Theory, this behaviour can be partly attributed to hyperbolic discounting, where individuals prefer immediate consumption needs or desires over long-term savings goals (Laibson, 1997; Frederick et al., 2002). However, using retirement savings for property acquisition carries certain risks. For instance, in the event of defaulting on housing-related loans, they may suffer losses that impact both assets and retirement savings (Butrica et al., 2010). Despite these risks, some scholars argue that property can serve as an effective hedge against inflation, mainly because real estate tends to appreciate over time (Narayanan, 2002). Nevertheless, the benefits of homeownership in retirement depend on how the asset is managed and utilised. While owning a house may offer stability and potentially lower living costs than renting, it may not generate immediate financial return unless used as an income-generating asset (Hassan et al., 2022). In many cases, asset value appreciation may only benefit future heirs rather than providing liquidity or income for retirees during their lifetime. Consequently, purchasing property at or near retirement age may not yield sufficient returns to justify large withdrawals from retirement savings, especially in the short term. Moreover, real estate investments are subject to market volatility, illiquidity, and maintenance costs, all of which can pose additional financial burdens during retirement (Ervin &

Smolira, 2023). These findings underscore the importance of careful financial planning when using retirement savings for property-related investments.

The assessment highlights that ethnicity and education level significantly influence pre-retirement withdrawal behaviour. Malays exhibit a higher tendency to withdraw compared to the Chinese and Indian communities, which aligns with findings by Agarwal et al. (2020) in Singapore. Prior studies suggest that certain demographic groups may be more vulnerable to income insecurity. Diverse ethnicities often possess varying demographic characteristics, such as income levels, educational attainment, and employment opportunities. These aspects can shape the ability to save for retirement and the likelihood of reliance on pre-retirement withdrawals (Abdullah Yusof, 2019; Mahdzan et al., 2020). The pattern suggests a potential deviation from the Life-Cycle Hypothesis, which generally expects individuals to smooth consumption by saving during working years and withdrawing the savings in retirement (Modigliani, 1986). Cultural preferences may also play a role; for instance, some ethnic groups may prioritise intergenerational financial support, prompting withdrawals to assist younger family members or elderly parents (Awang et al., 2024). Notably, the findings reveal that individuals with higher education levels are more likely to make pre-retirement withdrawals. One possible explanation is that higher education attainment often correlates with increased income and access to credit, which may lead to greater

financial obligations. Retirement savings may, therefore, be tapped for managing debt related to housing, education, healthcare, and lifestyle costs (Krishnaveni et al., 2024; Loke et al., 2022). Pre-retirement withdrawals may reflect financial strain or competing consumption needs that could disrupt the ideal savings trajectory. Nonetheless, further empirical study is imperative to elucidate the underlying mechanism of this association comprehensively.

CONCLUSION

The study empirically supports the Intertemporal Choice Theory by demonstrating how present bias and hyperbolic discounting drive pre-retirement withdrawals, particularly among individuals with smaller savings. It also challenges and refines the Life-Cycle Hypothesis, showing that not all individuals engage in rational long-term financial planning, and factors such as ethnicity and education level play a crucial role in withdrawal decision-making. These insights contribute to a more realistic and policy-relevant on retirement savings behaviour, reinforcing the need for interventions that mitigate behavioural biases and enhance financial planning literacy among at-risk groups.

Implications of the Study

The study makes a significant contribution to the limited research investigating retirement savings and pre-retirement withdrawal trends among the pre-retirement group of individuals in Malaysia. It offers valuable insights into understanding the

motivation and determinants influencing these withdrawals. The findings provide empirical validation and subtle extensions to the theoretical frameworks of Intertemporal Choice Theory and Life-Cycle Hypothesis (Fisher, 1930; Frederick et al., 2002; Laibson, 1997; Modigliani, 1986). The observed savings adequacy, withdrawal patterns, and demographic influences offer insights into the ways individuals' actions deviate from classical economic assumptions due to behavioural biases and demographic factors. Behavioural economics recognises that financial decision-making is not purely rational but shaped by present bias preferences. Individuals approaching retirement, particularly those aged 55 to 59, often face financial trade-offs between preserving savings for future security and accessing funds to meet present needs. This stage of life represents a crucial period where behavioural tendencies can significantly impact financial choices.

The findings that individuals opt for partial withdrawals rather than preserving the savings thus reinforce the concept of present bias as a core aspect of Intertemporal Choice Theory. Additionally, individuals with smaller savings tend to make the largest withdrawals aligns with hyperbolic discounting, which suggests that individuals prefer immediate financial satisfaction over long-term financial security. Individuals prioritise present consumption instead of preserving the limited savings for post-retirement use, particularly for property purchases and house renovations. This supports the idea

that people favour short-term tangible benefits over uncertain future security. While rational economic models predict that individuals should accumulate wealth to sustain retirement, present-bias decision-making leads to discounting future needs disproportionately. Such behaviour is particularly problematic for those with modest or low savings, as withdrawing a significant portion earlier can jeopardise financial security in later years.

The Life-Cycle Hypothesis assumes that individuals make optimal intertemporal consumption choices, smoothing income over a lifetime to maintain a stable living standard. However, the findings indicate that for many individuals, particularly those from specific ethnic backgrounds and higher education levels, their withdrawal decisions are not fully aligned with the assumption. They withdraw before retirement instead of systematically accumulating savings for post-retirement consumption, challenging the assumption of rational and forward-looking behaviour. The role of ethnicity and education level as predictors of withdrawal suggests that financial decision-making is not solely based on individual optimisation but is also shaped by demographic and socioeconomic factors. Ethnic variations may reflect differences in access to economic resources, cultural attitudes towards savings, or social support structures. Similarly, higher education levels may be associated with higher financial commitment, which can impair long-term financial decision-making and increase the likelihood of early withdrawals.

By integrating these findings into the Intertemporal Choice Theory and the Life-Cycle Hypothesis, the study highlights key areas where real-world behaviour diverges from theoretical assumptions. The results suggest that policies aimed at reducing present bias, such as automatic savings mechanisms, withdrawal restrictions for smaller savings, or financial literacy programs to help individuals make rational and better long-term financial decisions. Additionally, recognising the role of ethnicity and education in shaping financial planning behaviour can help policymakers design more tailored interventions that address structural barriers towards broader socioeconomic and cultural influences on effective financial planning.

Limitations and Recommendations for Future Research

While the study offers valuable insights into pre-retirement savings and withdrawal patterns, it is crucial to acknowledge its limitations. Firstly, the focus on a specific age group in Malaysia hinders the applicability of the findings. The data collected only represents members visiting and transacting at the EPF counter during a particular timeframe, which may not be representative of the broader population approaching retirement. Secondly, the use of retrospective questions in the survey that rely on respondents' memories can introduce biases into the results. Respondents may struggle to recall specific savings amounts, and some may be hesitant to disclose accurate financial information. Future

research could explore alternative data collection approaches, such as using administrative data from EPF records, to address these potential limitations.

Future research could expand on this groundwork by exploring the decision-making process behind pre-retirement withdrawals. Qualitative methods like interviews and focus groups could illuminate the motivations, concerns, and strategies that influence these decisions, particularly concerning present bias behaviour for individuals nearing retirement. Filling these knowledge gaps can offer comprehensive guidance for individuals and policymakers navigating the challenges of retirement planning and financial management.

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Key Attributes of School-Based Interventions for Preventing Drug Abuse Among Lower Elementary Schoolchildren in Malaysia: A Qualitative Research

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ABSTRACT

Schools can address drug-related issues by implementing interventions through various means, including curriculum enhancements, educational programs, policies, and best practices. This research explores community perspectives and experiences to better understand the key attributes of school-based drug abuse prevention interventions targeting lower elementary government schoolchildren in Malaysia. The researchers purposively recruited and interviewed 16 participants for this qualitative research, employing grounded theory analysis for data evaluation. The findings highlighted several key characteristics, such as the importance of early intervention, consideration of individual, social, and environmental differences, the implementation of age-appropriate interventions, a focus on personal and social development, the use of diverse instructional techniques, reliance on teachers and school counsellors for knowledge dissemination, and increased support for children facing truancy and conduct issues. Additionally, the research emphasized the significance of intervening with parents through schools and involving external stakeholders in the planning and implementation process. The researchers recommend the prominent implementation of both universal and selective interventions for lower elementary schoolchildren. The findings also emphasized the important role

of engaging parents in interventions conducted through schools. Furthermore, the research identified how various stakeholders could contribute to school-based interventions. School-based interventions have the potential to benefit not only children but also teachers, counsellors, parents, families, community members, and other stakeholders.

Keywords: Drug abuse prevention, lower elementary schoolchildren, Malaysia, preventive strategies, qualitative research, school-based interventions

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INTRODUCTION

The drug abuse epidemic in Malaysia continues to pose a significant challenge, growing more complex with the emergence and spread of new harmful drugs. The primary strategies to address drug abuse in the country include preventive education, enforcement and security programs, treatment and rehabilitation services, and the development of international relations (National Anti-Drugs Agency [NADA], 2024). Prevention encompasses interventions aimed at significantly lowering the risk of drug acquisition, promoting drug avoidance, and preventing the escalation of interpersonal and health-related issues (United Nations Office on Drugs and Crime [UNODC], 2003). Table 1 below outlines the four levels of prevention, namely universal, selective, tiered, and indicated, specifically designed for children (National Institute on Drug Abuse, 2020).

The school environment is a vital starting point for initiatives aimed at enhancing individuals’ knowledge, as well as their personal and social skills, ultimately seeking to reduce their individual risk factors for drug use (UNODC, 2004).

The primary objective of prevention efforts is to raise awareness about the risks of drug use, enhance life skills, and promote healthy lifestyles and positive attitudes among schoolchildren (Institute for Public Health, 2023a). Addressing externalized problems or disorders during childhood is crucial for preventing not only drug use but also disruptive, antisocial, and delinquent behaviours, along with issues related to academic performance and school dropout rates (UNODC, 2004).

Currently, government elementary schools in Malaysia are implementing a range of prevention strategies as part of the drug abuse prevention program known as *Program Pendidikan Pencegahan Dadah* (PPDa) (Daily School Management Section, 2022). Despite ongoing efforts, drug abuse remains a significant issue for children and adolescents. The Malaysian National Health and Morbidity Survey reports that 60,000 Malaysian adolescents aged 13 to 17 are currently using drugs, and 106,000 have tried drugs at least once. Among those who have ever used drugs, 75% initiated use before age 14 (Institute for Public Health, 2023b). Recent reports also highlight drug

Table 1
Different levels of prevention

Level of Prevention	Description
Universal	Targets all children in schools or communities, regardless of individual risk factors
Selective	Focuses on children at heightened risk due to factors like behavioural issues or living in high-poverty or high-crime areas
Tiered	Targets multiple risk levels, combining universal interventions with screening for severe issues and offering additional services as needed
Indicated	Focuses on children who have already started using drugs

Source: National Institute on Drug Abuse (2020)

use among elementary schoolchildren (Chelvi, 2024; Kaur, 2019).

This suggests that current prevention strategies may not effectively strengthen protective factors, especially for lower elementary school children. The UNODC and the World Health Organization (WHO; 2018) identify key protective factors for this age group, including school attendance, attachment to school, age-appropriate language and numeracy skills, social skills, and prosocial attitudes. The early and middle childhood stages are crucial for developing vulnerability and resilience, making them ideal for prevention interventions (Furu et al., 2023). Malaysian educators also emphasize the need for earlier drug use prevention programs to help students recognize and address drug abuse issues (Jusoh et al., 2023).

While most drug abuse prevention research focuses on upper elementary and secondary school children, there is a notable gap in studies targeting younger children, particularly those aged 7 to 9 in Malaysian government schools. This age group is often overlooked, despite the importance of early intervention in shaping attitudes and behaviours toward drug use. Additionally, existing literature tends to downplay the role of key external stakeholders, such as parents and the community, in school-based interventions. This research aims to address these gaps by focusing on lower elementary schoolchildren and exploring ways to enhance school-based prevention efforts.

Furthermore, international policies, especially in the United States and Europe, often focus on adolescents and their social

environments. However, few address the needs of younger children. In Malaysia, a diverse society with strong cultural values, it is essential to integrate these factors for effective intervention. This research focuses on lower elementary schoolchildren in Malaysia and incorporates cultural perspectives into the intervention framework, aiming to develop more culturally sensitive drug abuse prevention strategies by considering the roles of family, community, and government.

The main objective of this qualitative research is to gather insights and firsthand experiences from the Malaysian lower elementary school community on drug abuse prevention initiatives. The goal is for the findings to inform revisions of existing and future universal, selective, tiered, and indicated interventions, such as programs, policies, and practices in lower elementary government schools. The research aims to answer the question: “What are the key attributes of school-based interventions for drug abuse prevention targeting lower elementary schoolchildren in Malaysian government schools?”

LITERATURE REVIEW

Theories in Prevention

Social influences, such as family, friends, and peers, are key factors in drug abuse. Broader elements, like social networks, community, culture, and media, also play a significant role (Neighbors et al., 2016). According to the European Union Drugs Agency (EUDA; 2010), the social influence model offers an alternative to approaches such as information

dissemination and affective education, preceding ‘competence enhancement.’ The two components of the model are social learning theory and life skills theory.

Social learning theory suggests that behaviours, such as drug abuse, are learned through observation and the interaction of personal, environmental, and behavioural factors (Bandura, 1977; Smith, 2021). Children, however, tend to learn about drug use and form expectations about its effects through direct observation and vicarious learning (Scheier, 2012). Life skills theory, on the other hand, focuses on how individual, environmental, and social factors interact to shape behaviour, emphasizing skills such as critical thinking, communication, and stress management to protect children from negative influences (EUDA, 2010). Botvin and Griffin (2015) state that programs incorporating life skills training are effective primary prevention strategies for drug abuse, as these programs focus on enhancing social and personal competence skills.

The Substance Abuse and Mental Health Services Administration (SAMHSA; 2020) developed the Focus on Prevention Guidelines for Drug and Substance Use, which delineate four prevention theories. Table 2 below presents these theories along with their descriptions.

School-Based Interventions

The European Prevention Curriculum emphasizes that effective interventions encompass universal strategies, such as creating supportive social policies and fostering a positive school culture. These interventions also include universal and selective approaches that teach personal and social skills while addressing social influences, alongside indicated methods to tackle individual psychological vulnerabilities (EUDA, 2019). Interventions can strengthen family relationships by enhancing parent-school communication, developing partnerships, and equipping parents with effective techniques for teaching and managing child

Table 2
Prevention theories according to the Focus on Prevention Guidelines for Drug and Substance Use

Theory	Description
Behaviour Change Model	Behaviour change occurs when mass media messages raise awareness, alter knowledge, beliefs, and attitudes, teach skills, and build confidence to act in specific situations
Diffusion of Innovation Framework	Opinion leaders, or "trendsetters," spread behaviours, such as drug use, by discussing and promoting these innovations
Health Belief Model	Individuals are more likely to change behaviour if they perceive value or fear consequences, such as the effects of drug use, and anticipate positive or negative outcomes
Community Organisation Theory	Active participation and community development are key to addressing health and social issues effectively

Source: SAMHSA (2020)

behaviour (Ranaweera & Samarasinghe, 2006).

The UNODC (2004) recommends a series of sessions focused on teaching and practicing various personal and social skills to improve mental and emotional health, thereby enabling children to effectively manage challenging situations. In the context of Asian schools, behaviour modification skills are crucial and should incorporate patient listening, solution-oriented reasoning, guidance, counselling, fostering a nurturing teaching environment, and modelling exemplary behaviour (Ratnayake, n.d.).

Policies in Prevention

According to the UNODC and WHO (2018), a successful system uses evidence-based policies and interventions to support children's development, especially during high-risk transitions like childhood and adolescence. It is also important to address both individual and environmental factors of vulnerability and resilience. International guidelines prioritize personal and social skills education, improving classroom environments, parenting programs, policies to keep children in school, mental health interventions, adult programs in schools, workplace prevention, community initiatives, and addressing media influence. Additionally, the SAMHSA (2019) emphasizes the importance of cultural competence and sustainability in drug prevention.

In Malaysia, i-Cegah policies suggest using various media channels, such as new media, broadcast media, face-to-face interactions, outdoor media, and print media,

to disseminate drug prevention information. Education through teaching and learning is vital for imparting prevention knowledge and skills. Community empowerment helps members plan, implement, and evaluate prevention initiatives. Creating a drug-free environment involves establishing supportive values, codes, and attitudes. Identifying issues and referring individuals to experts is crucial, as is mobilizing community groups, including volunteers, influencers, and local role models, to provide alternatives (NADA, 2022).

Prevention in Government Elementary Schools in Malaysia

Jusoh et al. (2023) examined drug prevention programs in elementary schools in high-risk areas of Perak, highlighting challenges faced by teachers. The programs included activities such as drawing competitions, quizzes, talks, *Program Sifar Dadah Sekolah Rendah* (PROSIDAR), and *Program Intelek Asuhan Rohani 2.0* (PINTAR 2.0). The findings from this research indicated that teachers collaborated with parents to implement these programs, but emphasized the need for earlier intervention and a standard operating procedure for addressing drug abuse. They also identified issues such as inadequate guidance, inconsistent approaches, insufficient training, and ineffective programs that failed to address the root causes of drug use. Additionally, the programs were poorly evaluated, budgets were inadequate, and teachers expressed concerns about the lack of monitoring.

PINTAR 2.0 targets children, parents, and family members in a selective and tiered intervention aimed at identifying at-risk students, raising drug abuse awareness, enhancing life skills, promoting healthy lifestyles, and encouraging family involvement (NADA, 2023). Each year, it selects a limited number of children aged 10 to 12 (NADA, 2016). Che Rozubi et al. (2023) found that the program improved awareness, knowledge, skills, spirituality, delayed drug distribution, and reduced misconduct. However, challenges included the need for a more child-centered approach, monitoring issues, and some participants not meeting the criteria. Opportunities for improvement involved addressing the root causes of high-risk behaviours and enhancing collaboration among key agencies. Threats included insufficient parental involvement and external environmental influences.

METHODS

Research Design

This research employed a basic qualitative design to explore participants' experiences with school-based drug abuse prevention and to gather their insights and recommendations for effective interventions targeting lower elementary schoolchildren. A qualitative approach was chosen to understand the context surrounding participants' experiences, which is essential in educational settings where context influences perceptions and behaviours (Maxwell, 2013). Qualitative data also provide in-depth insights necessary

for creating tailored interventions (Green & Thorogood, 2018). Ethical approval for the research was granted by the Universiti Malaya Research Ethics Committee (Reference No.: UM.TNC2/UMREC-2041)

Sample and Recruitment

A total of 16 participants were selected to capture diverse viewpoints and experiences, particularly in school-based intervention research, where various stakeholders provide unique insights. Scholars suggest that this sample size is typically sufficient for saturation in focused qualitative research (Guest et al., 2006; Patton, 2002). It is also appropriate for capturing a broad range of perspectives without overwhelming the data collection process (Creswell & Poth, 2018). To address potential biases, purposive sampling was used to recruit participants for this research, focusing on "subject matter experts" essential for the development of children in lower elementary schools (Naisola-Ruiter, 2022). This selection was informed by existing literature and school-based drug prevention practices and policies in Malaysia. Recruitment methods included LinkedIn, Google Search, and referrals. In accordance with Merriam (2009), the researchers sought multiple perspectives by recruiting two individuals from each category, ensuring participants were not from the same organization. However, this guideline was adjusted for participants from the NADA, as the agency's headquarters included senior officers.

Participants were selected based on established criteria before the research

began. The researchers informed eligible participants about the voluntary nature of their involvement and the purpose of the research. All participants provided informed consent and shared demographic information, including age, location, and work experience. Data collection occurred via email for remote interviews or in person for face-to-face interviews. Table 3 presents an overview of participant characteristics.

Table 3
Participant characteristics

Code	Participant	Characteristics
P1	Drug abuse expert	Lecturer and scholar in the Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya. Active member of the Centre of Excellence for Research in AIDS (CERiA)
P2	Drug abuse expert	Faculty member at Universiti Sains Malaysia, affiliated with the Centre for Drug Research. Authored numerous research publications on drugs and drug-related issues in Malaysia
P3	Peer worker	Former drug user and has worked as a peer worker with Persatuan Insaf Murni Malaysia for 10 years
P4	Peer worker	7 years of volunteer experience at Drug-Free Malaysia, with experience in the design and coordination of school-based interventions using creative arts
P5	Parent of an elementary school child	43-year-old, with children aged 12, 8, and 3 years old. Two of them are currently registered in a government elementary school in Shah Alam
P6	Parent of an elementary school child	45-year-old, with children aged 17, 10, and 8. Two of them are currently registered in a government elementary school in Kuantan
P7	Elementary school counsellor	Employed at a government elementary school in Petaling Jaya, Selangor, for the past 5 years
P8	Elementary school counsellor	Employed at a government elementary school in Kota Kinabalu, Sabah, for the past 6 years
P9	Elementary school principal	Head of student affairs for 10 years, the participant has been the principal of a Tamil national elementary school in Brickfields, Kuala Lumpur, for the past 3 years
P10	Elementary school principal	Principal of a Chinese national elementary school in Ipoh, Perak, for the past 5 years
P11	Elementary school teacher	Elementary school teacher at a government school in Subang Jaya, Selangor, with 5 years of experience teaching English to lower elementary students
P12	Elementary school teacher	Elementary school teacher at a government school in Damansara, Selangor, with 20 years of experience teaching lower and upper elementary levels. Also serves as a PPDa teacher
P13	Community leader	Community leader at <i>Program Perumahan Rakyat</i> Desa Tun Razak, Kuala Lumpur, for 3 years, while living in the community for the past 10 years
P14	Community leader	Community leader at <i>Program Perumahan Rakyat</i> Wangsa Maju, Kuala Lumpur, a former drug user, and actively involved in community-based drug prevention efforts for the past 7 years

Table 3 (continue)

Code	Participant	Characteristics
P15	Officer at the NADA	Officer with 10 years of departmental experience across Sabah, Johor, Terengganu, and Perak. Currently stationed at the Selangor main office, with 3 years in the preventive division organizing school-based interventions
P16	Officer at the NADA	An officer with 6 years of experience and a law enforcement background, currently working in the preventive division

Data Collection

The same researcher conducted all interviews, either face-to-face or via Google Meet. This was to ensure consistency and reduce variability, which enhances dependability in qualitative research (Creswell & Poth, 2018). Participants were provided with a participation information sheet and asked to sign a consent form. An initial interview protocol was developed based on an analysis of relevant literature, practices, and policies on school-based drug abuse prevention. This protocol was then validated by three experts in the field, whose qualifications are outlined in Table 4.

The researchers made minor modifications and enhancements to the interview protocol based on expert feedback. The revised protocol was then

used to guide two preliminary interview sessions. Participants were instructed to respond in both English and Bahasa Melayu. After incorporating participant feedback and the researcher’s notes, the protocol was further revised. The final version of the protocol was used to guide all 16 interview sessions. The researcher minimized biases by creating a neutral environment and using active listening and open-ended questions to ensure participants’ perspectives guided the conversation (Patton, 2015). To uphold validity, the researcher remained sensitive, non-judgmental, and respectful (Merriam, 2009). All interviews were audio-recorded and transcribed verbatim. To ensure accuracy, the translated responses were reviewed and approved by a senior lecturer from the Department of Education and Counselling at Universiti Malaya.

Table 4
Expert qualifications for validating the interview protocol

Expert	Qualifications
One	Education and counselling professor at Universiti Sains Islam Malaysia, the expert has published articles in indexed journals on topics such as drug addiction, treatment, and rehabilitation
Two	An education professor at Universiti Malaya, the expert has research experience in educational technology, teacher education, and teaching methods
Three	Associate professor at Universiti Kebangsaan Malaysia, the expert specializes in psychological counselling, adolescent counselling, and counselling in industrial and organizational settings

Data Analysis

The researchers analyzed the data from 16 interviews using Strauss and Corbin's (1998) grounded theory approach. The transcribed interviews were transferred to a Microsoft Word document, and open coding was applied to each line (Esterberg, 2002). Axial coding was then used to organize the codes into categories and subcategories through a constant comparative method. The researchers allowed categories to emerge naturally, remaining open to recurring patterns (Patton, 2002). Selective coding was applied to develop final themes (Costa et al., 2016). Relevant categories were classified according to identified themes, focusing on key characteristics of school-based drug prevention interventions for lower elementary schoolchildren in Malaysian government schools. Saturation was achieved when a variety of perspectives and rich, detailed data were collected, while maintaining focus on the research question (Charmaz, 2014; Creswell & Poth, 2018). The findings were reported directly in relation to the research question.

RESULTS

All interview quotes in this section are from personal communications with participants.

Intervene During the Early Years of School

Participants stated that drug abuse prevention interventions could start at the lower elementary school level.

"Children between the ages of 7 and 9 are better able to understand things than younger ones. I don't think there's any harm in starting intervention at that age." (P1)

"I have seen children aged 10 to 12 using drugs. If this is the case, prevention should begin in lower elementary school, as the onset of drug use is occurring at younger ages." (P2)

"At times, their living environment is not conducive, so intervention should begin when they enter school. By Standard 1, these children are already aware of their surroundings and circumstances." (P3)

Consider the Child's Individual, Social, and Environmental Differences

The design and development of these interventions should consider factors such as the target population, culture, socioeconomic status, school location (rural or urban), the child's personality, and individual experiences.

"The initiatives should be tailored rather than adopting a one-size-fits-all approach. People in rural areas live differently from those in cities. We should also consider factors such as family income and the culture of specific places. It is important to focus on each target population while considering the contextual factors within the social structure." (P1)

“We also need to consider the child’s personality, as it may relate to potential drug use. Each student comes from a different background and experiences varying levels of stress.” (P5)

“We must consider the child’s personality and their truant behaviour. They should be continuously observed and monitored, along with the company they keep, including family and friends. Understanding their character and intervening accordingly is what it means to be selective.” (P15)

Implement Interventions that Match the Cognitive and Emotional Development of Lower Elementary Children

There is importance in customizing interventions based on a child’s cognitive and emotional development. Children in the lower elementary age group often imitate behaviours.

“According to Bandura’s theory, children of this age imitate what their parents do. However, parents may think that their children are too young to understand. But they are observing, aren’t they?” (P1)

Diversifying methods of conveying information is essential, as children may find it challenging to understand concepts related to drug use and addiction.

“In my school, I realize that students aged 7 to 9 would not be

able to grasp the concept of abuse and addiction. They just know they should not take drugs. They start to question ‘why.’ It makes sense to explain the effects of it rather than what leads to it.” (P8)

Children at this age are more aware of their own emotions and those of others.

“When I speak to my child, I notice she can express her feelings well. She can even tell when I am upset or angry.” (P5)

Focus on Personal and Social Development

Primary drug prevention education should focus on personal and social development to strengthen the child’s interests, mindset, and values.

“We need to create a new path for the child. If they relate to music or have hobbies like painting or skating, it creates an alternative path compared to drug use. I think any intervention needs to convey positive values and mindset for the children, know what is right and wrong.” (P4)

Participants identified that, at the lower elementary level, children can be taught about peer selection, drug refusal skills, emotional regulation, decision-making, and basic communication skills.

“Not only do we have to teach them the skills of refusing drug

use, but also the skills to resist peer pressure.” (P1)

“The teachers themselves must teach these children how to communicate with friends and parents.” (P2)

“Remind these children how to socialize, pick friends, and avoid those who are not good influences.” (P3)

“We can create creative platforms such as music and sports so that these children can de-stress and remove themselves from negative groups.” (P4)

“Besides coping skills, we can teach them how to express feelings, make decisions, communicate with their friends, and treat peers and parents.” (P16)

Provide Education Through a Diverse Range of Instructional Techniques

Elementary schoolchildren may learn more effectively through various instructional strategies, including role play (Participants 4, 9, and 11), creative projects (Participants 2, 4, 8, 10, and 15), game-based learning (Participants 3, 4, 9, 12, 14, and 16), demonstrations (Participants 1 and 15), poster presentations (Participants 5, 7, 11, and 14), videos (Participants 3, 5, 6, 8, 9, and 11), musical activities (Participants 4 and 11), drama (Participants 3, 4, 5, 8, 11, and 13), and storytelling (Participants 3, 7, 9, and 14). Participants also suggested

increasing digital engagement, noting that children learn best from electronic sources.

“Through media or electronic resources for providing information, biases can be reduced.” (P2)

“Children aged 7 to 9 learn best through observation. Programs must be paired with content that has a lot of pictures or videos. They do not fully understand information through talking alone.” (P6)

Teachers and School Counsellors as Primary Sources of Knowledge Dissemination

Younger children learn best from teachers, who not only provide drug prevention education but also observe and report any noticeable behavioural changes.

“At home, parents notice behavioural changes, but at school, it is the teachers who notice them.” (P6)

“For this age group, teachers are the best for influencing students.” (P16)

Religious teachers can lead programs.

“Other than the teachers, the religious teacher assists and leads the programs in my school.” (P8)

Subjects like health education (Participant 7), language (Participants 8 and 15), morals (Participants 11 and 12), science (Participant 11), and religious

studies (Participant 12) can incorporate drug prevention education. Participants also suggested integrating it into extracurricular activities, including clubs, sports, and religious events.

“We can have more extracurricular activities, sports events, educational events, and religious events to bring everyone together at school.” (P3)

Counsellors can assist in designing and implementing drug prevention programs (Participants 5, 7, 8, 10, 15, and 16). They can deliver presentations during school assemblies (Participant 7), provide classroom instruction (Participant 15), or offer drug prevention education through counselling sessions (Participants 1, 5, 8, and 9). Counselling can also serve as a strategy for drug prevention.

“Counselling can be an effective intervention. The counsellor can identify children facing problems or external influences by observing their behaviour during sessions.” (P9)

Provide Extra Attention to Children with Truant Behaviour and Conduct Issues

Participants emphasized that interventions should focus on children exhibiting truancy and conduct issues.

“A child may exhibit aggression or attitude problems even without using drugs. Skipping school can lead to

gang involvement and, eventually, drug use, as these behaviours often share common root causes. This is why it’s important to focus on those at risk” (P3)

“Children exhibiting truant behaviour may face problems, such as skipping school, using drugs, and developing additional disciplinary issues.” (P15)

Intervene with Parents of Children in Schools

A key finding regarding parental intervention in school-based settings is the importance of providing drug and social education, along with information on personal development and sexual education.

“Most parents are unaware of external influences. Once they understand the causes of drug use and abuse, they can motivate their child, discuss the consequences, and raise awareness.” (P1)

“Education for them can focus more on personal development, understanding societal issues, handling social problems, and even sexual education.” (P15)

Drug abuse prevention is more effective when parents are guided on engaging in open conversations, maintaining close relationships, and actively monitoring their child’s academic, social progress, peer interactions, and behavioural changes at home.

“Parents should be guided on how to speak openly with their child to encourage sharing struggles. They can also help by monitoring peers, media, and social media exposure, observing behavioural changes, and staying aware of their child’s academic progress.” (P4)

Parents can benefit from resources on financial management and referrals for mental health support or treatment for drug abuse and addiction.

“Parents can be given guidance on finances such as Credit Counselling and Debt Management Agency (AKPK) services.” (P13)

“Counsellors at schools can also provide information on how parents can get support for their own problems and treatment for drug use and addiction.” (P15)

Participants emphasized the importance of providing parents opportunities to facilitate interventions in schools, promote drug-related information, and raise awareness within their families and the broader community.

“Parents can also spread knowledge outside of school, at home, or in their residential gardens or societies.” (P4)

“Schools can invite parents to participate in programs, or even run them, perhaps.” (P5)

Engage External Stakeholders in Interventions

Schools should engage external stakeholders, such as local artists, social media influencers, external counselors, and politicians, to effectively plan and implement interventions.

“It is important to involve local artists and social media influencers in delivering the message.” (P3)

“External child counsellors or drug counsellors from rehab can contribute as well.” (P5)

“For parents, engaging local politicians is most effective, as they are seen as influential.” (P16)

Participants highlighted the key role of community leaders in school-based prevention efforts.

“Teachers have so much on their plate. External parties, like community leaders, can come in to share information, as they are known by parents.” (P1)

“The leaders tend to have high influence, especially in B40 or PPR housing areas. They can spread prevention knowledge through community events.” (P12)

“As a PPR leader, I would have to work together with non-governmental organizations to run programs.” (P13)

Participants noted that non-profit organizations play a crucial role.

“Peer workers, often ex-drug users, are familiar with the system and can guide parents and families in accessing support.” (P3)

“We know of community resources and can serve as a first point of contact for schools, especially when government agencies are unavailable. We also help organize talks, programs, and activities like dance or music.” (P4)

Drug abuse experts and medical professionals can contribute to school-based prevention by helping design content, delivery strategies, and training materials for educators and organizations.

“Experts and professionals can design and develop content, as well as train educators on how to teach it.” (P2)

“Experts are the most credible individuals to deliver talks to adults.” (P3)

Most of the external stakeholders’ involvement should focus on design and delivery as well as adult interventions, given concerns about children’s safety in schools.

“Since these are very young children, it may be unsafe to allow adults outside of school to have direct contact with them, as this is a matter of safety.”. (P2)

Other government agencies that can contribute to school-based prevention include the Ministry of Women, Family and Community Development (Participant 1), the Ministry of Youth and Sports (Participant 1), the Ministry of Health (Participant 3), the Ministry of National Unity (Participant 6), the Royal Malaysia Police (Participant 3), and the State Islamic Religious Council (Participant 3).

DISCUSSION

A key theme of this research highlights the importance of early preventive interventions, particularly for students in Standards 1 to 3, aged 7 to 9. However, current programs, such as PINTAR 2.0, are aimed at upper elementary students (NADA, 2023). Malaysian researchers also argue that drug prevention is most effective for children aged 11 to 12, which coincides with the formal operations stage (Chie et al., 2015). Nevertheless, Erikson’s developmental theory suggests that younger children are navigating the balance between industry and inferiority, facing both social and academic challenges (Cherry, 2024). Thus, early interventions can expose children to positive behaviours and life skills, reducing their vulnerability to harmful behaviours, such as drug use (UNODC & WHO, 2018).

The findings emphasize the need to consider individual, social, and environmental factors in prevention efforts (Bierman et al., 2011). Intervention design should account for factors such as target population, culture, socioeconomic status, school location, personality, and experiences.

This highlights the role of the social environment and individual experiences in shaping behaviour through observing and imitating role models. Interventions that align with a child's cultural context can also enhance resilience and coping abilities. Thus, tailoring interventions to a child's context, while addressing both resilience and vulnerability, is essential (UNODC & WHO, 2018). In Malaysia, cultural competence is also crucial, as language diversity impacts the accessibility and effectiveness of drug prevention programs (SAMHSA, 2019; Tan et al., 2018).

Prevention science integrates human development into intervention design (Biglan et al., 2011). During middle childhood, children undergo emotional and social changes, prioritizing friendships and peer approval while developing mental skills to express thoughts and feelings (Centers for Disease Control and Prevention, 2024). Emotional awareness, including understanding guilt, pride, and shame, also develops (Denham & Burton, 2003). This stage is crucial for teaching personal and social skills, making it an ideal time for interventions on drug refusal, emotional regulation, decision-making, and communication to help children navigate peer relationships and school environments (UNODC & WHO, 2018). Nevertheless, it is important to customize interventions based on a child's cognitive and emotional development, as younger children often imitate behaviours. Interventions can leverage this stage by modelling positive behaviours from influential figures, such as educators, parents, and peers. Additionally,

various skills can be taught in accordance with their comprehension levels.

School-based interventions targeting social competence could potentially reduce drug use (Bulut & Usman, 2020). The findings on personal and social development, including peer selection, drug refusal skills, emotional regulation, decision-making, and basic communication skills, align with the recommendations of the *European Prevention Curriculum*. However, the findings overlook important skills, such as problem-solving, assertiveness, and self-efficacy (EUDA, 2019). Essentially, interventions should focus on life skills to help children navigate social challenges and foster personal efficacy. Additionally, it is important to consider the role of a child's social environment in shaping behaviour through the observation and reinforcement of positive behaviours.

The findings highlight the need for diverse instructional methods to engage younger children. According to the EUDA (2019), interactive methods, structured lessons, and group activities are the most effective approaches for school-based interventions. The UNODC (2004) emphasizes role-play as an effective method for practicing drug refusal skills, while films and videos can model these skills, aiding in behavioural rehearsal (Scheier, 2012). Children can learn and rehearse positive behaviours through observation and role-playing in a supportive setting. Moreover, creative methods like role-play, music, and videos focus on developing essential personal skills, while creative platforms such as music and sports help

children de-stress and avoid negative peer influences (Volkow, 2019). The Institute for Public Health (2023a) suggests integrating technology, such as digital-based programs, to enhance engagement and foster self-resilience. Similarly, Paz Castro (2022) found that an automated mobile life-skills program effectively prevents drug use, offering a convenient alternative to school-based programs.

Teachers and counsellors play a crucial role in delivering knowledge and implementing sustainable prevention programs. As primary sources of information, teachers support students both inside and outside of the classroom (Gabrhelík, 2020). In addition to promoting prosocial behaviour, they help prevent misconduct and encourage student participation (Low et al., 2013; UNODC & WHO, 2018). The findings also stress the importance of involving counsellors in prevention efforts, with counsellors able to intervene universally, selectively for at-risk groups, or specifically target students showing signs of distress or early drug use (Ratnayake, n.d.). This highlights the significant role of teachers and counsellors as positive role models and sources of reinforcement in the learning process. Through active involvement, they can also help develop essential skills. Cultural and religious factors, such as religious studies or programs led by religious teachers in Malaysia, may also significantly impact drug prevention while promoting respect for diverse beliefs (Mohd Nawawi et al., 2024).

Findings from Jusoh et al. (2023) highlight challenges teachers face in

implementing interventions, such as a lack of guidance, inadequate training, ineffective evaluations, and questionable reports. These issues underscore the need for effective teacher and counsellor training. According to Handrianto et al. (2021), key competencies include developing teaching plans, understanding the curriculum, using effective strategies, fostering a positive environment, and adopting a social approach. Specialized training in identifying and managing conduct disorders and drug abuse is essential for those working with high-risk children (Institute for Public Health, 2023a; Rahimi et al., 2019). Proper training enhances teachers' and counsellors' ability to model positive behaviours and reinforce pro-social actions in students. Additionally, with proper training, they can be better equipped to foster a supportive environment where children can develop critical skills.

This research suggests that interventions should target children exhibiting truancy and conduct issues, as these behaviours often precede drug use later in life (Baharudin et al., 2005; Mansor et al., 2017; Mohd Jais, 2012; Tai & Abu Bakar Ah, 2016). Early interventions for children with emotional and behavioural disorders are crucial, as these children are at greater risk of drug use later in life (UNODC & WHO, 2018). These findings suggest that negative behaviours may be influenced by harmful role models or peers. Therefore, equipping these children with life skills early on can reduce their future risk of drug use. In addition, several Malaysian studies highlight the need to monitor gifted students and children with

special needs, who may be at risk (Abu Bakar & Ishak, 2014; Amat, 2018; Mansor et al., 2017).

The findings emphasize the importance of school-level interventions, with parents serving as a key protective factor against drug use (O'Connell et al., 2009). This is particularly crucial because elementary-aged children from dysfunctional families may associate with peers who engage in risky behaviours, thereby increasing their vulnerability (UNODC & WHO, 2018). The findings underscore the role of parents and caregivers as behaviour role models. Workshops can help parents set rules, monitor activities, develop social skills, and model positive behaviours, promoting healthy development, managing behavioural disorders, preventing violence, and reducing maltreatment (WHO, 2017). Workshops that help parents manage behavioural disorders and promote positive social interactions directly support the development of key life skills in children.

Stringer (2022) links children's brain development to neighbourhood adversity, suggesting that drug prevention should begin early and involve the entire community. The research identifies key external stakeholders for school-based interventions, including non-governmental organizations, government agencies, experts, influencers, and leaders within the community. These stakeholders can influence norms and implement interventions both within and beyond schools (SAMHSA, 2020). The broader social environment plays a crucial role in shaping children's and

adults' behaviours through modelling and reinforcement. Moreover, experts, along with these leaders, can foster life skills by offering guidance, resources, and support systems for schools and families.

Overall, these findings align with i-Cegah's policies on drug prevention education and community mobilization (NADA, 2022). They also contribute to the prevention theories outlined in the *Focus on Prevention Guidelines for Drug and Substance Use* (SAMHSA, 2020). The intervention content supports the behaviour change model for both children and parents. The community organization theory highlights the role of external stakeholders in interventions, while the health belief model suggests that parents are more likely to adopt healthy behaviours when they recognize the importance of avoiding drug use. Additionally, the diffusion of innovation framework illustrates how teachers and counsellors can set trends among students, while external stakeholders, such as community leaders, religious figures, and local artists, can influence adults in school-based interventions.

CONCLUSION

This research emphasizes the need for early preventive interventions for children aged 7 to 9, focusing on age-appropriate drug prevention programs, whether universal, selective, tiered, or indicated. It highlights the importance of considering individual, social, and cultural factors in designing interventions, with a focus on developing life skills such as decision-making,

emotional regulation, and peer resistance. Effective school-based programs require collaboration among parents, teachers, and counselors, supported by the community and various organizations. By addressing the unique needs of younger children, these interventions, whether universal, selective, tiered, or indicated, can better equip them to resist harmful behaviours and contribute to long-term positive outcomes.

The implications of this research highlight the need for early, targeted interventions in lower elementary schools, focusing on promoting personal and social development through curriculum, programs, and policies. It suggests revising drug prevention programs to be developmentally appropriate for children aged 7 to 9 and integrating prevention efforts into the school curriculum while involving parents through workshops. The findings emphasize the importance of community collaboration, particularly in reflecting local cultural values and fostering cross-sector partnerships among education, health, and social welfare. The study also recommends the implementation of pilot programs and a scalable framework for resource allocation, training, and evaluation. These findings contribute to global early prevention efforts and offer valuable insights for adapting interventions in diverse cultural and educational contexts.

This research has several limitations. The sample size, while adequate for qualitative saturation, and its geographical focus may not represent the broader experiences of all Malaysian schools, particularly private or

international ones. Language translation issues could have affected the accuracy of responses, and the researcher's language proficiency may have influenced question phrasing and interpretation, despite efforts to minimize this. Additionally, challenges such as social stigma around drug use, limited resources in rural schools, and parental resistance may hinder the implementation of proposed interventions.

Future research on school-based drug prevention for lower elementary schoolchildren in Malaysia should focus on age-appropriate content that promotes personal and social development, such as drug refusal skills, emotional regulation, decision-making, and communication. Studies should also establish guidelines for identifying at-risk students. Expanding research to include upper elementary, secondary, private, and international schools, as well as tertiary institutions, could offer a broader community perspective. Longitudinal studies are needed to assess the long-term impact of early drug prevention. Additionally, future research should explore different school contexts, regions, and demographics to identify factors influencing positive outcomes. Research should also address implementation barriers like school resources, staff availability, and costs, while exploring how interventions can be scaled in both urban and rural settings.

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Philanthropic Fundraising in Higher Education: Alumni Engagement, Brand Equity, and Social Impact

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ABSTRACT

Philanthropy has emerged as an alternative solution to address the high cost of education, which often exacerbates disparities in access to education. Within the context of higher education, alumni play a pivotal role as donors. This study aims to examine the influence of alumni engagement, university brand equity, and the social impact of philanthropic institutions on alumni's philanthropic intentions towards their alma mater. The research focuses on alumni of Universitas Gadjah Mada (UGM), Yogyakarta, which hosts Rumah ZIS, a philanthropic institution that has pioneered and set benchmarks for similar initiatives across other Indonesian universities. The analysis employs the Partial Least Squares Structural Equation Model (PLS-SEM) using SmartPLS software. The findings reveal that alumni engagement (AE), brand equity (BE), and the social impact of campus philanthropic institutions (SI) significantly influence alumni philanthropic intention (PI). This study proposes a model for philanthropic fundraising in higher education by integrating three critical components: alumni, universities, and philanthropic organizations. Enhancing

alumni engagement, strengthening university brand equity, and optimizing the social impact of philanthropic institutions can effectively boost alumni philanthropic intentions. To expand their fundraising strategies, higher education institutions should leverage broader alumni networks, thereby positioning alumni philanthropy as a foundational pillar for financing higher education in the future.

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INTRODUCTION

The issue of financing higher education has led to significant disparities in access to education. According to Kompas Daily Newspaper, the participation rate in higher education among the poorest 20 percent of Indonesian society is alarmingly low. Additionally, parents are increasingly struggling to afford higher education for their children (Rosalina et al., 2022). Although the government has implemented scholarship programmes such as BidikMisi to address this challenge (Aliyyah et al., 2019), these initiatives are often mistargeted (Kusumawati & Kudo, 2019). As a result, the problem of equitable access to higher education remains unresolved (Fadhil & Sabic-El-Rayess, 2021).

Philanthropy offers an alternative approach to addressing inequities in higher education, particularly amidst escalating cost pressures (Rohayati et al., 2016) and declining government support over recent decades (Drezner et al., 2020). Research highlights that philanthropy has historically played a transformative role in higher education and is expected to continue doing so (Pasic, 2023). Leading global universities such as Harvard, Yale, and Stanford boast substantial endowments (Kennedy, 2020), as do Islamic institutions like Al-Azhar University in Egypt and the Qarawiyyin University in Morocco (Mohamad et al., 2017). Moreover, private philanthropy is an emerging trend in higher education across Asia (Lam, 2023). Through philanthropic contributions, universities can address funding needs, improve educational quality

(Hasan et al., 2019), and enhance their social impact, thereby fulfilling their mission to serve the public good (Pasic, 2023).

From the perspective of Islamic philanthropy in Indonesia, Law Number 23 of 2011 on Zakat Management permits universities to manage Zakat, Infaq, and Sadaqah (ZIS) through Unit Pengelola Zakat (UPZ). Furthermore, the Indonesian Ulema Council (MUI) Fatwa Number Kep.-120/MU/II/1996 endorses the allocation of zakat for scholarships, a principle already implemented by several philanthropic institutions (Nasution, 2021). This legal and moral legitimacy has allowed universities to develop Islamic philanthropic initiatives, such as Universitas Gadjah Mada's (UGM) Rumah-ZIS. As a pioneering campus UPZ in Indonesia, Rumah-ZIS has been recognized as an efficient and stable philanthropic institution and has set benchmarks for similar initiatives at other universities (Piliyanti & Meilani, 2020).

The success of Rumah-ZIS UGM in fostering campus philanthropy is particularly noteworthy, especially regarding alumni participation as donors. Previous research underscores the critical role of alumni contributions in both public and private universities (Heckman & Guskey, 1998; Iskhakova et al., 2016; Lara & Johnson, 2014), prompting universities to cultivate lifelong relationships with their alumni (Drezner, 2018a). For instance, Iskhakova et al. (2016) noted that in the US and UK, the majority of university funding comes from philanthropy—particularly from alumni—rather than tuition fees or

government support. According to Walton (2019), Peter Dobkin Hall argued that individual and foundation donations were pivotal to the rise of modern universities in America. Consequently, understanding the factors that influence alumni involvement and their willingness to support their alma mater remains an important area of research (Pedro et al., 2018). However, preliminary observations suggest that UPZ fundraising efforts in Indonesian universities primarily target staff and employees.

Previous studies have examined the influence of various factors on alumni philanthropy, including marketing (McAlexander et al., 2014), alumni affinity and generational differences (McAlexander et al., 2016), citizenship behaviour (Wulandari, 2019), brand community (Kelly & Vamosiu, 2021), and alumni engagement (Barber, 2013; Drezner, 2018a). Building on these studies, this research investigates the role of alumni engagement, brand equity, and the social impact of philanthropic institutions in shaping alumni philanthropic intentions towards their alma mater. While brand equity is traditionally associated with marketing, its relevance in higher education has grown as universities compete within the global academic marketplace (Mourad et al., 2020). Strengthening university branding can enhance public trust and influence philanthropic intentions (Drezner et al., 2020). Moreover, alumni contributions are often aligned with the perceived social and personal value of the institutions they support (Drezner, 2018b). This study seeks to address a research gap

by examining the combined influence of alumni engagement, brand equity, and social impact on philanthropic intentions towards higher education institutions. The findings will contribute to the development of a unique philanthropic fundraising model for higher education, incorporating three key stakeholders: alumni, universities, and philanthropic institutions.

LITERATURE REVIEW

Philanthropic Intentions

Etymologically, the term philanthropy originates from the Greek language, comprising two words: *philos*, meaning “love,” and *anthropos*, meaning “human.” Thus, philanthropy can be defined as “love for humanity.” Olivier (2012) defines philanthropy as “voluntary actions undertaken by individuals or groups to enhance societal welfare.” Zunz emphasizes that the concept of philanthropy extends beyond monetary donations to encompass activities such as education, health, and environmental initiatives. From an Islamic perspective, Islamic philanthropy represents an adaptation of the modern concept of philanthropy, rooted in principles such as *zakat*, *infaq*, *alms*, and *waqf* (Fauzia, 2017).

Philanthropic intention refers to the desire or willingness of an individual or group to participate in philanthropic activities or contribute to charitable causes. It reflects a readiness to provide financial resources, time, or support to address social issues or promote specific causes. In the context of intention theory, Hwang et al. (2020) describe behavioral intention as the

likelihood of an individual engaging in a particular behavior, encompassing sub-dimensions such as the intention to use, word-of-mouth intention, and willingness to pay more. Ajzen (1991) posits that behavioral intention significantly influences the likelihood of an individual performing a specific action. This process is deliberate, shaped by attitudes, social norms, and perceived behavioral control (Ajzen, 1991).

Alumni Engagement

The concept of engagement was initially defined by Kahn as the integration of organizational members into their work roles, manifested physically, cognitively, and emotionally during task performance. Agoi (as cited in Wulandari, 2019) further elaborates on engagement as a state characterized by passion, dedication, and absorption. Barber (2013) conceptualizes alumni engagement using various theories, including Maslow's hierarchy of needs, which categorizes human motivations into levels such as physiological needs, safety, belonging and love, self-esteem, and self-actualization. According to this theory, needs are typically activated sequentially, with higher-level needs emerging upon the satisfaction of lower-level ones. Hummel (as cited in Barber, 2013) suggests that alumni involvement corresponds to the need for belonging and love, encompassing a sense of membership and participation in groups or communal associations.

Drezner and Pizmony-Levy (2021) underscore the importance of fostering a strong sense of meaningful belonging to

promote alumni philanthropy, beyond general involvement. Kevin Fleming's Pots of Water framework (Fleming, 2019) identifies five core factors influencing alumni engagement: personal values, perceived institutional integrity, connectedness, commitment, and a sense of fulfillment. Radcliffe (2011) defines alumni engagement as alumni's connection to their alma mater, demonstrated through participation in campus events, volunteering, and providing constructive input for institutional development. This study adopts these perspectives as research indicators, focusing on a sense of belonging actualized through diverse alumni activities and their perceptions of their alma mater, including pride and dedication. Radcliffe (2011) concludes that higher levels of alumni engagement correspond with greater tendencies for voluntary contributions to their alma mater, a finding consistent with the works of Barber (2013) and Drezner (2018a).

H1: Alumni engagement (AE) significantly influences alumni philanthropic intentions (PI).

Brand Equity

From a marketing perspective, brand equity is often defined in various ways, but there is consensus that it represents the additional value attributed to a brand. Keller (as cited in Ebrahim, 2020) identifies four dimensions of brand equity: brand awareness, brand image, brand association, and perceived brand quality. Tasci (2021) highlights distinctions in conceptualizing brand equity, either through perception-based or financial-

based metrics. Financial-based brand equity focuses on metrics such as cash flow, cost savings, sales, and pricing, while perception-based brand equity involves aspects such as awareness, image, perceived quality, perceived value, and loyalty.

Brand equity encompasses the overall value of a brand as perceived by consumers, extending beyond its logo or name to include the customer experience. According to Tasci (2021), the brand equity of a university represents the perceived value and reputation of the institution among the public, students, alumni, and other stakeholders. It reflects how the university is known, valued, and identified, as well as how these perceptions influence decision-making about the institution. Drezner et al. (2020) argue that public discourse, perceptions, and personal observations of higher education shape beliefs, which in turn affect attitudes toward giving. Fleming's (2019) concept of perceived institutional integrity aligns with Drezner et al. (2020), illustrating that trust and perceived integrity are integral to brand equity. Campus brand equity is shaped by factors such as academic quality, faculty reputation, graduate success, student experience, facilities, research output, and societal contributions. Universities with strong brand equity are more likely to attract talented students, secure financial support, and maintain a favourable reputation in higher education.

Brand equity is also a critical indicator of financial success, drawing significant attention from academics and practitioners over the past three decades (Rojas-Lamoren

et al., 2022). In recent years, brand equity has been studied extensively in the context of higher education, where it is found to influence university reputation (Khoshtaria et al., 2020; Mourad et al., 2020). Prior studies demonstrate its substantial impact on individuals' giving intentions to non-profit organisations (Hou et al., 2009) and consumer purchasing decisions (Mawadati, 2023; Thuy, 2022).

H2: The brand equity of a higher education institution (BE) significantly influences alumni philanthropic intentions (PI).

Social Impact of Philanthropic Institutions

Measuring the social impact of philanthropy is a key component in evaluating the performance of philanthropic institutions. It is one of the micro-dimensions identified in the National Zakat Index (IZN) and CIBEST. The concept of social impact is inherently fluid, as its definition is often subjective and normative, making it adaptable and challenging to standardise. Hertel et al. (2020) identify various interpretations of social impact within the social entrepreneurship literature, such as metrics assessing the percentage of beneficiaries gaining permanent employment, levels of poverty alleviation, and jobs created. However, recent developments in impact evaluation literature define impact as the changes brought about by specific interventions, encompassing both short- and long-term effects. In the context of philanthropy, these concepts can be

elaborated upon using impact indicators from the CIBEST framework. The impact of zakat, for instance, is measured through three primary variables: the welfare index, which integrates material income and spiritual conditions; the modified human development index, accounting for zakat's influence on education and health among mustahiq (those eligible to receive zakat); and indicators of independence, assessing the sustainability of mustahiq income sources post-zakat distribution (Bastiar & Bahri, 2019).

Previous research, such as the model by Iskhakova et al. (2016), highlights the influence of philanthropy on alumni loyalty. The social impact of philanthropic institutions aligns with the emphasis on physical evidence in social marketing theory, which enhances campaign effectiveness by demonstrating tangible outcomes (Nasution, 2023). The venture financing model, widely adopted in the United States and Australia for philanthropy in higher education, places a strong emphasis on the social impact of investment-based donations (Rowe, 2023). Drezner (2018b) asserts that alumni contributions are motivated not only by loyalty but also by the alignment of social and personal values with the institution's mission. This study incorporates this alignment as a key indicator of the social impact variable, assessing whether the objectives of a university's philanthropic initiatives resonate with alumni values, thereby encouraging their contributions.

H3: The social impact of philanthropic institutions (SI) significantly influences alumni philanthropic intentions (PI).

METHODS

Data Collection and Sampling Procedure

This study employs an online survey method among UGM alumni to test the hypothesis, considering logistical and practical constraints. The main logistical challenge is distributing the survey to alumni located both domestically and internationally. The online survey provides an efficient solution to overcome issues related to distance and time. Additionally, online surveys are more cost- and time-efficient compared to face-to-face surveys, which require transportation, logistics, and more time for data collection. UGM was chosen for several reasons. First, as a state university, it faces greater pressure than private institutions to seek external funding sources and tends to adopt sophisticated techniques in fundraising efforts (Filosa & Bollier, 2017). Second, the university has established a Zakat Management Unit (UPZ) called Rumah-ZIS, which is known as a campus UPZ pioneer in Indonesia. Rumah-ZIS is regarded as the most efficient and stable philanthropic institution at the university level and has become a benchmark for several UPZs at other universities (Piliyanti & Meilani, 2020). Third, the university's alumni organization, KAGAMA (Alumni Family of Gadjah Mada University), has been established since 1958 (KAGAMA, 2024) and is one of the oldest and most solid alumni organizations in Indonesia (Wahyono, 2023).

The sample size framework in this study follows the guidelines of Hair et

al. (2021), assuming that the minimum expected path coefficient to be significant is between 0.11 and 0.20. Therefore, around 155 observations are needed to achieve significance at the 5% level, with 80% power. The sampling technique used in this study was convenience sampling, based on the availability of respondents who are UGM alumni. Participants were selected based on their accessibility and willingness to participate in the online survey. However, it is important to recognize that the use of convenience sampling can introduce potential biases, such as selection bias, where individuals who are more accessible or more motivated may differ from the general alumni population. This could affect the generalizability of the findings to all UGM alumni. To mitigate this, a larger sample size (227 respondents) was collected, which helps improve the precision of the estimates and reduce the impact of potential biases. According to Hair et al. (2021), larger sample sizes increase the precision (i.e., consistency) of PLS-SEM estimates. Respondents in this study were contacted by UGM, specifically its philanthropic institution, Rumah ZIS, based on a research permit letter from the Institute for Research and Community Service, State Islamic University of North Sumatra, Number B.121/Un.11.R/L2.3/KS.02/05/2024. Sample members were sent a Google Form link that briefly introduced the research objectives and included a questionnaire with several statements to be rated using a 1-5 Likert scale. Therefore, it can be said that the data used to answer

this research question is primary data, as it comes directly from respondents. However, secondary data will also be used to help analyze the primary data. Data was collected over the past three months (May to July 2024), providing respondents with the opportunity to complete the research questionnaire.

Measurement and Survey Design

The research questionnaire was designed based on operational definitions derived from previous studies, which are summarized in Table 1.

Based on Table 1 above, the operationalization of alumni engagement (AE) in this study is grounded in established theories and empirical evidence. The behaviors outlined in previous research are integrated into the survey items, which are specifically designed to capture key aspects of alumni engagement. For example, AE.1, which focuses on attendance at various campus activities, aligns with Radcliffe's (2011) emphasis on alumni presence at events. AE.2, which addresses the willingness to attend campus activities if invited, reflects a proactive readiness to engage. AE.3, which focuses on voluntary participation in supporting the alma mater, is consistent with Barber's (2013) concept of contribution and belonging. AE.4, which involves taking initiative and providing constructive input for campus development, reflects the perspectives of both Radcliffe (2011) and Drezner (2021) on meaningful engagement. Additionally, AE.5, which measures feelings of pride as an alumnus,

Table 1
Measurement of constructs

Constructs	Codes	Measurement	Sources
Alumni Engagement	AE.1	Attendance at various campus activities	Radcliffe, 2011; Barber, 2013; Wulandari, 2019
	AE.2	Willingness to attend campus activities if invited	
	AE.3	Voluntary participation in helping the alma mater	
	AE.4	Take initiative and provide constructive input on campus development	
	AE.5	Proud to be an alumni	
	AE.6	Dedication to alma mater	
Brand Equity	BE.1	Curiosity about campus developments	Tasci, 2021; Ebrahim, 2020
	BE.2	Good introduction and awareness of the campus	
	BE.3	Image and reputation of the university	
	BE.4	Quality of education, campus facilities, and infrastructure	
	BE.5	Conduciveness to campus life	
	BE.6	Good relations between alumni and alma mater	
	BE.7	Likelihood of recommending your alma mater to others	
Social Impact	SI.1	Knowledge of campus philanthropic institutions	Hertel et al., 2020; CIBEST; Bastiar & Bahri, 2019
	SI.2	The impact on equal access to education	
	SI.3	The impact on the development of community service	
	SI.4	The impact on research development	
	SI.5	The alignment of the social impact with the donor's objectives	
Philanthropic Intentions	PI.1	Desire to participate in fundraising for the alma mater	Hwang et al., 2020; Ajzen, 1991.
	PI.2	Participation in building an alumni network	
	PI.3	Willingness to promote and campaign for campus philanthropy	
	PI.4	Desire to prioritize donations to the alma mater's philanthropic institutions	
	PI.5	Willingness to channel donations through campus philanthropic institutions	

draws on Fleming's (2019) sense of fulfillment and Barber's (2013) notions of self-esteem, while AE.6 captures dedication to the alma mater, reflecting the commitment outlined by Fleming (2019) and Barber (2011). The survey design ensures that each item accurately reflects the constructs identified in the literature, with pride and dedication (AE.5 and AE.6) aligning with the emotional dimension of engagement

emphasized by Barber (2013) and Fleming (2019). The participation indicators (AE.1–AE.4) capture both the physical and cognitive aspects of engagement, as described by Kahn.

The operationalization of brand equity (BE) in this study is based on well-established theoretical frameworks and empirical findings. The survey items were designed to reflect these concepts, with each

item targeting a specific dimension of brand equity. BE.1 captures brand awareness, as defined by Keller (1993), focusing on curiosity about campus developments. BE.2 addresses both brand awareness and brand image, relating to the positive introduction and general awareness of the campus, as described by Keller (1993) and Tasçi (2021). BE.3 directly reflects brand image and brand association, in line with the university's reputation, as outlined by Drezner et al. (2020) and Tasçi (2021). BE.4 highlights perceived quality, particularly in relation to the quality of education, campus facilities, and infrastructure, as emphasized by Keller (1993) and Drezner et al. (2020). BE.5 focuses on the student experience, a critical aspect of brand equity in higher education, as suggested by Mourad et al. (2020), highlighting the conduciveness of campus life. BE.6 reflects brand association and the sense of community between alumni and the institution, factors that influence alumni loyalty and engagement, as noted by Fleming (2019). Finally, BE.7 examines loyalty and advocacy, dimensions commonly used to measure brand equity, by assessing the likelihood of recommending the alma mater to others, as discussed by Keller (1993) and Tasçi (2021). These items ensure the survey addresses both perception-based metrics of brand equity and the behaviors and attitudes related to institutional integrity and trust, which are critical factors influencing alumni engagement and philanthropic intentions (Drezner et al., 2020).

In this study, social impact is specifically understood within the context

of philanthropy, aligning with the concepts of welfare, human development, and independence, as discussed by Bastiar and Bahri (2019) in relation to zakat. These dimensions measure the material and spiritual conditions, education, health, and independence of individuals benefiting from philanthropic activities. Based on this framework, several survey items have been developed. SI.1 measures knowledge of campus philanthropic institutions, which captures awareness and understanding of the entities involved in university philanthropy. SI.2 explores the impact on equal access to education, reflecting the social impact in the area of educational equality, a central theme in the literature on social impact, particularly in the context of philanthropy. SI.3 assesses the impact on the development of community service, aligning with broader social impacts on community well-being. SI.4 evaluates the contribution of philanthropy to research development, a significant area in which philanthropy influences institutional progress. Finally, SI.5 focuses on the alignment of social impact with donor objectives, measuring the degree to which philanthropic activities correspond with the values of donors, as emphasized by Drezner (2018b) as a key motivator for alumni contributions. These items are drawn from the literature on social impact in philanthropy, particularly the works of Iskhakova et al. (2016) and Rowe (2023), which examine the social outcomes of philanthropic contributions in higher education. The items are designed to capture both the immediate and long-term

changes resulting from philanthropic efforts, while also assessing how well philanthropic goals align with the personal and social values of donors, as highlighted by Drezner (2018b). For instance, SI.5 specifically explores the importance of this alignment, which has been shown to influence alumni philanthropic behavior and loyalty.

A pilot test was conducted with 50 respondents to refine the survey, ensuring the reliability and validity of the constructs before wider distribution. The results indicated that Cronbach's alpha values ranged from 0.887 to 0.956, and the Composite Reliability values ranged from 0.923 to 0.966, both of which exceed the minimum threshold of 0.70 (Hair et al., 2021). Regarding discriminant validity, the HTMT analysis revealed a high correlation between the constructs BE <> AE and PI <> SI. To address this, the indicators were revised, and the subsequent HTMT values fell below 0.9, indicating satisfactory discriminant validity.

Data Analysis

The analysis was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique, implemented via Smart PLS software version 4.1.0.3. The PLS path model comprises two components. First, there is the measurement model (Outer Model), which illustrates the relationship between the construct and its indicator variables. Second, there is the structural model (Inner Model), which represents the relationships between constructs. The analysis of the

measurement model includes tests for validity and reliability. Validity is assessed through convergent and discriminant validity. Convergent validity is indicated by an Outer Loading score greater than 0.7 and an Average Variance Extracted (AVE) score greater than 0.5 (Hair et al., 2021). Discriminant validity is evaluated using the Heterotrait-Monotrait Ratio of Correlations (HTMT), with a value below 0.9 indicating discriminant validity between two reflective constructs (Henseler et al., 2015). Reliability is assessed using Cronbach's alpha, with a minimum value of 0.70 (or 0.60 in exploratory research) and a maximum value of 0.95 (Hair et al., 2021). Second, the analysis of the structural model involves examining the R-squared value, followed by the path coefficient, T-statistic (bootstrapping), predictive relevance, and model fit. An R-squared value of 0.75 is considered substantial, 0.50 is considered moderate, and 0.25 is considered weak across various social science disciplines (Hair et al., 2021). The statistical significance criterion is a p-value of less than 0.05 (Sarstedt & Cheah, 2019).

RESULTS AND DISCUSSION

Description of Research Respondents

Table 2 shows that the respondents in this study consisted of 227 alumni, with the following demographic distribution: 39.2% were male and 60.8% were female, indicating a female dominance. Regarding the year of graduation, 55.7% graduated before 2014, 18.9% between 2015 and 2017, 14.7% between 2018 and 2020, and 10.5%

after 2020, demonstrating a predominance of alumni who graduated before 2014. In terms of faculty, most respondents were from Vocational Schools (19.3%), followed by the Faculty of Engineering (10.1%), Faculty of Agriculture (18.0%), Faculty of Cultural Sciences (12.7%), Faculty of Economics and Business (5.2%), Faculty of Mathematics and Natural Sciences (5.2%), and other faculties (29.5%). Regarding profession, 18.9% were self-employed, 11.8% were businessmen, 15.4% were civil servants, 25.1% were private sector employees, 6.1% were teachers, and 22.7%

were in other professions. Furthermore, 74.7% of respondents had donated to Rumah ZIS, while 25.3% had not, indicating that the majority of respondents had contributed.

Outer Model

The outer model is assessed by examining the validity and reliability values of the model’s measurements, including validity and reliability tests. Validity is measured through convergent validity (Outer Loading and AVE) and discriminant validity (HTMT). Table 3 shows that in this study,

Table 2
Respondent description

Category	Indicator	Total	Percentage
Gender	Male	89	39.2
	Female	138	60.8
Graduation year	< 2014	53	55.7
	2015 to 2017	18	18.9
	2018 to 2020	14	14.7
	> 2020	10	10.5
Faculty	Economics and Business	12	5.2
	Engineering	23	10.1
	Vocational School	44	19.3
	Agriculture	41	18.0
	Cultural Sciences	29	12.7
	Mathematics and science	12	5.2
	Other	66	29.5
Profession	Self-employed	43	18.9
	Businessman	27	11.8
	Civil servants	35	15.4
	Private Sector Employee	57	25.1
	Teacher	14	6.1
	Other	51	22.7
Have you ever donated to Rumah ZIS?	Ever	169	74.7
	Never	58	25.3
Total		227	100.0

Table 3
Validity and reliability for constructs

Construct	Indicators	Loading Factor	Cronbach's alpha	Composite Reliability	AVE
Alumni Engagement	AE.1	0.756	0.911	0.932	0.695
	AE.2	0.862			
	AE.3	0.865			
	AE.4	0.786			
	AE.5	0.841			
	AE.6	0.884			
Brand Equity	BE.1	0.689	0.896	0.921	0.662
	BE.2	0.779			
	BE.3	0.862			
	BE.4	0.897			
	BE.5	0.848			
	BE.6	0.791			
Social Impact	SI.1	0.796	0.876	0.909	0.668
	SI.2	0.783			
	SI.3	0.778			
	SI.4	0.818			
	SI.5	0.906			
Philanthropic Intentions	PI.1	0.852	0.880	0.918	0.736
	PI.2	0.843			
	PI.3	0.920			
	PI.4	0.814			

Source: SmartPIS (2024)

the Loading Factor score exceeded 0.7, and the AVE score exceeded 0.5, meeting the criteria (Hair et al., 2021). In addition, the reliability test is measured by Cronbach’s alpha and Composite Reliability scores. The results indicate that both the Cronbach’s alpha and Composite Reliability scores meet the minimum required value of 0.70 (Hair et al., 2021).

Table 4 indicates that the HTMT values in this study are all less than 0.9, thus satisfying the criteria for discriminant validity between the reflective constructs (Henseler et al., 2015). This demonstrates

that the constructs measured by these latent variables have clear distinctions, characterized by minimal significant overlap.

Table 4
Discriminant validity: HTMT

Latent variables	AE.	BE.	SI.	PI.
AE.				
BE.	0.865			
SI.	0.795	0.842		
PI.	0.780	0.836	0.852	

Source: SmartPIS (2024)

Inner Model

To analyze the direct and indirect influences between variables, an Inner Model evaluation was performed. This evaluation began with examining the R-squared value, followed by the path coefficients, T-statistics (bootstrapping), predictive relevance, and model fit using PLS-SEM.

The R-squared value for the philanthropic intention (PI) variable, as shown in Table 5, is 0.658, indicating that alumni engagement, brand equity, and social impact account for 65.8% of the variance in PI, while the remaining 34.2% is influenced by other factors. This value is considered moderate.

Furthermore, the results of this research show that the coefficient value of the AE variable is 0.175, indicating a positive relationship. If it is assumed that the AE coefficient value increases by 1%, there will be an increase in PI by 0.175. The BE coefficient value is 0.298, also showing a positive relationship. Therefore, if the BE coefficient value increases by 1%, there

will be an increase in PI by 0.298. The SI coefficient value is 0.413, demonstrating a positive relationship. Hence, if the SI coefficient value increases by 1%, there will be an increase in PI by 0.413.

To assess whether the relationship between these variables is significant, Figure 1 and Table 6, which show the results of the bootstrapping method carried out in SmartPLS 4, should be examined. The criterion for statistical significance is a P-value < 0.05 (Sarstedt & Cheah, 2019). This can also be confirmed by comparing the calculated t-value to the t-table value (1.98). If the calculated t-value is greater than the t-table value, the hypothesis (H) is accepted (indicating an influence). Based on Figure 1 and Table 6, the research results show that all hypotheses (H1, H2, H3) are accepted, as each has a P-Value < 0.05 (the probability for AE → PI is 0.031, BE → PI is 0.000, and SI → PI is 0.000), or a calculated t-value greater than the t-table value (H1: 2.160 > 1.98; H2: 3.623 > 1.98; H3: 6.025 > 1.98).

Table 7 shows that the predictive relevance value obtained through the blindfolding test is 0.647, which is greater than zero, indicating that the model has good predictive relevance.

Table 8 shows that the NFI value in this model is 0.763, meaning that this research model fits 76.3% of the data.

Table 5
R-square value

	R-square	R-square adjusted
PI.	0.658	0.654

Source: SmartPIS (2024)

Table 6
T-statistics (Bootstrapping)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AE. -> PI.	0.175	0.176	0.081	2.160	0.031
BE. -> PI.	0.298	0.297	0.082	3.623	0.000
SI. -> PI.	0.413	0.416	0.069	6.025	0.000

Source: SmartPIS (2024)

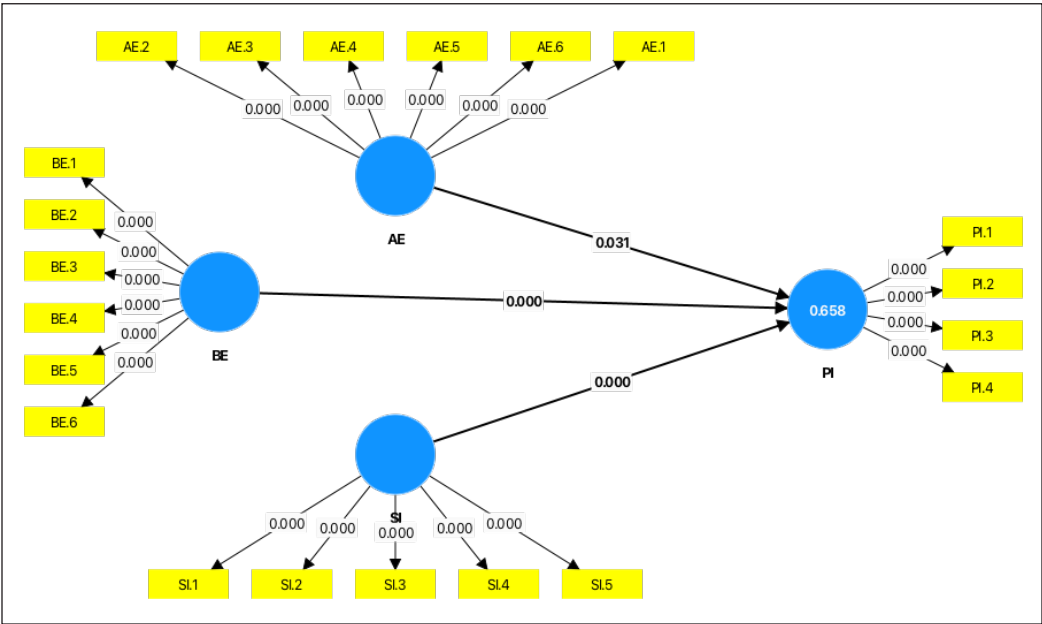


Figure 1. Bootstrapping
Source: Smart PLS (2024)

Table 7
LV prediction summary

	Q ² predict	RMSE	MAE
PI.	0.647	0.604	0.444

Source: Smart PLS (2024)

Table 8
Model fit

Model	Saturated model	Estimated model
SRMR	0.077	0.077
d_ ULS	1.379	1.379
d_ G	0.814	0.814
Chi-square	991.535	991.535
NFI	0.763	0.763

Source: Smart PLS (2024)

DISCUSSION

The results of this research demonstrate that the alumni engagement (AE) variable has a significant effect on the philanthropic

intention (PI) variable. This finding aligns with previous research by Radcliffe (2011), Barber (2013), Fleming (2019), and Drezner (2018a), which states that higher levels of alumni engagement are associated with a greater propensity for voluntary contributions to the alma mater. Wulandari (2019) also found a correlation between the level of alumni involvement and engagement with financial and social behavior, moderated by citizenship behavior. According to Barber (2013), and supported by Drezner and Pizmony-Levy (2021), alumni engagement is driven by a sense of love and belonging, drawing on Maslow's hierarchy of needs theory. To enhance alumni engagement, it is necessary to foster these connections, which in this study was achieved by organizing alumni activities and building communication to establish relational bonds, as also suggested by Cho

et al. (2019). Vidal and Pittz (2019) argue that universities must invest resources to create and promote participation in campus reunion opportunities. Moreover, campuses need to design experiences that generate pride among alumni, thereby cultivating their dedication to the institution. If alumni have positive experiences during their studies, they are more likely to donate to the university (Vidal & Pittz, 2019).

The second key finding of this study reveals that the brand equity (BE) variable significantly influences alumni philanthropic intentions (PI). While BE is traditionally associated with marketing, recent developments indicate that universities are increasingly utilizing marketing technologies (Drezner, 2018a; Mourad et al., 2020). As identified in this research, BE plays a crucial role in the financial success of a brand (Rojas-Lamorenna et al., 2022) and in influencing purchasing decisions (Mawadati, 2023; Thuy, 2022), although BE alone is insufficient for creating brand awareness. Our findings extend the influence of BE to philanthropic intentions, supporting the work of Khoshtaria et al. (2020), who highlighted the impact of BE on university reputation. This study suggests that higher education institutions should develop their campus brand to foster a positive image and perception in the public eye, which builds trust—a factor that influences alumni donations (Drezner et al., 2020). Similarly, Fleming (2019) advocates for building institutional integrity to enhance university brand equity. In the broader context of non-profit organizations, the results of this study

are consistent with the findings of Hou et al. (2009). However, how to effectively cultivate BE in higher education institutions remains a limitation of this research and warrants further investigation. Nonetheless, this study emphasizes the importance of focusing on educational quality, facilities, infrastructure, campus life, and the cultivation of strong relationships between alumni and the alma mater.

The results of this study also confirm the impact of the social influence of philanthropic institutions on alumni philanthropic intentions. These findings reinforce the importance of demonstrating the tangible social impact of philanthropists' donations, in line with recent developments in philanthropic models (Rowe, 2023). The study highlights the need for alignment between the mission and social objectives of university philanthropic institutions to encourage alumni donations, as also noted by Drezner (2018b). Additionally, this study extends the findings of Iskhakova et al. (2016) based on the IAL model, which identifies philanthropy as a key determinant of alumni loyalty, including their commitment to donating to their alma mater.

Philanthropic actions are often perceived as charitable (Brady et al., 2002), and the findings of this study are consistent with Cascione's (2004) research, which identified religion as a significant motivation for many higher education philanthropists. The findings also reveal that social impact is the most influential factor contributing to philanthropic intentions. When viewed

through the lens of Cascione's description of religious motivation, which includes goals such as creating a better world and helping others, this is congruent with the social impact indicators in this study, which focus on providing equal access to higher education and engaging in community service. These results further support the importance of physical evidence in the social marketing theory of philanthropic organizations, particularly the presentation of concrete data or statistics demonstrating the positive impacts achieved by philanthropic institutions (Nasution, 2023).

Although this study is focused on university philanthropy, its findings are also applicable to the development of strategies for Islamic philanthropy in line with global trends, particularly as the study pertains to a zakat management institution. Islamic philanthropic organizations should not hesitate to adopt marketing advancements commonly used in the business sector and adapt them for zakat and waqf fundraising strategies, while maintaining adherence to Sharia principles. In line with this study's findings, zakat management institutions could establish alumni networks consisting of individuals who have benefited from their programs. These institutions should foster strong relationships with these alumni by involving them in relevant activities and maintaining continuous communication to build meaningful engagement. Such alumni could become valuable ambassadors, enhancing the institution's branding within the community. The finding that social impact is the most influential factor in

alumni philanthropic intentions suggests that integrating modern approaches, such as strong brand equity management and robust alumni engagement, could help tailor zakat and waqf programs to meet the expectations of alumni donors. This approach would foster emotional connections and enhance trust in the institution. Consequently, this model not only broadens the scope of university-linked philanthropy but also strengthens its role as an agent of social change, in alignment with Islamic values and global needs.

CONCLUSION

This study highlights the importance of alumni engagement, brand equity, and social impact in influencing alumni philanthropic intentions toward higher education institutions. In the context of the financing challenges faced by higher education in Indonesia, which results in disparities in access to education, philanthropy presents an effective alternative solution. The findings suggest that increasing alumni engagement through programs that strengthen their emotional connection with their alma mater has the potential to enhance philanthropic contributions. Additionally, university brand equity plays a significant role in shaping philanthropic intentions, with the quality of education and a positive institutional image contributing to stronger alumni loyalty. The social impact of philanthropic institutions also exerts the greatest influence on alumni philanthropic intentions, indicating that alumni are more likely to donate when they perceive their contributions as making

a tangible difference. By harnessing the potential of alumni, higher education institutions in Indonesia can play a pivotal role in creating more equitable access to education through effective philanthropic initiatives.

Implications of the Study

This study makes a significant contribution to the literature linking alumni engagement, university brand equity, and the social impact of philanthropic organizations to alumni philanthropic intentions. The research proposes a model related to philanthropic intentions in higher education by connecting three key components: alumni, universities, and their philanthropic organizations. This study advances the theoretical understanding of alumni philanthropy in higher education by testing and extending several key frameworks. First, it validates the Theory of Planned Behavior (TPB) (Ajzen, 1991), showing that alumni's philanthropic intentions are driven by attitudes, norms, and perceived control, expanding TPB's relevance to non-profit giving contexts. Second, it applies Maslow's Hierarchy of Needs (via Barber, 2013), confirming that belongingness fosters alumni engagement and subsequent donations, thus broadening its application to educational philanthropy without altering the original theory. Third, Engagement Theory (Kahn via Wulandari, 2019) is extended, demonstrating that multi-dimensional alumni involvement predicts financial support beyond organizational settings. Fourth, Brand Equity Theory (Keller via

Ebrahim, 2020; Tasci, 2021) is adapted to higher education, revealing that university brand strength enhances alumni giving intentions, enriching its scope in non-commercial domains. Finally, Social Impact Measurement Concepts (CIBEST via Bastiar & Bahri, 2019; Hertel et al., 2020) are reinforced, with findings highlighting social impact as a key driver of donor behavior, integrating secular and Islamic perspectives. Together, these findings offer a cohesive model linking individual, institutional, and societal factors, enhancing the explanatory power of these theories in philanthropy research.

Practically, universities need to strengthen their alumni networks by building long-term relationships through relevant activities, such as reunions and continuous communication. Moreover, university brand equity must be carefully managed to enhance the institution's image and reputation in the eyes of alumni. This brand equity management is not only crucial for attracting prospective students, but also for deepening alumni's emotional connection to their alma mater. Universities should also optimize the social impact of their philanthropic organizations by presenting tangible evidence of the positive contributions they have made to society.

Furthermore, university philanthropic organizations should diversify their fundraising strategies, moving beyond salary deductions from campus employees and leveraging a broader alumni network. This will ensure that alumni philanthropy becomes a key pillar of higher education

financing in the future. Universities are also encouraged to expand their philanthropic impact, not only through scholarships but also by funding research or programs that provide direct benefits to the surrounding community. This strategy will solidify the role of universities as agents of social change, contributing not only to education but also to the welfare of society.

Limitations and Recommendations for Future Research

This study identifies several limitations that should be considered for future research. The research model demonstrates a moderate value, suggesting that there are additional factors influencing alumni philanthropic intentions that were not fully explored in this study. While the study focuses on three main factors—alumni engagement, brand equity, and social impact—it does not examine how these factors may be influenced by specific conditions such as individual experiences or other external factors. Future research that explores the moderating or mediating variables influencing philanthropic intentions could offer more comprehensive insights. Additionally, the study's focus on alumni from a single university in Indonesia means that these findings may not be entirely applicable to alumni from other universities with different social, cultural, or economic contexts, or with philanthropic organizations that may have varying conditions. Therefore, it is important to develop a more comprehensive and objective measurement of social impact and to explore variations in philanthropic

intentions across different contexts.

For future research, it is recommended to adopt a more holistic approach by examining a wider range of factors influencing alumni philanthropic intentions, such as personal experiences or the effects of external philanthropic campaigns. Further research could also draw upon various alumni behavior theories, such as the Theory of Discretionary Collaborative Behavior (DCB), the Theory of Existence, Relatedness, Growth (ERG), or the Theory of Intention to Alumni Loyalty (IAL Model). Longitudinal studies could provide a more detailed understanding of how philanthropic intentions evolve. The development of social impact metrics is also needed to provide a clearer assessment of the success of philanthropic programs and to offer more applicable insights for effective philanthropic management strategies.

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Impact of Paternalistic Leadership on Organisational Commitment Among *Abdi Dalem*: The Mediating Role of Job Satisfaction and Compensation

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ABSTRACT

A traditional institution like a palace regards organisational commitment as a vital factor to maintain performance and sustainability, but interestingly, it provides its own internal system and uniqueness in comprehending and practicing it. This article examines the impact of paternalistic leadership (PL) on organisational commitment (OC), using job satisfaction (JS) and compensation as mediators. JS and compensation are considered minor variables in measuring the direct impact of PL on OC. The sample consists of 229 out of 1300 individuals working as *Abdi Dalem* (palace servants) in various positions within the Yogyakarta Palace, Indonesia. The hypotheses were tested using partial least squares structural equation modelling (PLS-SEM). The findings revealed a significant negative impact of PL on OC. However, when both mediators were considered, a positive impact between PL and OC through compensation emerged. Interestingly, while PL had a positive impact on JS, it had a negative impact on OC. These results highlight the unique nature of the relationship between PL and OC within the specific context of the population under study. The article suggests that traditional institutions like the Yogyakarta Palace have unique characteristics in the relationship between PL and OC, with implications for stakeholders in policy-making.

Keywords: Commitment, job satisfaction, leadership, organisation, palace, Yogyakarta

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INTRODUCTION

In the context of a complex society, leadership models have evolved to meet the needs of institutions and organisations (Caesar, 2016; Irawanto et al., 2020; Kim & Beehr, 2020). As a distinctive model, paternalistic leadership (PL) has emerged as an important research topic examined by various scholars using

diverse approaches, contexts, and cases. Researchers have also explored PL through various studies in different countries and organisations, highlighting rich patterns and characteristics, particularly within a specific case and cultural context (Irawanto & Ramsey, 2011; Jackson, 2016; Mansur et al., 2017; Selvarajah & Meyer, 2017, 2020), various cases at each level of the institution (Y. Chen et al., 2019), such as education (Dianingrum et al., 2022), family (Soylu, 2011), and workplaces (X. Chen et al., 2014). Among the various topics, the investigation of the impact of PL on OC in palace institutions has received little attention. Therefore, this article makes a significant contribution to the development of PL by presenting empirical evidence from *Abdi Dalem* (palace servants) of the Yogyakarta Palace through the mediating roles of JS (JS) and compensations or rewards.

Apart from cross-cultural aspects, studies on PL continue to attract scholars ranging from information sharing, openness, and creativity (Duan et al., 2024), religious ethics (Chaudhary et al., 2023), to ethical climate (Cheng & Wang, 2015). In particular, the impact of PL on OC has become a significant area of research for scholars, demonstrating a positive relationship with organisational dynamics (Irawanto & Novianti, 2021; Ünler & Kılıç, 2019). The existing studies in general concluded that PL has a positive impact on OC (Aycan, 2015; Chaudhary et al., 2023; X. Chen et al., 2014).

The positive effect occurs within the context of modern leadership and a conventional compensation and reward system. Indeed, previous studies have

primarily investigated the influence of compensations on OC within a standard compensation and remuneration framework (Suprihatini et al., 2023). Meanwhile, this study investigates how the mediating roles of JS and compensations within the Yogyakarta Palace influence OC. The palace institution, serving as the case study for this research, presents intriguing insights since a compensation system within the palace institution does not comply with the regional minimum wage of Yogyakarta (Tjong & Schmillen, 2019). As the only kingdom that has maintained political and cultural power after Indonesian independence, the Yogyakarta Palace has deep historical roots in Java and is highly respected in the context of Indonesian state formation (Assilmi, 2024; Monfries, 2008; Ratnawati & Santoso, 2021). It persistently preserves its cultures, traditions, and myths, which strengthen the palace's image within Indonesian society (Grave, 2014). This fact has significant implications for leadership studies, workplace dynamics, and organisational behaviour within modern society (Ratnawati & Santoso, 2021; Sari et al., 2023; Wijayanti & Nafiah, 2019; Wulandaru et al., 2025).

Examining the relationship between paternalistic leadership (PL) and organisational commitment (OC) with job satisfaction (JS) and compensation as mediating factors among *Abdi Dalem* in the Yogyakarta Palace provides valuable empirical data from distinct socio-cultural contexts. This research can contribute to a broader understanding of leadership and organisational dynamics, offering new

insights and perspectives that enhance the depth of studies in these fields. Furthermore, by exploring the unique hierarchical structures and deeply ingrained cultural values within the Yogyakarta Palace, this study reveals how traditional leadership models adapt and function in contemporary settings. These findings can inform both academic discourse and practical applications, particularly in developing culturally sensitive leadership strategies in diverse organisational environments.

In contrast, several studies have provided empirical evidence that paternalistic leadership (PL) does not support organisational commitment (OC) under specific conditions. These conditions include the influence of Islamic work ethics (Chaudhary et al., 2023), the authoritarian dimension of PL (X. Chen et al., 2014; Dianingrum et al., 2022; Islam et al., 2022), the ethical climate within the organisation (Erben & Güneşer, 2008), leadership in the African context (Nnaemeka & Onebunne, 2017), and cultural differences across East Asian societies using the triad model of PL (Cheng et al., 2014). This highlights the complexity and tradition-dependent nature of PL's impact on OC, suggesting that its effectiveness can vary significantly based on cultural, ethical, and organisational factors.

The inconsistency in empirical research on the effects of paternalistic leadership underscores the importance of this study, which offers a new empirical perspective from the specific context of traditional and cultural institutions like a palace. The primary purpose of our article is, therefore, to address this confusion and assess how

paternalistic leadership affects OC through the roles of JS and compensation. This article explores the potential for developing PL models in such settings, thereby broadening the debate and research agenda on leadership models in diverse contexts.

LITERATURE REVIEW

This study employed symbolic interactionism, a social psychological theory developed by George Herbert Mead, to examine the social interaction and socialisation of *Abdi Dalem* in the Yogyakarta Palace. The theory explains that social interaction is shaped by the interpretation of language and symbols between people (Azarian, 2021). Humans respond to things based on their understanding, and society is seen as a product of these interactions. It is created and maintained through repeated interactions, where people use symbols—such as words, gestures, and facial expressions—to communicate (Blumer, 1969). According to Mead, society consists of five key elements: self, action, object, social interaction, and collective action (Blumer, 1969; Mead, 1934). This theory is widely used to understand social interaction and symbolic action, which shape social order and culture (Dennis & Martin, 2007). Thus, this study applied the theory to evaluate attitudes, subjective norms, and perceived actions among *Abdi Dalem* of the Yogyakarta Palace. This theory considerably examines a large scope of social structure, institutions, social organisation, social process within institutions, and power (Hall, 2003; Paul, 1998), which is also related to the social and cultural process of *Abdi*

Dalem within the traditional institution of the Yogyakarta Palace.

Following Blumer, this study employed symbolic interactionism to explore the social life of the *Abdi Dalem*, which consists of recurrent joint actions sustained by shared meanings, habits, interpretations, and negotiations (Schwalbe, 2020). The theory is operationalised by focusing on how *Abdi Dalem* interpret their roles, responsibilities, and identities within the symbolic universe of the Yogyakarta Palace. The research investigates how meanings are constructed and negotiated through their everyday interactions—both with fellow *Abdi Dalem* and with the royal family—using culturally embedded symbols such as royal ceremonies, uniform attributes, ritual language, and hierarchical gestures (Gibson & Lehn, 2021). These symbolic forms serve not only as markers of identity and social order but also as tools for transmitting traditional values and sustaining loyalty to the palace. By observing how *Abdi Dalem* internalises these meanings and acts upon them, the study reveals the dynamic processes of identity formation, norm reinforcement, and role enactment, illustrating how the palace, as a traditional institution, continues to reproduce its cultural legitimacy through symbolic interactions (Dennis & Martin, 2007).

Paternalistic Leadership

Paternalistic leadership combines authority and benevolence (Pellegrini & Scandura, 2008), demonstrating a deep concern for employee welfare, akin to a parent-child

relationship (Ayca et al., 2013). This leadership style is frequently observed in communal and cultural contexts, particularly in Asian countries (X. Chen et al., 2014). Farh and Cheng (2000) present a strong case for the positive aspects of paternalism. They assert that authoritarianism, benevolence, and morality are some of the aspects of paternalism. Authoritarianism involves a superior exerting strong authority and control over subordinates, demanding absolute obedience. Rather, paternalistic leaders typically use close monitoring to convey high expectations to subordinates and encourage them to meet performance requirements. This argument aligns with the fact that institutions in Eastern countries employ PL to resonate with the socio-cultural context of society (Irawanto et al., 2016). The traditional institution of the Yogyakarta Palace serves as a compelling example that enriches the discourse on PL and its application within specific cultural contexts. This version emphasizes the significance of the Yogyakarta Palace as an influential example and strengthens the argument for its relevance in the broader discourse on PL. Furthermore, paternalistic leaders promote their subordinates' professional development with significant energy and resources, offering timely and suitable guidance (Pellegrini & Scandura, 2008).

Job Satisfaction

As an important concept and practice within organisations, this term was first introduced by Hoppock (1937) and then developed by academics and practitioners (Kalleberg,

1977; Copeland et al., 2022). It is defined as an employee achievement, manifested in positive attitudes and behaviour, which stem from the psychological aspects of employee satisfaction with work environment factors (Bashir & Gani, 2020). The personal nature of JS, influenced by social status and cultural privilege experienced by *Abdi Dalem* in the Yogyakarta Palace, provides new evidence regarding the complexity of JS. The debates over JS have been linked to various factors such as leadership models (Mwesigwa et al., 2020), teamwork (Lee et al., 2017), work environment (Raziq & Maulabakhsh, 2015), and personal commitment (Li & Xie, 2020). By examining a specific case, such as a palace institution, the measurement of JS can be further developed and refined. In the context of paternalistic leadership, ensuring job satisfaction is essential for maintaining employee performance and securing long-term organisational success. Based on the findings of previous research, the following hypotheses can be made between PL and the OC:

H1. Paternalistic leadership has a positive impact on organisational commitment.

H2. Paternalistic leadership has a positive impact on job satisfaction.

Compensation

Most companies provide not only salaries but also compensation in the form of rewards, such as goods or awards, to complement wages and benefits. These rewards are part of the management compensation provided to employees (Lazear, 2018). Compensation is

a reward given to employees, either directly or indirectly. Direct compensation includes basic salary and other forms of income paid directly to employees (Schmitz & Yzerbyt, 2020). Compensation is a complex strategy aimed at rewarding employees for their performance and motivating them to achieve high levels of productivity (Herpen et al., 2005; Mahato & Kaur, 2023). Numerous studies have demonstrated that compensation encompasses various forms, ranging from financial incentives such as direct salary, commissions, and bonuses to indirect benefits such as insurance, social assistance, pensions, and education, as well as non-financial rewards (Maggino, 2023).

Non-financial rewards and non-material incentives include elements such as increased responsibility, recognition, pro-social behaviour, encompassing social norms, reciprocal obligations or altruism, opportunities for growth, and appreciation within the work environment (Grillos, 2017; Mu, 2022). In the context of the Yogyakarta Palace, non-material incentives are fundamental aspects that reveal the cultural values deeply embodied and accepted within the institution of the palace. These rewards play a crucial role in enhancing employee motivation and JS, contributing to a more positive organisational culture and long-term employee retention (Nawa & Kempa, 2017). Based on the previous findings regarding how paternalistic leadership influences compensation, the following hypothesis can be made between PL and compensation.

H3. Paternalistic leadership has a positive impact on compensation.

Organisational Commitment

Organisational commitment is the degree to which an individual feels connected to and involved in an organisation (Steers, 1977). OC extends beyond passive employee loyalty; it involves an active relationship in which employees willingly invest their efforts to support and advance the organisation’s goals and sustainability (Meuer & Allen, 1997). Previous studies on OC have focused on measuring performance and output within organisations (Lee & Kim, 2023; Jang et al., 2021). Low employee commitment can lead to higher turnover rates and a reluctance to contribute to the organisation’s success, which in turn impedes overall organisational performance (Frederiksen, 2017). OC refers to loyalty and dedication to an organisation, reflecting a willingness to contribute to its goals. This often leads to increased JS, lower turnover rates, and improved organisational performance (Agrawal & Srivastava, 2018; Luz et al., 2018). OC is tied to work experiences that foster a sense of belonging, emotional attachment, and ownership towards the organisation (Greenberg, 2011). In the context of the Yogyakarta

Palace, OC is also reflected in the loyalty of palace servants to the sultan and the institution. This deep-rooted allegiance not only preserves the palace’s cultural heritage but also ensures the continuity of its traditions and values across generations. Thus, we hypothesize the following:

- H4. Job satisfaction has a positive impact on organisational commitment.
- H5. Compensation has a positive impact on organisational commitment.
- H6. Job satisfaction has a moderating impact on the correlation between paternalistic leadership and organisational commitment.
- H7. Compensation has a moderating impact on the relationship between paternalistic leadership and organisational commitment.

METHODS

Conceptual Framework

This study explores the impact of PL on OC. It also examines how PL affects OC through compensation and JS. The research model demonstrating the impact of PL on OC can be found in Figure 1.

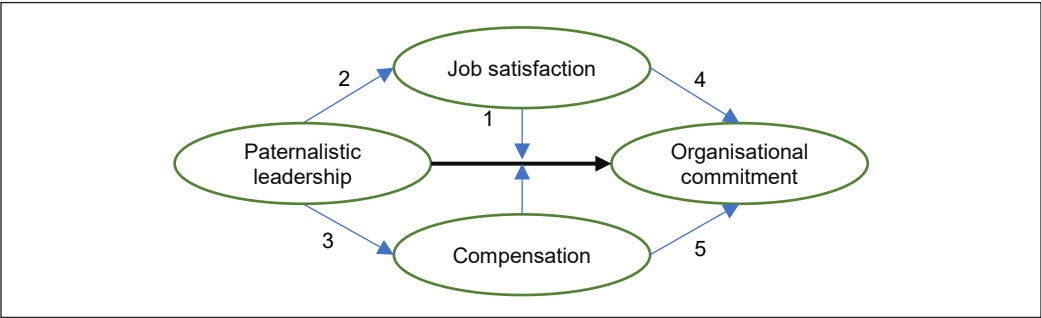


Figure 1. Conceptual framework

Data Collection and Sample Size

The population in this study consisted of 1300 members of the Yogyakarta Palace. The research sampling used convenience sampling technique to select relevant respondents was employed to select respondents from the palace servants. The accepted and appointed servants as *Abdi Dalem*, are divided into two main groups: *Punakawan* (general public) and *Keprajan* (both from military and civil service officials). The survey was conducted online using Google Forms and distributed to a predetermined population. A total of 229 respondents participated in the study, selected through non-probability sampling, specifically using the purposive sampling method. This method was chosen because the population met specific criteria established by the researcher (Acharya et al., 2013), for instance, the criteria included being over 17 years of age and having completed at least two years of internship. The selection of *Abdi Dalem* as a sample considered factors such as their active involvement and loyalty to the Yogyakarta Palace. After conducting a screening test, the researcher eliminated 20 respondents who were classified as outliers and did not meet the criteria for the filtering questions. As a result, the study concluded with 229 valid respondents, meeting the minimum sample size for SEM as recommended by Hair et al (Hair et al., 2014). The data were collected in two months, from October 16 to December 16, 2023, following the permit issued by the palace official. The permit, detailed in letter No. 0979/KHPP/Mulud.X/

JIMAWAL.1957.2023, granted the researcher access to collect data from the lowest level of *Abdi Dalem* (called as *Jajar* and *Bekel*) to the highest one (*Bupati Kliwon*).

Table 1 shows that the majority of respondents in this study were male (91.27%) and over the age of 50 (68.56%). Most respondents held the rank of *Bekel* (32.31%), followed by *Jajar* (15.28%), *Kaprajuritan* (13.54%), *Lurah* (10.92%), and other positions such as *Wedono*, *Bupati*, *Penewu*, or *Keparak*. Additionally, 11 respondents were in internship positions, selected based on a criterion of having completed more than two years of internship. The educational level of respondents was predominantly high school (42.79%), with most being married (90.39%). A significant portion of the respondents had more than 10 years of service (81.22%) and frequently interacted with their superiors (72.93%).

Table 1
Demographic statistics

Variable	Total (N)	Percentage (%)
Gender		
Male	209	91.27
Female	20	8.73
Age		
20 - 29	20	8.73
30 - 39	14	6.11
40 - 49	38	16.59
50 - 59	65	28.38
60 - 69	57	24.89
70 - 79	28	12.23
80 - 89	7	3.06
Position		
Jajar	35	15.28
Bekel	74	32.31
Lurah	25	10.92
Penewu	12	5.24

Table 1 (continue)

Variable	Total (N)	Percentage (%)
<i>Wedono</i>	21	9.17
<i>Bupati</i>	14	6.11
<i>Kaprajuritan</i>	31	13.54
<i>Magang</i>	11	4.80
<i>Keparak</i>	6	2.62
Education		
Master degree	3	1.31
Undergraduate	39	17.03
Collage	4	1.75
Senior High School	98	42.79
Junior High School	37	16.16
Elementary School	44	19.21
No formal education	4	1.75
Status		
Married	207	90.39
Single	19	8.30
Other	3	1.31
Internship period		
< 5 years	29	12.66
5 - 10 years	14	6.11
> 10 years	186	81.22
Interaction with superiors		
Sometime	49	21.40
Occasionally	13	5.68

Note. *Jajar* = first rank; *Bekel* = second rank; *Lurah* = third rank, like a head of a servant group; *Penewu* = fourth rank, like a head of village; *Wedono* = fifth rank; *Bupati* = sixth rank, like a regent; *Kaprajuritan* = special servants for bodyguards; *Magang* = internship; *Keparak* = mostly female servants whose duties are close to the sultan

Measurement

In determining the sample size, this study followed the recommendations of Sekaran and Bougie (2016) developed from Krejcie and Morgan (1970). The sample consisted of servants of the Yogyakarta Palace and was selected using a systematic random sampling method. A total of 229 respondents were selected for data analysis, which was

considered sufficient (Sekaran & Bougie, 2016). Meanwhile, the questionnaire was developed following a thorough review of previous studies, theories, and international scales. The study measures the variable of PL using a scale modified by Irawanto et al. (2016), which includes visible, authoritarian, benevolent, moral incorruptedness, moral courage, moral impartialness, dan moral magnanimity. All survey questions were formulated based on the scale and the contextual situation in the Yogyakarta Palace. This situation pertains to the existence of a traditional leadership model, which is a characteristic of Javanese bureaucratic culture. This leadership model has been adopted by the Indonesian bureaucracy, especially since the New Order era.

JS is measured using a scale introduced by McGrandle (McGrandle, 2019), with 4 scales: aspirational, calmness, sincerity, independence, and leadership. Four statements were assessed using a five-point scale ranging from 1 (very dissatisfied) to 5 (very satisfied). Two of these statements are: (1) 'The current job allows you to work calmly,' and (2) 'The job provides opportunities for independent work.'

The measurement of compensation is based on a scale developed by Herpen (Herpen et al., 2005) and evaluates the perception of *Abdi Dalem* towards higher rewards for more professional and demanding performance, compared to another system that offers lower rewards but is more informal and less demanding. The indicators used to evaluate work compensation, as outlined by Nawa and Kempa (Nawa & Kempa, 2017), include

reasonable salaries that are in line with job responsibilities, incentives that are commensurate with the sacrifice, allowances that are in accordance with expectations, and adequate facilities. This indicator was selected because it is relevant to the research context in the Yogyakarta Palace, particularly after the Special Autonomy Law No. 13/2012 was issued. It guarantees that the Yogyakarta Palace is to receive special funds (Danais), which include additional compensation for *Abdi Dalem*. The presence of Danais could be investigated to determine whether this extra compensation provides additional motivation and dedication for *Abdi Dalem* to fulfil their responsibilities and remain committed to the organisation.

OC is measured using a scale developed by John P. Meyer and Natalie J. Allen (Meuer & Allen, 1997), which includes indicators such as affective commitment, continuance commitment, and normative commitment. These three dimensions were selected because they encompass personal, material, organisational, social, and cultural factors (value systems) that align with the context of *Abdi Dalem* assignments, which are based not only on skills but also on tradition-based devotion.

Data Analysis Tool

Once the data were collected, the relationship between PL and OC was examined using partial least squares structural equation modelling (PLS-SEM). This method was selected because it works effectively in exploratory research, which has little substantial understanding and information

(Hair et al., 2014). Additionally, PLS-SEM is a latent variable modelling approach that simultaneously handles multiple variables and accounts for measurement errors. It is widely used in business research due to its high statistical power for analysing complex structural equation models with multiple constructs (Hair et al., 2012). Data analysis was conducted using the SmartPLS 4.0 application (Ringle et al., 2012).

RESULTS

Data were analysed using PLS-SEM, a technique employed across various fields, including research on OC. This method is especially well-suited for investigating new variables, as demonstrated in this study. The analysis proceeded in three stages: evaluation of the measurement model, assessment of the structural model, and evaluation of the blindfolding procedure, also known as predictive relevance. The measurement model assessment was found to be satisfactory, allowing for the subsequent evaluation of the structural model. This stage aims to test the research hypotheses, assess the significance of the structural relationships, and determine whether the hypotheses are supported (Hair et al., 2014). Following this, the blindfolding procedure was conducted to assess the predictive relevance of the developed research model. Predictive relevance is indicated if the value obtained for the reflective endogenous variable is greater than 0. Finally, the moderation effect was tested, with a t-value greater than 1,96 considered as supporting the hypothesis (Hair et al., 2014).

Measurement Model

The analysis of the measurement model examined several components, including indicator loadings, average variance, and composite reliability. Additionally, the assessment addressed concerns related to discriminant validity by evaluating factor loadings and the relationships between latent variables. The primary objective of assessing convergent and discriminant validity was to establish content validity by verifying item factor loadings, as outlined by Hair et al. (2014). The factor loadings for the 37 questions in the instrument were found to be 0.70, indicating a significant contribution to clarifying the underlying structures. The evaluation procedure for determining convergent and discriminant validity of the model constructs followed a reflective measurement approach and involved multiple stages. In summary, in PLS-SEM, the measurement models of reflectively measured constructs are evaluated by systematically testing convergent and discriminant validity, as described, and this has been successfully achieved in this study.

The results of the loading factor calculation reveal that there are 3 indicators

with weak values (<0.708). These indicators are KK6 and KK3 on the JS variable, both with loading factor values of 0.690 and 0.697, respectively, and indicator I8 on the reward variable with a loading factor value of 0.699. Despite their weak values, these indicators were not eliminated as they met all convergent validity criteria (see Table 2). Convergent validity was assessed based on Cronbach’s alpha, composite reliability, or rho_a values, with the criteria being values >0.70 and AVE values of ≥ 0.50 .

The test results for convergent validity show a Cronbach’s alpha value greater than 0.883, composite reliability above 0.9, and an AVE value exceeding 0.554, indicating that the content and validity requirements are met. In order to determine how much each construct in the structural model differs from the others, discriminant validity must be assessed after the loading factors and convergent validity have been confirmed. Discriminant validity is evaluated using HTMT ratios and cross-loading values, as presented in Table 3.

The results of the discriminant validity test, as shown in Table 4, indicate an HTMT value <0.90 . Additionally, Table 5 presents the cross-loading test results, which

Table 2
Convergent validity

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Compensation	0.910	0.914	0.925	0.554
Paternalistic Leadership	0.955	0.962	0.959	0.612
Job Satisfaction	0.886	0.923	0.913	0.637
Organisational Commitment	0.883	0.900	0.910	0.629

Table 3
Discriminant validity assessment based on HTMT values

Variable	Compensation	Paternalistic Leadership	Job Satisfaction	Organisational Commitment
Compensation				
Paternalistic Leadership	0.220			
Job Satisfaction	0.260	0.408		
Organisational Commitment	0.693	0.190	0.197	

Table 4
Results of R² and Q² values

Variable	R ²	Q ²
Compensation	0.048	0.037
Job Satisfaction	0.176	0.161
Organisational Commitment	0.424	0.021

demonstrate that each indicator’s loading on its respective construct is higher than its loading on other constructs. Therefore, it can be concluded that the model used in this study is valid.

Structural Model Assessment (Inner Model)

Once the validity and reliability of the outer model have been established, the next step is to evaluate the hypothesised relationships in the inner model through several procedures. The first procedure involves assessing multicollinearity among the independent variable constructs in the structural model by examining the VIF (variance inflation factor) values. According to the criteria set by Hair (Hair et al., 2014), VIF values should be <5. The results of the multicollinearity assessment indicate that all VIF values are <5, demonstrating that both the inner and outer models are free from multicollinearity (Table 4).

R² measures the variance explained by each endogenous construct and is often referred to as the predictive power within the sample. It reflects the explanatory power of a model but does not indicate its predictive power outside the sample. R² values range from 0 to 1, with higher values representing greater explanatory power. The acceptability of R² values depends on the context. In social sciences, an R² value of 0.75 is considered substantial, 0.50 is moderate, and 0.25 is weak. In other fields, such as predicting stock returns, an R² value as low as 0.10 may be deemed satisfactory.

The R² value for the compensation variable is 0.048, which is classified as weak according to the criteria. This indicates that PL explains only 4.8% of the variance in compensation, with the remaining 95.2% influenced by variables not included in this study. Similarly, the R² value for JS is 0.176, also classified as weak. This means that PL accounts for just 17.6% of the variance in JS, while 82.4% is influenced by external variables. In contrast, the R² value for OC is higher at 0.424, suggesting that PL explains 42.4% of the variance, with the remaining 57.6% attributed to other variables outside this study.

Another method for assessing the prediction accuracy of the PLS technique is by calculating the Q^2 value, which evaluates both out-of-sample prediction and explanatory power within the sample. The Q^2 value must be greater than 0 for a given endogenous construct to indicate the predictive accuracy of the structural model for that construct. As a guideline, Q^2 values greater than 0, 0.25, and 0.50 represent small, medium, and large predictive relevance, respectively. The test results show that the Q^2 value for the reward variable is 0.037, the Q^2 value for JS is 0.161, and the Q^2 value for OC is 0.021. These values suggest that the model in this study demonstrates good predictive relevance. The last stage is to determine the statistical significance and relevance of the path coefficients, which normally vary from -1 to +1, by analysing the model's explanatory and predictive power.

A Goodness-of-Fit Test (GoF)

The GoF index is a comprehensive measure used to validate the combined performance of the measurement model and the structural model. It is calculated as the square root of the average communality index multiplied by the average R^2 value of the model. The GoF value ranges from 0 to 1, with interpretations as follows: 0.1 indicates a small GoF, 0.25 denotes a moderate GoF, and 0.36 represents a high GoF. The calculation results show that the GoF value of the model is 0.368, which falls into the high GoF category. This indicates that the empirical data explain the measurement model with a high level of fit.

Hair noted that PLS is a type of SEM analysis designed for predictive purposes (Hair et al., 2014). Lower RMSE (root mean squared error) and MAE (mean absolute error) values compared to those of the baseline linear regression model (LM) indicate that the model has better predictive power. The calculation results show that PLS-SEM yields lower values than the regression model, demonstrating that PLS-SEM provides more precise predictive power for this study.

Statistical Hypothesis Test

A statistical hypothesis test is conducted by examining the t-statistic and p-value. Assuming a significance level of 5%, a t-value greater than 1.96 (for a two-tailed test) and a p-value <0.05 indicate that the indicator weight is statistically significant. If both the t-statistic and p-value meet these criteria, it suggests a significant influence between the exogenous and endogenous variables, leading to the acceptance of the hypothesis. According to Table 5, the results from the SmartPLS 4 bootstrapping algorithm, of the seven proposed hypotheses, three are rejected: (1) the direct impact of PL on OC, (2) JS on OC, and (3) the impact of PL on OC mediated through the JS variable. The remaining four hypotheses show significant relationships between variables and are accepted.

DISCUSSION

The statistical findings of this study provide evidence that PL does not directly impact OC; instead, it needs the mediating role

Table 5
Statistical hypothesis test

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Conclusion
Paternalistic leadership -> Organisational commitment	0.042	0.043	0.060	0.705	0.481	Unsupported
Paternalistic leadership -> Job satisfaction	0.420	0.427	0.056	7.551	0.000	Supported
Paternalistic leadership -> Compensation	0.219	0.227	0.062	3.533	0.000	Supported
Job satisfaction -> Organisational commitment	-0,005	-0,005	0,062	0,083	0.934	Unsupported
Compensation -> Organisational commitment	0.642	0.644	0.055	11.716	0.000	Supported
Paternalistic leadership -> Job satisfaction -> Organisational commitment	-0.002	-0.003	0.027	0.081	0.936	Unsupported
Paternalistic leadership -> Compensation -> Organisational commitment	0.141	0.146	0.041	3.424	0.001	Supported

of other variables, namely compensation. Additionally, the JS variable, which was proposed as a mediator in this study, was found to be ineffective in mediating the influence of PL on OC. In the context of *Abdi Dalem*, who has a spiritual attachment to the palace and particularly to the sultan, satisfaction, including job satisfaction in the workplace, is a collective experience and context-dependent, constructed through culture, morals, and an understanding of the way of life within Yogyakarta society. Social and cultural meanings, conveyed through symbols rooted in the palace, have shaped the people’s understanding and social interactions with the palace.

These results contrast with previous research, which suggested that PL has a positive effect on OC (Irawanto et al., 2016; Khudhair et al., 2022; Ünler & Kılıç,

2019). Empirical data from *Abdi Dalem* of the Yogyakarta Palace shows that OC stems from their social status as *Abdi Dalem*, which grants them privileges as members of palace servants and earns them respect in society. This practice is deeply rooted in social interactions that shape the understanding of the palace’s values, which are established as the foundation of social and cultural order within Yogyakarta society. Indeed, the privileges are deeply ingrained in those who engage with the Yogyakarta Palace, particularly *Abdi Dalem*. Thus, their commitment is not derived from leadership but rather from their social status within the social milieu in Yogyakarta. *Abdi Dalem* is perceived as a chosen person who reflects being taken for granted, meaning they already possessed a commitment to the palace before taking on the position,

fully aware of the associated costs and benefits. These findings from *Abdi Dalem* in the palace not only corroborate previous research (Chaudhary et al., 2023; X. Chen et al., 2014; B. S. Cheng et al., 2014; Dianingrum et al., 2022; Erben & Güneşer, 2008; Islam et al., 2022; Nnaemeka & Onebunne, 2017) but also strengthen the argument that social recognition and titles, rather than direct leadership influence, play a crucial role in shaping OC.

Meanwhile, there is a strong relationship between PL and JS (Chan & Mak, 2012; Irawanto et al., 2020). Empirical data from palace servants supports the hypothesis that PL positively influences JS (H2). Being *Abdi Dalem* provides a sense of comfort in their work and JS under PL, which is considered to have noble leadership values in the context of the Yogyakarta Palace. The impact of leadership on JS is manifested through the bestowal of titles to *Abdi Dalem* by the sultan himself. For instance, *Abdi Dalem*, who shares a noble family lineage with the sultan, will be honoured with the title *Gusti* (high respect) before their name. Additionally, *Abdi Dalem*, with the rank of regent, will be given the title *kanjeng*, which denotes elder and obedience. Holding these titles grants individuals a respected social status, both as individuals and as representatives of the palace.

Another crucial aspect of the palace institution is the provision of compensation, which reinforces the loyalty and dedication of those who serve, particularly *Abdi Dalem*. Compensation not only acknowledges their contributions but also ensures the

sustainability of their commitment to preserving the cultural and traditional values of the palace. Appropriate pay strategies can have a favourable impact on employee well-being and productivity (Lazear, 2018). In the Yogyakarta Palace, non-material rewards and compensations are experienced by *Abdi Dalem* in forms of recognition, social norms, altruism, and appreciation by society (Grillos, 2017). However, material compensations hold greater significance for the younger *Abdi Dalem*, whose lifestyles are more materially orientated and who possess superior skills, particularly in arts and culture. This allows them to participate in various performance activities organised by the palace, both domestically and internationally. The empirical data confirm that PL influences compensation (H3), which is in line with previous studies (Schmitz & Yzerbyt, 2020; Mahato & Kaur, 2023; Maggino, 2023).

The unique evidence on OC in the context of *Abdi Dalem* in the Yogyakarta Palace arises from a deep sense of devotion to the institution rather than from the conditions and facilities provided by the palace. Indeed, the traditional leadership of Yogyakarta Palace, following Dickson et al. (2003), is culturally contingent (emic) and cannot be applied as a “universal” leadership theory (etic). The empirical data from the Yogyakarta Palace revealed the uniqueness of titles, statues, and recognitions that seem important within Yogyakarta society. These cultural symbols not only reflect the social hierarchy but also serve as key markers of identity and belonging, reinforcing the

palace's central role in the community. It also requires a contextual understanding of traditional leadership, which is a *sine qua non* in rural areas, such as in rural South Africa (Koenane, 2018).

In so doing, the previous studies suggesting that JS is positive to OC (H4) are not supported (Jang et al., 2021; Mwesigwa et al., 2020). This suggests that the OC of *Abdi Dalem* is not driven by the level of JS they experience. Instead, this commitment is something they have held since before joining or registering as servants of the palace. The foundation of being *Abdi Dalem* is personal commitment with loyalty and devotion to the sultan and the palace. This tradition of service reflects Javanese culture, which regards the palace as the centre of life. The complexity of OC among *Abdi Dalem* of the Yogyakarta Palace offers valuable insights that enrich previous studies. These studies have explored factors such as psychological well-being and the interplay between salary satisfaction and normative commitment (Lee & Kim, 2023; Luz et al., 2018). By examining the unique cultural and institutional context of *Abdi Dalem*, this research adds a nuanced understanding to the existing body of knowledge on OC.

Furthermore, the impact of compensation on OC is found to be significantly positive (H5), which is in line with previous studies (Maggino, 2023; Nawa & Kempa, 2017). Leaders of traditional institutions like the palace should recognise that the relationship between subordinates' perceptions of rewards and their commitment is influenced by individual

cultural values. Therefore, leaders need to prioritize cultural considerations rather than relying solely on general strategies. This also underscores the significant difference in OC between public and private sector organisations, with the latter typically having better financial resources to invest in employee retention. *Abdi Dalem* works in the palace to seek the sultan's blessing (*ngalap berkah*). This blessing is an abstract reward, yet its influence is so powerful that it shapes the social life of *Abdi Dalem*. For them, welfare is not only worldly but also spiritual, manifested through inner peace and happiness.

The mediating role of JS in the impact of PL on OC (H6) is rejected. Empirical data from *Abdi Dalem* of the palace indicate that JS does not influence their level of OC to the sultan as a paternalistic leader. In this context, *Abdi Dalem* of the Yogyakarta Palace already possesses an internal OC, which is derived from their interactions with the wider community. These findings are particularly interesting as they reveal that JS is unable to mediate the influence of PL on OC. *Abdi Dalem* has an a priori OC, which is further supported by field findings that JS, including the fulfilment of basic needs, the opportunity for self-expression, and social interaction, does not play a mediating role.

The relationship between PL and OC often depends on the prevailing compensation and reward system. Employees who receive fair and ideal rewards from paternalistic leaders tend to exhibit high OC. Conversely, when compensations are perceived as unfair or inadequate, it can lead to lower

OC (Herpen et al., 2005; Mahato & Kaur, 2023). Moreover, the mediating role of compensation in the influence of PL on OC (H7) is accepted. *Abdi Dalem* perceives compensation and rewards as a form of appreciation beyond material benefits, encompassing symbolic rewards such as peace and the blessings of the sultan. This demonstrates a strong consistency between rewards as a form of appreciation and the spirit of devotion exhibited by *Abdi Dalem* in the Yogyakarta Palace.

This finding underscores that material rewards enhance the commitment of *Abdi Dalem*, suggesting that traditional institutions like the palace could benefit from incorporating a business management dimension. The performance of *Abdi Dalem* is not solely based on traditions and intangible values but also relies on a tangible incentive system, such as material rewards. Providing these rewards strengthens *Abdi Dalem's* belief that the palace's PL genuinely cares about their well-being. By adopting the best practices of the Yogyakarta Palace, the sultan and other kingdom institutions of the Archipelago should consider developing a stronger business management tradition. This approach would likely increase the OC and performance of *Abdi Dalem*.

CONCLUSION

The results of this study indicate that PL does not impact OC in the context of a palace institution. The OC of *Abdi Dalem* comes from their social status, which provides them with privilege and respect from the community. Interestingly, while

PL significantly influences JS by creating a comfortable environment for *Abdi Dalem* in the Yogyakarta Palace, JS does not affect OC. This is because OC is established voluntarily from the first moment they prepare to join the palace. Thus, JS does not serve as a mediator between PL and OC. *Abdi Dalem's* commitment is directed towards the sultan as their leader and the institution of the palace, making JS a secondary factor. Meanwhile, compensation is the only mediating role that directly supports the impact of PL on OC.

Implications for Theory and Practice

In the theoretical aspect, this study offers the conceptual contribution of OC, which is positively influenced by compensation and JS, to be redefined in the context of traditional and cultural institutions like the palace. This empirical data confirms the significance of rewards in the palace as a traditional institution in Yogyakarta, which is linked to the voluntary commitment of *Abdi Dalem* to the sultan and the palace. Further, it explores the potential for developing PL models in such settings, thereby broadening the debate and research agenda on leadership models in diverse contexts. The implications for broader leadership theory development suggest that the embodiment of cultural values, spiritual attachment, and loyalty should be emphasised in developing leadership models by incorporating the symbols and spiritual aspects rooted in the palace.

In the specific context of the theoretical development of symbolic interactionism,

the findings contribute to this theory by highlighting how organizational commitment (OC) and paternalistic leadership (PL) are shaped not only through rational-instrumental factors such as compensation but also through culturally specific symbols, rituals, and interactions that carry deep meaning for *Abdi Dalem*. The findings reveal that the symbolic value of rewards and the performative aspects of leadership in the palace setting play a central role in shaping voluntary commitment. This reinforces the symbolic interactionist emphasis on meaning-making and social negotiation in institutional settings. By showing how cultural symbols—such as ritual gifts, honorific language, and ceremonial participation—mediate the relationship between leadership and commitment, the study expands the application of symbolic interaction theory beyond its conventional focus on micro-level interactions. It demonstrates how the theory can be used to interpret broader organizational and cultural dynamics in traditional institutions, thereby contributing to the ongoing evolution of symbolic interactionism in understanding complex, value-laden social structures.

Practically, the findings provide valuable insights for policymakers in developing new models and approaches for traditional institutions like the palace. They challenge such institutions to create more effective systems of appreciation, compensation, and rewards for *Abdi Dalem*. For stakeholders involved in policymaking, this study has significant implications for the practical management and governance of traditional

institutions like the palace, offering a better understanding of the complex aspects of leadership models and organizational culture.

Limitations and Recommendations for Future Research

The study's limitations include the use of a convenience sampling approach, focusing solely on individuals working at *Abdi Dalem* in the Yogyakarta Palace. This sampling method means that the respondents may not adequately represent the entire community of traditional and cultural institutions across the archipelago's palaces and kingdoms. As a result, the findings may not be generalisable to other similar institutions. The future study is expected to consider employing more diverse and representative sampling methods to enhance the applicability of the results across different traditional and cultural settings, like the palace.

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Saudi EFL Students' Perceptions and Effects of Role-Play on Their Speaking Skills

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ABSTRACT

Speaking is a key skill in both language learning and teaching. One of the teaching strategies that has enhanced students' speaking ability has been role-play. The study is designed to investigate (a) Saudi EFL students' perceptions of role-play and (b) explore the positive effects of adopting role-play activities on their speaking skills. This research study adopted a mixed methods approach, utilizing a questionnaire for quantitative data and semi-structured interview-based methodology for qualitative data, consisting of both closed-ended and open-ended questions. The population selected for this study was 49 female university students at the undergraduate level majoring in the English Language and Translation program at Imam Abdulrahman bin Faisal University (IAU), Saudi Arabia. The findings of the participants' perceptions displayed a positive impact on their speaking proficiency, contributing to improved motivation, communication skills, confidence, emotional resilience, overcoming fear, shyness, and negative feelings associated with speaking English in EFL contexts. A vast majority of respondents emphasized the significance of role-play activities as a pedagogical tool for enhancing EFL speaking skills and fostering socio-emotional development, thereby highlighting role-play's recognized value in practical language learning and communication. Respondents valued the engaging nature of role-play for promoting real-world communication abilities, contributing

to a more confident and resilient outlook during these activities. Integrating role-play activities into Saudi EFL curricula can maximize learning and cultivate a more learner-centered and participatory environment conducive to holistic language development.

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INTRODUCTION

English, the most popular language, is spoken by millions of individuals across the globe. In contemporary times, the evolution of English persists as it assimilates new words, expressions, and dialects from a wide range of linguistic sources. Undoubtedly, English holds the distinction of being the most widely spoken language worldwide, surpassing other languages in terms of its global reach and influence. Despite the importance placed on English, many students around the world face challenges in effectively communicating in English, particularly in speaking. Various factors contribute to these difficulties, with the most prominent factor being the limited possibility of practicing speaking daily outside of the classrooms or lecture halls. Hence, there is an urgent need to tackle this challenge and create opportunities for learners of English as a foreign language (EFL) to overcome hurdles posed in speaking skills.

Speaking skill is an interactive process of oral communication, which expresses perceptions, feelings, beliefs, and helps share knowledge with others (Vân et al., 2022, p. 2522). However, it is important to note that the spoken language differs from the written language in several ways, which poses additional challenges and demands. Speaking is a key skill in both teaching and learning. According to Chaney (1998), speaking ability is the process of sharing and making meaning while using spoken and non-spoken signs. Speaking plays a dominant part in foreign language contexts, and it is a skill that needs improvement

through continuous practice, as it consumes time to speak fluently or become adept at speaking. In order to hone students' speaking ability, instructors play a vital role in disseminating various strategies to enhance this skill. One of these teaching strategies is role-play.

Role-play activities involve taking on a particular role in a simulated setting, enabling students to explore various perspectives and participate actively in real-life situations. According to Russell and Shepherd (2010), role-playing is defined as "a form of experiential learning where students adopt different personas and work through a given scenario together, interacting in their assumed roles" (p.992). As a dynamic teaching strategy, it enhances both speaking skills and communication abilities, promoting lively interaction. By enacting the shoes of a specific character during role-play, students as actors or actresses communicate, interact, develop, learn, and partake in settings adapted from real-life scenarios. Furthermore, role-play is an excellent way for students to expand their English knowledge and understanding, equipping them with a deeper comprehension (Vân et al., 2022).

Role-play activities can provide an enjoyable and interactive learning platform. By portraying real-life scenarios, students gain valuable insights into how language is employed in different contexts, allowing them to enhance their linguistic abilities as well as communicative competence. The role-play technique has benefited learners in diverse ways. In addition to

a variety of multidimensional teaching strategies that persist today, the role-play technique stands out as unique, for it facilitates the development of oral fluency, promotes interactive speaking and listening skills, creates opportunities for cross-cultural exchanges, teaches problem-solving abilities, builds an environment for language acquisition, and encourages socio-cultural dynamics of communication.

Role-play exercises seek to provide an in-depth understanding of the course content through their practical application of the acquired knowledge and skills. Role-play enables students to put their knowledge to use in a situation that is like their daily activities and routines. The communication skills that we employ in our daily lives, such as interactions with family members, colleagues, friends, relatives, or conversations, or negotiations at hospitals, stations, airports, shopping centers, supermarkets, cafes, etc., offer real-world scenarios. Students as learners deduce meaning from these scenarios, or social environments, which assist in reinforcing their language learning journey. During role-play, students practically utilize the foreign language, and that helps them understand how the foreign language is applied in real life. Consequently, this propels EFL learners to practice speaking in English more frequently and without any inhibitions.

However, in spite of varied teaching strategies, it is no wonder that teachers at times can be selective, reluctant, or dispassionate in integrating them into

language learning classrooms. Hence, it is pivotal to acknowledge the necessity to enhance teachers' current teaching practices in EFL settings, as they promote diversified approaches to teaching and generate interactive teaching-learning environments. In addition, the usage of teaching strategies improves the quality of teaching, makes the process of teaching effective, and significantly emphasizes practical ways of learning. Furthermore, resistance to employing appropriate strategies by teachers could impact students' academic achievement. Teaching strategies, in a way, make learning interesting by fostering a community of responsive learners interacting socially, intellectually, and emotionally.

Studies on effective teaching strategies, especially the role-play techniques, are prevalent. However, there is scant attention given specifically to the impact of the role-play technique on students' speaking proficiency in the Saudi EFL context. While it is noteworthy to see studies documenting this technique in the health sciences stream in Saudi Arabia, there exists a gap in the EFL context. Consequently, underscoring the need to explore Saudi EFL learners' perceptions of the role-play technique on their speaking skills is vital in advancing this gap and fostering experiential learning approaches to language teaching. Hence, this research study aims to examine this gap by contributing to the existing studies and providing useful knowledge to language practitioners to improve their teaching techniques.

LITERATURE REVIEW

This study addresses the sociocultural theory of cognitive development propounded by Lev Vygotsky (1962) and the experiential learning theory, specifically the learning cycle proposed by David Kolb (1984). Russian psychologist Vygotsky (1962) emphasized that social interaction is fundamental to learning and believed that language, humans' greatest tool for communicating, develops from these social interactions, facilitating mental functions like abstract thinking, planning, and problem-solving. Vygotsky's (1962) social development theory focuses on the idea that cognitive functions are the products of social interactions. The Vygotskian approach also addresses collaborative learning and calls for both the teacher and the students to take non-traditional roles in collaborative learning (as cited in McLeod, 2024a). The role-play technique vividly promotes collaborative learning, social interactions, and interpersonal skills among students as proposed by Vygotsky. In a similar vein, the American educational theorist and psychologist David Kolb's (1984) experiential learning theory, considered as one of the most widely influential frameworks, states that learning is "the process whereby knowledge is created through the transformation of experience" (as cited in McLeod, 2024b). In essence, Kolb suggests four stages in the cycle of experiential learning, namely *concrete experience*, *reflective observation*, *abstract conceptualization*, and *active experimentation*, which begin

with a student's concrete experience (of a situation or existing/new experience) and end with the knowledge gained through active experimentation (as cited in McLeod, 2024b). With role-play acting as a tool for the application of knowledge, it undoubtedly is a vital technique in the learning process, as stated in Kolb's model of four stages of learning. In this sense, efficient learning involves interactive learning strategies rather than relying solely on lecture-based or didactic approaches. Hence, role-play as an effective learning tool indisputably supports the execution of theory to practice as advocated by Vygotsky and Kolb.

Role-play's crucial role in enhancing the speaking skills of EFL learners is being rapidly acknowledged. According to Khasbani and Seli (2021), speaking has been generally regarded as the core element of English language learning. They believe that students' success in learning English is often assessed by how well they can articulate and express themselves orally. Khasbani and Seli's (2021) study points out that, in English language classrooms, the demand for students to be fluent and skillful English speakers started to increase over the course of the last few decades. However, students often battle to master their speaking skills. Various factors contribute to the lack of proper speaking skills among EFL students in general, and Saudi EFL students in particular. Either students are uncomfortable, disinterested, or bored with the traditional learning methods (Vân et al., 2022), or speaking English in public becomes a stressful ordeal, as they fear

being looked down upon by others (Yen et al., 2015). In Saudi Arabia, EFL students have faced challenges in English-speaking proficiency, as they fail to practice speaking. The important reason is that these EFL learners have little chance to speak or use English in their day-to-day interactions. This shortage of interaction deprives the learners of a suitable communicative environment as well as adversely affects their development of language learning skills. Certain studies have found that the interference of spoken Arabic in the class (Hamad, 2013), lack of intrinsic motivation and encouragement (Al-Seghayer, 2011; Alrashidi & Phan, 2015), and scarce opportunities to practice speaking (Alrasheedi, 2020) pose as hindrances for EFL students in Saudi Arabia. Therefore, active teaching strategies such as role-play are recommended to improve students' oral skills and overcome hurdles in speaking.

Previous studies on role-play techniques or activities at the school and college levels showcased that it enhanced students' speaking ability (Ferawaty, 2018; Khasbani & Seli, 2021; Phuetchon et al., 2012; Vân et al., 2022), motivation levels (Faqih, 2017; Hamdi, 2023; Lutfi et al., 2018; Maulana & Lolita, 2023), and encouraged peer interaction (Phuetchon et al., 2012). The positive impact of role-play on language proficiency, especially speaking skills, is discussed in the following research studies. In a study from Indonesia, the researchers facilitated the opportunity for forty-eight students at a vocational school to use their target language and display their speaking ability using role-play. The participants

exposed to role-play teaching showed improvement in their speaking performance test results compared to those who adopted the traditional presentation techniques (Khasbani & Seli, 2021). A research study from the southern part of Vietnam showed role-play techniques' positive impact on EFL learners' speaking. The findings indicated a variety of reasons, like comfortable learning environments, being less boring than other teaching methods, fun activities lessening stress, in addition to role-play techniques influencing learners' speaking proficiency (Vân et al., 2022). Another study based on the quantitative data results from Indonesia exhibited that the role-playing method drastically improved students' English-speaking ability by 11.8% in comparison to the traditional method, which was at 5.2% (Maulana & Lolita, 2023). On the other hand, researchers Lutfi et al. (2018) argued that despite the fact that students are taught to develop their speaking skills in schools, it is not very often that this process is presented to them using an attractive method. Similarly, Lusi and Nasution (2022) argued that it is important to implement some engaging classroom activities to improve students' speaking skills. Furthermore, the findings of a study on Iraqi EFL students' speaking skills highlighted the instructors' role, suggesting that instructors should be involved in role-play activities and that they should discuss different topics when implementing this method. The researcher also mentioned that they should discuss different human emotions and the situations in which those emotions would be present

(Krebt, 2017). An interesting study aimed at investigating the usage of unscripted role-play activities to improve the speaking ability of Thai EFL college students in the English for Communication course showed positive student satisfaction, enabling them to communicate independently, feel comfortable during topic discussions, in addition to fostering interaction with peers (Phuetphon et al., 2012). Yen et al.'s (2015) study from Taiwan examined an EFL instruction course by merging Facebook and Skype as platforms through which students performed role-play activities. The results showed an improvement in students' speaking skills. Additionally, Katemba and Grace's (2023) study asserted that role-play bridges the gap between textbook dialogues and common usage as well as between classrooms and real-life circumstances (p.249).

Numerous studies underscored the value of role-play as an effective instructional strategy in EFL environments, promoting student engagement (Nfor, 2020), building confidence and cooperation (Rayhan, 2014), and overall language proficiency (Lestari & Sridatun, 2020; Krebt, 2017). Nonetheless, role-play activities also addressed negative effects as noted from teachers' perspectives such as time constraints (Ments, 1994; Kumaran, 2017), inappropriate classroom management, inadequate availability of role-play materials, difficulty in controlling the class, a few learners' refusal to participate (Kumaran, 2017), noise, laughter, disorder and disturbance (Rojas & Villafuerte, 2018).

In the Saudi Arabian EFL context, studies on the influence of role-play on speaking skills have addressed different concerns. Focusing on the effect of role-play on the development of dialogue skills among learners of Arabic as a second language at a university in Saudi Arabia, Daif-Allah and Al-Sultan's (2023) study results displayed a positive effect of role-play in terms of self-esteem, good listening, expressing opinions, in addition to admiration for others. On the other hand, a study from the southern province of Saudi Arabia stated that not using strategies like role-play and debates by instructors, not using language labs, devoting more time to listening than speaking skills, lack of assignments that develop speaking skills and the need to increase teaching hours for listening & speaking courses were some of the factors that negatively affected the speaking skills in Saudi colleges for female students (Hamad, 2013). Another study from Riyadh dealt with the efficacy of role-play as a teaching strategy and its impact on the formative assessment among English major students in a Saudi University (Keezhatta, 2020). This study displayed it as an effective technique that increased students' English language proficiency. In a similar vein, Alghamdy's (2022) study, which investigated the effectiveness of role-play vs traditional methods on EFL students' English communication skills from the southwestern part of Saudi Arabia, largely favored the role-play strategy.

A review of the previous studies in Saudi Arabia have tended to focus on improving the acquisition of overall

language proficiency or communication abilities through role-play or solely focus on factors influencing the speaking performance of learners. However, studies that have been conducted exclusively on the impact of role-play on students' speaking skills in a Saudi EFL context are minimal. To address this research gap, this study endeavors to depict Saudi EFL students' attitudes towards role-play activity to determine if the teaching strategy is effective in improving their speaking skills. It is also interesting to note that the presence of previous studies and explorations on this topic were mostly carried out in Asian EFL settings, as English is not their native language. As the results of prior research studies in these settings have shown improvement in EFL students' speaking skills, it persuaded the researchers of this current study to investigate the topic and to ascertain the effectiveness of the role-playing technique on the speaking proficiency. Additionally, if this method is proven to be effective in changing teachers' roles to a less dominant one, as suggested by Alzboun et al. (2017), then it could also be beneficial, as it will make their job easier and reduce their workload. The concept of role-play discussed above highlights the objectives of this current study and aims to answer the following questions:

RQ1: What are Saudi EFL students' perceptions of role-play activities on their speaking skills?

RQ2: What are the positive effects of adopting role-play activities on the speaking skills of Saudi EFL students?

METHODS

Research Design

Researchers J.W. Creswell and J.D. Creswell (2018) stated, mixed methods research is “an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using a distinct design” (Chapt.1). This research study used a convergent mixed methods design, where both types of data provide information, (about views of participants qualitatively and scores on instruments quantitatively) yielding similar results, and the findings based on the analysis note whether there is convergence or divergence between the two forms of data (J. W. Creswell & J. D. Creswell, 2018, Chapt.10). In this research design, both quantitative and qualitative data are analyzed independently and then merged to see where they complement, align, or diverge. Moreover, as noted by J. W. Creswell and J. D. Creswell (2018), differences in a few concepts, themes, or scales exist, and divergence in this type of approach can be mentioned as a limitation without further follow-up (Chapt.10). However, the convergence of the results enhances the validity of the overall research study by demonstrating consistency across methods. Apart from collecting numerical data (descriptive frequencies) through the quantitative approach, this study wanted to explore additional information to seek in-depth perspectives on role-play activities, capture varied experiences of participants about role-play, their feelings, and opinions in the form of qualitative data. Participants were asked to complete a questionnaire comprising

closed-ended questions and semi-structured interviews comprising open-ended questions to investigate their attitudes towards this technique. By integrating the two forms of data, mixed methods research provides insight beyond the information provided by any of these data alone (J. W. Creswell & J. D. Creswell, 2018). Furthermore, Johnson et al. (2007) asserted that the “mixed methods research is an intellectual and practical synthesis based on qualitative and quantitative research,” and seeks to “provide the most informative, complete, balanced, and useful research results” (p.129). Hence, this mixed methods approach was deemed appropriate to gain a holistic picture and answer the research questions of this study. This approach aligns with exploring the experiential aspects, attitudes, and effects of role-play in EFL classes by capturing both the numerical data and the nuanced, personal experiences of learners. Comparing and integrating quantitative and qualitative findings enhances consistency, which is further reinforced by comprehensive feedback from students, thereby offering deeper insights into their attitudes and practices. By integrating both types of data, the findings can be cross-validated to ensure a more robust understanding. By utilizing the convergent mixed methods design, both forms of data can be simultaneously gathered to determine the tangible effects of role-play.

The Participants

The population selected for this study was 49 female Saudi university students

at the Department of English, College of Science & Humanities, Jubail, Imam Abdulrahman Bin Faisal University (henceforth IAU), Saudi Arabia. The participants are Level 4 students majoring in the English Language and Translation program at the undergraduate level. The program has eight levels spread over a period of four years. The reason for selecting these participants was that they participated in the role-play activity offered to them during their second year at the Department of English. Also, the study adhered to the strict guidelines on ethical procedures. Ethical approval was obtained by the Institutional Review Board (IRB) of Imam Abdulrahman bin Faisal University, with ref no: IRB-2024-28-424.

Data Collection Instruments

This study employed two instruments for the purpose of data collection—a questionnaire comprising closed-ended questions and semi-structured interviews comprising open-ended questions. Questionnaires are one of the most prevalent and extensively used methods of collecting data concerning the views, beliefs, or attitudes of a large number of people (Curle & Derakhshan, 2022, Chapt.3). Furthermore, they are particularly efficient in terms of the researchers’ time, effort and financial resources, as the instrument is quick and fast in employing and processing the data (Dörnyei & Taguchi, 2010, p.6). Likewise, in qualitative research, Punch (2009) asserts that interviews are considered the most vital data collection tools.

Pilot Testing

Pilot testing is an essential aspect for improving the design of the research instruments. It is a vital stage for ensuring “high quality (in terms of reliability and validity) of the outcomes” (Dörnyei, 2007, p.75). Dörnyei (2007) emphasizes the pivotal importance of piloting research instruments before they are administered, to protect against potential methodological and organizational problems (p.75). The pilot model was administered to a sample of 21 students (who were not part of the current study) majoring in the English Language & Translation Program to test the validity and authenticity of the instruments. After the process of piloting the questionnaire (quantitative data) had been done, modifications were applied to the 20 questions or items based on the participants' comments involved in the pilot testing. The preliminary analysis of results was carried out to check the precision of the questions and whether their purpose served to answer the research questions. Considering the feedback offered, some questions were deleted as they appeared repetitive, while some were modified and restructured. Therefore, the updated questionnaire included a total of 14 items. The same process was followed for the 5 semi-structured interview questions (qualitative data). After pilot testing, 2 questions were deleted and 4 were added to make a total of 7 questions. The finalized online survey questionnaire consisted of 14 items, while the semi-structured interview questions consisted of 7.

Data Analysis

This research study participants partook in a role-play activity during the academic year 2023-24. For quantitative data, most of the questions were written by the authors specifically for the study, while a few were borrowed from existing questionnaires (Alrasheedi, 2020; Losi & Nasution, 2022), which discuss the topic of role-play and its impact on EFL students' speaking skills. As for the qualitative data, the same method was followed to frame the questions for semi-structured interviews (open-ended). Some were customized, while others were borrowed from Mehdiyev's (2020) study. Non-probability convenience sampling method was employed for the online questionnaire, and the purposive sampling method was utilized for selecting the interviewees.

An informed consent form was collected from each participant during the initial stage of the online data collection process. Participation in this research study was voluntary, and participants were free to withdraw at any moment. A short description at the beginning of the questionnaire detailed the reasons for conducting the research, the type of questions, and the confidentiality of responses.

Quantitative Data

The quantitative data was collected through a questionnaire on Google Forms, which analyzed the data into percentages and graphs. The link to the online questionnaire was sent through a WhatsApp group chat to 49 EFL students. There were 14 closed-ended

questions on a 5-point Likert scale, split into two sections. This online questionnaire consisted of 7 items on speaking skills relating to student's engagement in role-play activities in EFL classrooms, their participation, influence on their speaking skills (pronunciation, fluency, vocabulary, communication, recitation of dialogues, memorization and so on) and 7 items on positive effects (motivation, confidence, identifying weaknesses and strengths, overcoming fear and shyness, feelings of stress), in addition to their personal information. The main purpose of collecting the personal information section (which included the participant's name, student ID, and email ID, along with a statement asking if they wished to participate in the semi-structured interviews) was to ensure that the data was authentic and that the link was not shared elsewhere.

Qualitative Data

Researchers Braun and Clarke (2006) suggested analyzing qualitative data with a systematic approach to uncover patterns and themes within the dataset. The choice of semi-structured interviews was intended to create a comfortable environment, facilitating free discussions on the research topic. Through face-to-face interviews, participants or respondents shared their perceptions and insights on the role-play activity based on their own involvement and experiences. Semi-structured interviews were conducted with 10 interviewees to understand their perspectives and provide more insights into the study. These were

a specific group of participants who consented to be interviewed and agreed to share their experiences with us. To ensure accurate documentation of the interviews, the researchers used the Voice Memos application. The individual interviews were conducted in the department's meeting room, with each session lasting approximately 25-30 minutes. Following the completion of the interviews, the researchers personally reviewed all the recorded discussions to provide the most accurate description of the results. The qualitative data obtained from the interviews were then coded and analyzed using Braun and Clarke's (2006) approach, which involved identifying repeated patterns of meaning in the interviews, focus groups, or other textual sources, to gain further insights and address the research questions of the study.

RESULTS

The findings elucidate the effectiveness of incorporating role-play activity in improving Saudi EFL learners' speaking skills. This section is structured to cover two main aspects:

- (1) Perceptions of Role-play activities on Saudi EFL students' speaking skills and
- (2) The Positive effects of adopting Role-play activities on the speaking skills of Saudi EFL students.

Perceptions of Role-Play Activities on Saudi EFL Students' Speaking Skills

The participants filled out the data online, and anonymity and confidentiality for

each participant were maintained. The online survey questionnaire was filled out by 49 participants, accounting for 100% participation. Hence, the total respondents of this study included 49 questionnaire respondents and 10 interviewees. The results (descriptive frequencies) of the first section of the questionnaire related to RQ1 are detailed in Table 1 below:

The responses of ‘Strongly agree’ and ‘Agree’ were tabulated as positive outcomes, while the responses of ‘Strongly Disagree’ and ‘Disagree’ were tabulated as negative outcomes. The questionnaire results for RQ1 indicated that most students preferred role-play activity as a classroom learning method, and it impacted their speaking skills (Figure 1). All the respondents confirmed that they participated in role-play activities in their English language classes for Item 1. Items 2 and 3 addressed the impact of role-play on fluency, pronunciation, and vocabulary. 90% of respondents agreed with

item 2, suggesting that they found role-play helpful in developing their fluency and improving their pronunciation, while 86% indicated enhanced vocabulary usage after indulging in the activities for item 3.

Similarly, 86% of respondents in item 4 agreed that role-play, while time-consuming in reciting dialogues, contributed to improved listening and speaking skills, allowing them to engage actively. Item 5 assessed whether role-play provided opportunities to practice their speaking skills, which accounted for 98% high agreement amongst the respondents. Lastly, items 6 and 7 focused on the application of role-play in debating, public speaking, and general communication skills, which can be employed and practiced outside EFL classrooms. 88% of respondents agreed that role-play helped improve these skills for item 6. There was agreement of 92% and disagreement of 8% for item 7. Overall, these results suggest a high level

Table 1
Responses of perceptions towards role-play activities on a 5-point Likert scale (N=49)

Items	SA	A	N	D	SD
1. I participated in role-play activities during English language classes.	56%	44%	0%	0%	0%
2. Role-play had an impact on my fluency and improved my pronunciation in EFL classes.	42%	48%	2%	8%	0%
3. Role-play improved my vocabulary usage after engaging in the activities in EFL classes.	38%	48%	4%	10%	0%
4. Though role-play activities consume time to recite the dialogues, they helped me improve my listening & speaking skills.	26%	60%	6%	8%	0%
5. Role-play activities provided opportunities to practice my speaking skills.	30%	68%	0%	2%	0%
6. Role-play has improved my communication skills. e.g., speaking in public, communicating, debating, etc.	32%	56%	4%	8%	0%
7. I will use this communicative language learning to practice English outside the EFL classrooms.	34%	58%	0%	8%	0%

Note. SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree

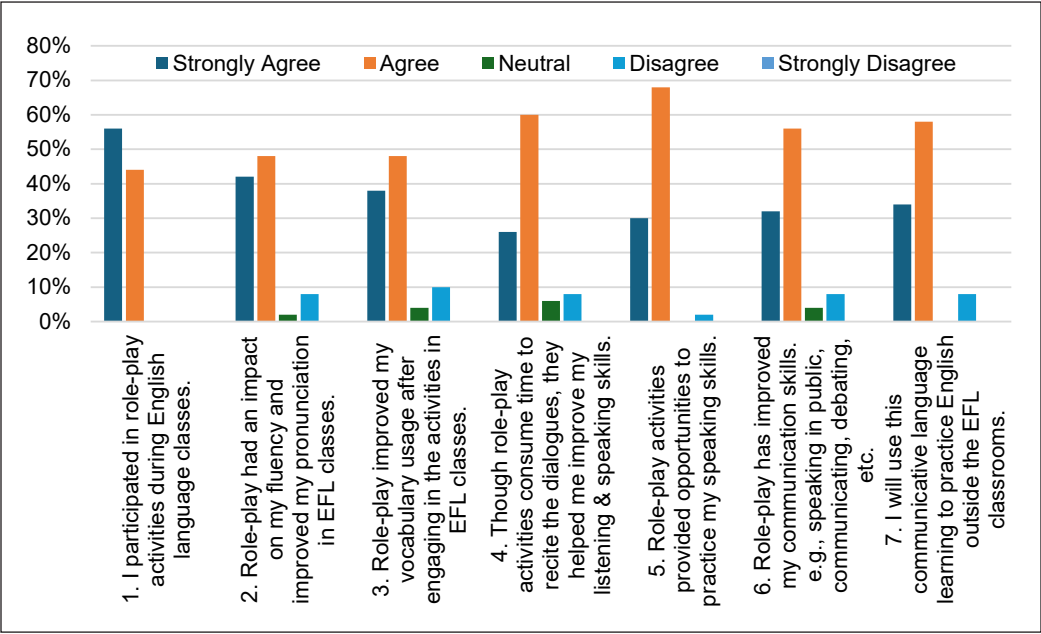


Figure 1. Responses of the questionnaire summary on perceptions of role-play activities on a 5-point Likert scale

of agreement (85% and above) among Saudi EFL participants regarding perceptions of role-play in enhancing their English-speaking skills.

The inclusion of qualitative data in this study was to search for common patterns of meaning and align the compatibility within the datasets that inform the two research questions. Furthermore, by analyzing the interview responses (qualitative data) from the 10 interviewees for RQ1, the researchers observed the following insights. In response to the first interview question, whether they encountered any problems during the application of the role-playing technique, they stated:

Not really, but the only problem was I was nervous, and my partner was not that good. [L4P1]

During the application of role-playing technique, I did not have any significant problems, and the process went smoothly. [L4P2]

Yes, finding suitable words and maintaining a formal conversation was hard for me. [L4P3]

Yes, during the role-play one challenge I faced was staying in the character. It took some practice to embody the role effectively. [L4P8]

No major problem, the process was actually fun and interesting. [L4P9]

Almost faced stress and uneasy gut feeling. [L4P10]

Secondly, in the interviewee's responses to the question about real-life situations

where engagement in role-play activities helped overcome language barriers, they said:

There is no specific situation, but I like it when I practice my language with others by doing role-play. [L4P1]

I have definitely become more confident in participating during lectures, and also more confident in participating in social activities. [L4P2]

Before, I was shy and did not participate, but after my first role-play, I gained the trust to speak. [L4P3]

Role-play activities helped me practice real life scenarios and be more confident while ordering food or asking for directions. [L4P8]

During the role-play I suddenly forgot a line, and I didn't remember what it was, so I improvised, and it was a lot better than what I memorized. [L4P9]

Furthermore, in response to the third interview question about which method was quicker and easier to learn between traditional textbook-based techniques and role-play, the majority of participants favored the role-play method by saying:

The role-play method is more fun than the traditional textbook method. [L4P2]

The role-play method is easier in my opinion. Practising the role-play is more effective, because you will learn your weaknesses and practice to improve your skills. [L4P3]

The role-play, because it is quicker and easier to learn, and it is more flexible and helps me memorize new words. [L4P4]

The traditional textbook method because I love books. [L4P7]

The role-play method was easier and quicker for me to memorize the whole script. [L4P9]

Textbooks were different because the story was already written, but in role-play, you have to act seriously and also write the story. [L4P10]

Finally, in response to whether the role-play technique is an effective method for improving the acquisition of speaking skills in EFL classes, all respondents (100%) unanimously agreed. The reasons cited include – increased usage and engagement with the English language, confidence to speak, opportunities to practice and overcoming fear of presentations as stated in the following extracts:

Yes, speaking has always been the first thing to improve any language. Talking to classmates and doctors is helpful. Role-play played a big part in improving my speaking skills. [L4P3]

Yes, it helps to develop speaking, listening, and sharing ideas wonderfully and easily. [L4P4]

Yes, it made a lot of improvement in overcoming the fear of presentation in other courses. [L4P9]

The qualitative findings of the first research question (RQ1) suggest a positive perception of role-play activity as an effective tool for improving speaking skills among Saudi EFL learners. While 50% of the interviewees did not encounter any issues during the application of the role-play technique and found the process easy, helpful, fun, and interesting, 50% expressed nervousness, a partner's proficiency as a potential challenge, difficulty in finding suitable words, sustaining their character, and even physical symptoms such as uneasiness in the stomach. These challenges can be attributed to the minimal disagreement in the questionnaire items 6 & 7 of the quantitative data, where some participants encountered challenges in public speaking, and the lack of communicative practice outside EFL classrooms might have led to these difficulties. These responses indicate a mixed perception, which can be attributed to differences in individual comfort levels and personal experiences in public speaking.

However, 80% of the interviewees expressed a positive impact in overcoming language barriers, mentioning increased confidence, improvisation, and significant transformation by overcoming shyness after engaging in role-play. On the other hand, 20% were neutral as they did not perceive

significant practical advantages. These findings align with previous observations, complementing the findings from items 2 and 3 of the quantitative data. Participants who noted improvements in fluency, pronunciation, and vocabulary usage likely benefited from role-play activities, as they felt confident and practiced speaking skills in a conducive environment.

In addition, 80% of the interviewees expressed a preference for role-play due to its effectiveness and ease of learning and improvement in their speaking skills, while 10% explicitly favored both the traditional textbook and role-play methods, and 10% indicated a preference for the traditional textbook approach only. On the whole, these perceptions add up to the unanimous agreement of this technique's effectiveness in the acquisition of speaking skills in EFL classes, thereby complementing the quantitative findings of items 4 and 5.

The Positive Effects of Adopting Role-Play Activities on the Speaking Skills of Saudi EFL Students

The results (descriptive frequencies) of the second section of the questionnaire related to RQ2 are detailed in Table 2.

The questionnaire results indicated that most of the respondents experienced a positive impact of adopting role-play activities on their speaking skills (Figure 2). Firstly, item 8 demonstrated that role-play can be a valuable teaching technique for developing speaking skills. 90% of respondents agreed with this statement, citing this method to engage and promote

English speaking. Item 9 examined whether role-play helped overcome learners' fear and shyness in EFL classes. As per the data, 84% agreed, while 14% disagreed with this item. Item 10 focused on boosting students' conviction in generating creative words through role-play, with 88% agreement of respondents.

Table 2
Responses of positive effects of adopting role-play activities on a 5-point Likert scale (N=49)

Items	SA	A	N	D	SD
8. Role-play to promote English speaking is a useful teaching technique for learning English.	36%	54%	4%	6%	0%
9. Role-play helped me to overcome my fear and shyness in EFL classes.	30%	54%	2%	14%	0%
10. Role-play helped me to generate more creative words while speaking English.	36%	52%	4%	6%	2%
11. Role-play has motivated me to participate and engage in real-life conversations.	36%	50%	4%	6%	4%
12. Role-play activities enhanced my English-speaking skills and made me more confident in every participation.	34%	48%	4%	12%	2%
13. After participating in role-play activities, I can identify my weaknesses and strengths.	36%	58%	2%	4%	0%
14. Role-play inside classrooms has helped me feel less stressed.	32%	48%	4%	10%	6%

Note. SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree

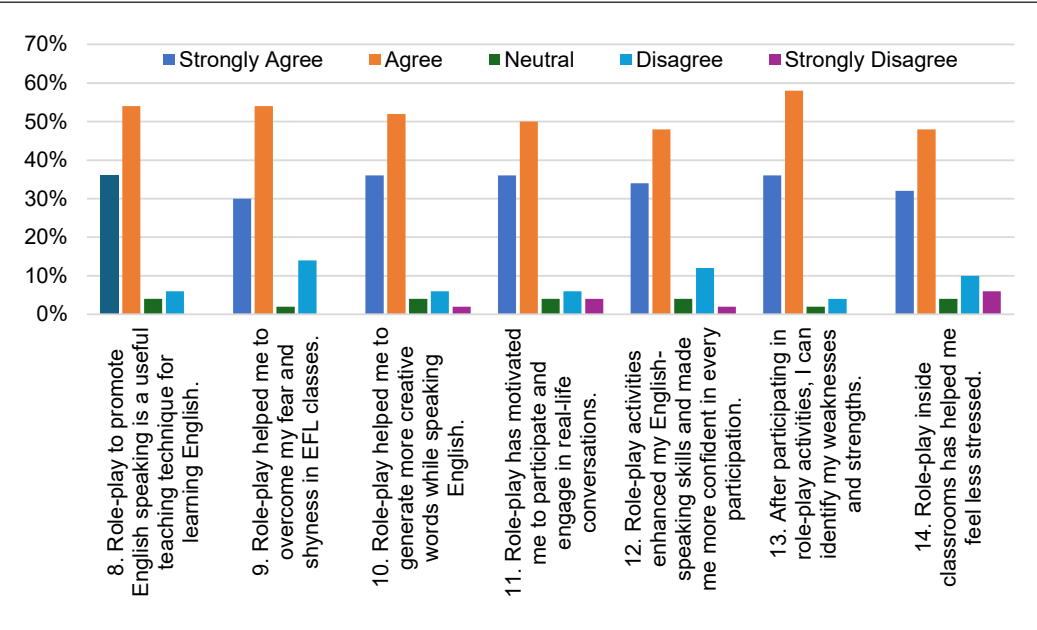


Figure 2. Responses to questionnaire summary on positive effects of adopting role-play activities on a 5-point Likert scale

Items 11 and 12 explored motivation and whether respondents enhanced their confidence through role-playing activities. The results showed that 86% respondents agreed with item 11, while 82% agreed with item 12. Furthermore, items 13 and 14 examined the respondents' ability to identify their weaknesses and strengths and whether they felt less stressed through classroom role-play. 94% displayed high agreement, pointing to the fact that the learners were able to assess and figure out any hindrances they might face (item 13). In addition, by feeling less stressed (item 14), they could experience a comfort zone and enjoy the activity (80%).

Overall, these results suggest a good level of agreement (80% and above) regarding the positive effects of adopting role-play activities among Saudi EFL learners, as they promote personal growth and social interaction. However, additional support may be needed for some learners to fully benefit from these activities, as the percentage of respondents who disagreed on some items, though minimally, cannot be ignored. Both items 9 and 12 displayed 14% equal disagreement citing the fact that some respondents were not quite confident in every participation and experienced fear. This aspect of fear can also be linked to item 14 concerning stress, where the respondents felt stressed, probably because of fear and shyness.

The qualitative data findings (interview responses) in relation to RQ2 reveal the following insights. Firstly, in response to what positive changes the respondents

noticed about themselves during role-play, they noted:

It's not always been easy to talk in front of people, but with practice it became easier to talk. I felt less stressed and anxious. [L4P3]

Role-play has improved my social skills. After role-play, I have gained more confidence in speaking with others in English. [L4P8]

There were major and noticeable improvements in my public speaking skills and in my pronunciation skills. [L4P9]

Usually when I talk, I don't raise my voice, but after role-play I did. I felt confident and sensed it's happening for real. [L4P10]

Secondly, in response to overcoming negative feelings after participating in role-play techniques, most respondents reported dealing with various fears and anxieties related to communication. As stated by them:

Participating in role-play techniques has helped me overcome negative feelings such as the fear of interacting with native speakers. [L4P2]

It is okay to make mistakes and learn from them. The fear of being made fun of is common, but no one is perfect. This idea is what made me less stressed and helped me

through the role-play experience. [L4P3]

I have overcome stress, confusion, anxiety, and shyness. [L4P4]

I was kind of scared of speaking in front of my classmates and making mistakes. [L4P7]

I overcame the fear and actual anxiety of speaking in front of many people. Also, the fear of looking ridiculous while speaking. [L4P9]

I was afraid to commit mistakes due to stress. [L4P10]

Thirdly, in response to how one's confidence in speaking English has been affected through involvement in role-play activities, they reported:

I became more confident, and I think if I practiced more, I will be better. [L4P1]

My confidence has become high, and it has become easy for me to speak in front of a large number of people. [L4P4]

My confidence actually increased by a lot and all the obvious tension in me disappeared. [L4P9]

For the first time it was very good but the second time it was much better than the first. [L4P10]

The qualitative findings of the second research question (RQ2) suggest that

the adoption of role-play activities has multifaceted positive effects, not only on students' speaking skills but also in building confidence, emotional resilience, and overcoming negative feelings associated with language learning. All of them (100%) stated that they experienced improvements in various aspects. They reported specific improvements in areas such as pronunciation and social skills, reduced stress and anxiety in public speaking situations, enhanced listening and speaking abilities, and heightened attention during conversations. These findings collectively underscore the effectiveness of role-play in facilitating skill enhancement across various communication domains, which can be attributed to the results of items 12, 13, and 14 of the quantitative data.

In response to whether role-play helped in overcoming negative feelings, 60% revealed gaining control over the fear of making mistakes or being ridiculed, and overcoming fears of interacting with others, including native speakers. They also cited overcoming feelings of stress, confusion, anxiety, and shyness, while 40% did not overcome fears of performing in front of the class or making mistakes and felt stressed in the process of performing well. These findings highlight the role of role-play techniques in helping learners conquer their negative feelings associated with communication and performance anxiety. These responses complement the findings from items 9 and 12 of the quantitative data.

Lastly, all respondents reported a positive impact on their confidence levels.

Specifically indicating ease in speaking to strangers, using new words, constructing sentences, and speaking in front of large groups. These qualitative findings highlight the way role-play activities bolster learners' confidence levels and improve their ability to communicate effectively in English-speaking situations.

DISCUSSION

The current study investigated female Saudi EFL students' perceptions and experiences of the application of role-play activities and their vital role or impact on their speaking skills. The findings of this research revealed that Saudi EFL learners at IAU perceived role-play to be effective and acknowledged its usefulness in enhancing their speaking proficiency.

In line with previous research, our findings corroborate the results of Razali and Ismail (2017), Vân et al. (2022), Khasbani and Seli (2021), and Aliakbari and Jamalvandi (2010) about the positive outcomes of role-play activities in enhancing speaking skills in English language learning. Our study displayed a positive effect of this technique on their fluency and pronunciation, which shares similar agreement with Thai and Nepalese EFL students' improvement in fluency and pronunciation accuracy (Neupane, 2019; Phuetphon et al., 2012). In addition, role-play also enhanced students' vocabulary usage (through a selection of their own words and phrases), which goes with the results of other studies from Iraq, Nepal, and Vietnam (Krebt, 2017; Neupane, 2019; Vân et al., 2022). Role-play allowed

students to cast themselves in different situations, act as different characters, and think in different ways, which propelled them towards the usage of new vocabulary.

A vast majority of respondents asserted that role-play activities provided opportunities to practice their speaking skills. Role-playing activities are usually liked by students because they are enjoyable and improve their conversational skills. Our study respondents believed that participating in role-play activities promotes English speaking and is a useful teaching strategy for learning English. This is compatible with Losi and Nasution's (2022) views on implementing some engaging classroom activities to improve students' speaking skills. The respondents also displayed interest in participating in role-play because it made them feel less stressed, which agrees with Vân et al.'s (2022) research study, and less fearful and less reserved or shy, which is compatible with Lutfi et al.'s (2018) research study. When learners overcome some negative aspects, their confidence level also increases. Role-play activities also boosted our students' confidence through enhanced speaking skills that stand in line with the results of other findings by Khasbani and Seli (2021), Vân et al. (2022), Nikmah and Zami (2019), and Losi and Nasution (2022). It is pivotal to state that these positive outcomes are perceived and not quantifiable by tests.

Feelings associated with fear, shyness, stress, and not being confident are some of the negative aspects that hinder a student's speaking proficiency. One notable study

by Alrasheedi (2020), which investigated the psychological factors influencing the speaking performance of Saudi EFL learners, found that students are prone to hesitation, shyness, fear of making mistakes, and confronting criticism, which adversely affect their speaking abilities. Through the analysis of our study's interview responses, a nuanced understanding of the difficulties and benefits associated with the role-play approach emerged. The diverse display of experiences among participants highlighted the versatile nature of role-play as a language learning tool. While some learners encountered difficulties such as nervousness, difficulty in maintaining formal conversations, and language proficiency issues, others found the process of role-playing easy. The negative outcomes associated with fear in our study deal with performance anxiety in front of the class, which corresponds to Alrasheedi's (2020) and Aljumah's (2011) study results. A minority of our respondents encountered fear, which made them feel stressed and anxious, affecting their confidence and speaking performance. This discrepancy in experiences may be credited to factors such as individual language proficiency levels or first-time exposure to role-play activities. However, despite these varying challenges reported, there was a high consensus among participants regarding the benefits of role-play in fostering engagement and providing an interactive platform for language practice. Our study's findings in the Saudi EFL context led us to appreciate and provide insights into the relationship between students' engagement

and their speaking performance during role-play, which leads to a discussion of the significance of peer work or collaborative learning. Through group work or teamwork, students are empowered to become interpersonal communicators, mutual learners, multitaskers, peer correctors, and socially competent people.

Furthermore, our respondents' preference for the role-play method over the traditional textbook-based learning approach underscores the need for pedagogical innovation in EFL instruction, and this finding corresponds to the findings of Neupane's (2019), Keezhatta's (2020), and Alghamdy's (2022) study. Also, the unanimous agreement amongst respondents for opting for the role-play technique as an effective method for improving the acquisition of speaking skills in EFL classes and high agreement about role-play providing opportunities to practice speaking skills, highlights role-play's recognized value in practical language learning and communication, thereby boosting their confidence in real-life situations. Respondents valued the engaging nature of role-play for fostering real-world communication abilities and social skills, contributing to a more confident and resilient outlook during language learning activities. Furthermore, our respondents articulated a range of transformative positive experiences, inclusive of emotional development and decreased anxiety when speaking in English. This aspect is particularly significant in EFL contexts, where learners often grapple with performance-related stress, anxiety,

and the fear of committing blunders in front of others. By creating a supportive and inclusive learning environment, role-play activities empower learners to take ownership of their language learning journey and gradually overcome barriers in communication. Additionally, the observed enhancement in communication skills and emotional understanding amongst participants underscores the holistic nature of language learning, which extends beyond linguistic competence to encompass socio-emotional dimensions. Role-play activities not only offer a more dynamic and interesting learning experience but also cater to diverse learning needs. With the surge in digital educational technologies, a transformation in role-play has led to its integration into eLearning platforms through virtual simulations and scenario-based learning (Teachfloor, n.d.). Thus, role-play proves to be a resourceful and adaptable educational tool even in digital teaching and learning environments.

CONCLUSION

In conclusion, the findings of this research study at IAU underscore the significance of role-play activities as a pedagogical tool for enhancing EFL speaking skills and fostering socio-emotional development among learners. By providing a platform for experiential learning and collaborative interaction, role-play activities offer a lively approach to English language learning instruction that promotes active engagement, confidence-building, and cultural awareness. Over the years,

previous studies noted that role-playing honed students' practical application of speaking skills when they embodied real-life situations and portrayed varied characters. This immersive experience contributed to an increase in self-confidence, fostering a sense of motivation, and maximized active learner participation in EFL classrooms. Additionally, considerations should be given in addressing potential challenges such as cultural sensitivity and learner motivation to ensure the successful utilization of role-play activities in diverse educational contexts. Finally, this research resonates with the existing literature on active learning strategies in EFL contexts, suggesting that role-play activities can create a dynamic and inclusive English-speaking environment. Integrating role-play activities into Saudi EFL curricula can not only enhance speaking skills but also cultivate a more learner-centered and participatory environment conducive to holistic language development. Proposing the widespread adoption of role-play techniques in Saudi Arabian EFL classrooms is recommended for enriching language learning experiences.

Implications of the Study

This study implies that the role-play environment provided a safe space for learners to enhance language use, gain control over committing mistakes, speak in front of large groups or strangers, thus contributing to the development of emotional resilience and self-efficacy. However, the negative consequences reported in our study call for working on the psychological

aspects, like anxiety and stress. Jacob Moreno's *Psychodrama* (which established the foundations for role-playing psychology) and Albert Bandura's *Social Learning Theory* help heal and address psychological challenges or emotional conflicts through rehearsals or re-enactment practices, thereby highlighting the therapeutic potential of role-play. Further research could explore the long-term impact of role-play activities on language proficiency, particularly linking it to the enhancement of critical thinking skills, cultural interpretation of the target language, and emotional aspects. As emotions strongly charge the students, the process of remembering or storytelling becomes easy. Hence, these emotional aspects of memory retention can aid in the acquisition of the language.

Limitations and Recommendations for Future Research

This study sample limits itself to female students at the College of Science & Humanities, IAU in Saudi Arabia. However, for future research, both male and female students from different colleges at IAU can be considered, which might result in a larger population sample. Initiatives on the part of the educational practitioners to expand the use of role-play techniques in teaching can strengthen English language learning platforms and encourage stakeholders to routinely incorporate role-play into most of the English-speaking courses in Saudi Arabia, both at the school and university levels. This would enable us to bridge the gap in the Saudi EFL context. This research aims

to provide valuable insights for educators, policy makers, curriculum developers, and future researchers to incorporate innovative and improvised role-playing activities for the acquisition of speaking skills in EFL classrooms. If implemented and used effectively, the role-play method can make a compelling impact in the world of pedagogy.

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APPENDIX

Semi-Structured Interview Questions

1. Did you encounter any problem(s) during the application of the role-playing technique?
2. Could you share any particular real-life situation where engagement in role-play activities aided in overcoming language barriers?
3. Which method was quicker and easier to learn—the traditional textbook-based method or role-play method (in terms of content)?
4. Is role-play technique an effective method for improving the acquisition of speaking skills in EFL Classes?
5. What other positive changes have you noticed about yourself during role-play—e.g. active listening, social and emotional development, etc.?
6. What kind of negative feelings have you overcome after participating in role-play techniques?
7. How has your confidence in speaking English been affected by your involvement in role-play activities?

Exploring the Emotional Impact: Visual Narratives of 4-6 Year-Old Children Affected by the Russian-Ukrainian War

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ABSTRACT

This study investigates the emotional impact of the Russian-Ukrainian war on Ukrainian children aged 4-6 who have sought refuge in Turkey. The research aims to uncover the inner feelings and experiences of these young war victims through the analysis of visual narratives expressed in their drawings. This study systematically examines 23 drawings using content analysis, facilitated by the Maxqda 2020 program to ensure objectivity. Key themes identified include fear, danger, loss, and separation, alongside expressions of hope and peace. These findings underscore the critical need for accurate analysis of war-affected children's emotions to support their social integration and inform effective policy-making. The study contributes to the understanding of the psychological impact of war on children, offering valuable insights for policymakers and practitioners working in the fields of child welfare and trauma recovery.

Keywords: Children, emotional impact, migration, Ukraine, victimization, war

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INTRODUCTION

The Russian-Ukrainian war, a conflict that has profoundly reshaped the geopolitical landscape, has cast a long and dark shadow over countless lives, with young children among the most vulnerable and least understood victims. Despite international regulations governing human rights during times of war, extensive violations persist due to the adverse conditions that emerge.

The intricacies of warfare pose significant challenges to ensuring human rights protections, resulting in profound tragedies that extend beyond injuries and fatalities. War leads to mass displacement, health crises, food insecurity, disrupted education, homelessness, and deteriorated welfare systems, ultimately tearing apart families, cultures, and societies. Regrettably, children bear a heavy burden of these destructive consequences, enduring the environmental upheaval and devastation that exacerbate these adverse effects over time (Fronek, 2024; Fylkesnes et al., 2019; Gao et al., 2010; Guru, 2010; Masten & Narayan, 2012; Park, 2015).

The emotional and psychological toll of war on children is profound and multifaceted, affecting them in ways distinct from adults due to their dependency on care, stability, and secure attachments. In times of conflict, children often experience disrupted relationships with caregivers, as parents may become emotionally unavailable due to trauma, preoccupation with survival, or loss of life. Many children are placed in substitute care, with some even becoming “unaccompanied children,” completely devoid of adult protection (Barbara, 2006). These disruptions leave children vulnerable to long-term emotional and psychological scars, with impacts that may extend far beyond the cessation of hostilities.

War’s effects on children are particularly devastating during critical developmental periods. Interruptions to education, forced displacement or migration, or injuries sustained during conflict can profoundly

alter their life trajectories. A child who has lost access to schooling may miss out on foundational cognitive and social development, while those disabled in war may face compounded challenges, including social exclusion and restricted life opportunities (Barbara, 2006).

The psychological impact of war on children is pervasive, encompassing immediate stress responses, heightened risks for mental disorders, and persistent fears for personal and familial safety. These experiences starkly contrast with children’s developmental needs for security and predictability (Bürgin et al., 2022). Mental health and psychosocial interventions for war-affected children must address these issues holistically, integrating trauma-informed and resilience-oriented approaches. Such interventions emphasize the restoration of both external and internal security, recognizing that effective support must cater to the unique emotional and developmental needs of children (Bürgin et al., 2022).

While much of the existing literature has focused on the psychopathological outcomes of war, our research has expanded to consider children’s social, emotional, and behavioral adaptations in conflict settings. For example, Jensen and Shaw (1993) note that children’s cognitive immaturity and adaptive capacities may allow them to develop self-protective mechanisms in less intense wartime environments. However, massive exposure to trauma often overwhelms these defenses, highlighting the necessity for timely and culturally

sensitive interventions. A shift in focus from psychopathology to resilience and social awareness has opened new avenues for understanding how children cope with wartime adversities and for identifying interventions that support positive outcomes.

For those caught in the throes of war, migration often becomes an involuntary necessity, driven by the imperative to protect their children (Hvass & Wejse, 2017). In 2023 alone, a staggering 20 million children fled conflict zones for various reasons, underscoring the scale of the crisis (OCHA, 2023). This surge in migration has thrust the issue of “refugee children” into the spotlight, demanding urgent attention as a pressing social concern. The repercussions of this displacement will reverberate across social, cultural, educational, and healthcare domains in both the short and long term (Pearn, 2003).

The ongoing conflict between Russia and Ukraine serves as a poignant illustration of the dire consequences endured by children, leading to the emergence of the “refugee children” phenomenon. Dating back to the historically tumultuous relationship between the two nations, tensions escalated into crisis in 2014 and culminated in war when Russia invaded Ukraine on February 24, 2022 (Sacchi, 2022). Marking one of the lengthiest direct military confrontations of our era, the Russian-Ukrainian conflict has inflicted severe harm, particularly upon Ukrainian children (Fronek, 2024). Official reports indicate that during the third week of the war, 902 civilians, including 75 children, perished and compelling approximately

75,000 Ukrainians to seek refuge. This crisis ranks as the second-largest wartime tragedy in European history, following World War II. By 2023, the toll had risen to 9,701 civilian fatalities and 17,748 injuries. Distressingly, the impact on children is stark, with 555 young lives lost and 901 boys and 379 girls injured, highlighting the profound tragedy inflicted upon them (OHCHR, 2023). These grim statistics underscore the devastating toll of war on innocent children.

The conflict between Russia and Ukraine has escalated into an international crisis, extending beyond their borders to impact neighboring countries and, notably, Europe. Alongside blatant violations of basic human rights during the war, Ukrainian children have been subjected to various threats, including cultural erosion, human trafficking, organ trafficking, and drug trade, resulting in the disruption of family cohesion (Coynash, 2022; Saryono et al., 2022). Assessing the broader implications of the Russian-Ukrainian conflict on children reveals migration as a significant outcome. Forced to flee their homeland, Ukrainian children grapple with challenges such as education, healthcare, and food scarcity in refugee camps. Those relocating to safer countries face additional hurdles, particularly adaptation issues (Graham, 2002). Russia's invasion of Ukraine precipitated a mass exodus of children, driven solely by the imperative of survival. Many sought asylum primarily in neighboring European nations like Poland, Hungary, Romania, and the Czech Republic, while others sought refuge in more distant locales such as Western

Europe, the USA, and Turkey. However, these migration decisions were fraught with peril, including the risks of death, exploitation by human traffickers, and involvement in organ trafficking (OHCHR, 2022).

As the war in Ukraine drags on, the needs of Ukrainian children are becoming increasingly pressing due to the escalating risks posed by the conflict. Their vulnerability to the war's effects, their longing for familial support, and their social requirements underscore the necessity for tailored policies addressing the repercussions of their migration experiences. Children bear a disproportionate burden of the war's disinformation within the social fabric, making it more challenging for them to cope with its adverse consequences compared to adults. Particularly, disabled children, economically disadvantaged children, those from single-parent households, and orphans experience heightened levels of victimization (Denov, 2010; Edward et al., 2020). Ukrainian children face similar challenges to other migrant children affected by war in general, including language barriers, social and cultural disparities, and insufficient local resources. Effectively addressing these issues requires a deep understanding of children's emotions and thoughts, coupled with accurate anticipation of their needs (Bosqui & Marshoud, 2018; Slone & Mann, 2016).

A comprehensive review of the literature reveals various studies concerning the broader society and the plight of children in the aftermath of the Ukraine-Russia conflict.

These studies predominantly focus on the healthcare and educational rights of children affected by the Russian-Ukrainian war (Armitage, 2023; Khen, 2023; Martyenanko, 2022), social issues (Badanta et al., 2024), health challenges faced by migrant children, and the psychological impact of these challenges (Birgün et al., 2022), as well as the victimization of children abducted by Russia (Fornek et al., 2023). Additionally, significant attention has been given to the role of UNICEF in safeguarding children's rights during wartime (Arlief & Tunggal, 2023), and the public health implications of migration resulting from the Russian-Ukrainian conflict (Duszczyk & Kaczmarczyk, 2022; Sokań-Adeaga et al., 2023).

While existing literature has extensively examined and evaluated children affected by the Russian-Ukrainian war through various sources, direct inquiry into the emotions and thoughts of children at the primary level has been notably lacking. This study seeks to address this gap by directly identifying the feelings and thoughts of children aged 4-6 who are victims of the Russian-Ukrainian conflict and have migrated to Turkey, using visual aids and employing Maxqda software for data analysis. This manuscript delves into the visual narratives created by children aged 4-6, providing a poignant window into their inner worlds. By exploring their drawings, paintings, and other visual expressions, we aim to uncover the emotional impact of the war on these young minds, offering valuable insights into their experiences, fears, and hopes.

Consequently, this study stands as a pioneering endeavor in terms of both data collection and methodology, filling a crucial void in the literature. Importantly, the primary source of information in this study is the children themselves, thus lending significant weight to its findings. The outcomes of this study serve as a valuable resource for informing policy development, particularly concerning children directly impacted by warfare.

RESEARCH METHODOLOGY, DESIGN, AND THEORETICAL FRAMEWORK

The study adopted a qualitative research approach to explore the relationship between various events by comparing established standards with defined issues, thereby elucidating the current circumstances. The rationale behind selecting the qualitative research model as the methodological framework lies in its capacity to uncover participants' attitudes, perspectives, perceptions, and experiences realistically and holistically within their natural environment. This approach is particularly effective in gaining a deeper and more comprehensive insight into the experiences of children aged 4-6 years amidst war conditions.

The theoretical basis of this research is grounded in Expressive Arts Therapy and Narrative Psychology. Expressive Arts Therapy emphasizes the use of creative processes—such as drawing, storytelling, and play—to help individuals express emotions and experiences that may be

difficult to articulate verbally, particularly in traumatic contexts (Klorer, 2000; Malchiodi, 2005). This approach aligns well with the study's aim to explore young children's experiences, as it allows for the expression of their internal worlds in developmentally appropriate ways.

Narrative Psychology, on the other hand, focuses on the stories people construct and tell about their lives, which shape their identity and perception of events (Bruner, 1990; McAdams, 2001). In this study, children's drawings are considered visual narratives that express their personal stories, emotions, and perceptions of the war. By interpreting these visual narratives, the study seeks to uncover the children's inner worlds, offering valuable insights into their psychological state and the effects of their experiences. This theory is relevant to the study as it highlights the importance of understanding how children narrate their experiences of war, which can provide insights into their coping mechanisms and the impact of such events on their psychological well-being. Integrating these theoretical perspectives within the qualitative framework enriches the study's ability to capture the nuanced and complex experiences of children in war-torn environments.

In sum, qualitative research, supported by Expressive Arts Therapy and Narrative Psychology, offers a robust foundation for exploring and understanding the intricate realities of children's lived experiences in contexts of conflict. By integrating these theories, the study frames children's

drawings not just as artistic expressions but as meaningful narratives that can be systematically analyzed to uncover deeper emotional and psychological truths about their experiences of war. This theoretical approach guides the content analysis methodology used in the study, allowing for a nuanced exploration of themes such as fear, hope, and loss in the visual narratives created by the children.

Aim and Question of the Research

This study aims to explore the emotions and experiences of children aged 4-6 years who have migrated to Turkey following their displacement due to the war sparked by Russia's invasion of Ukraine. By shedding light on the feelings, desires, fears, and anxieties of these young victims, the research aims to inform the development of policies tailored to their specific needs and circumstances. It holds significance in both assessing the extent of trauma endured by children affected by war and in formulating appropriate and effective social policies.

To achieve this goal, the primary research question is formulated as follows:

1. What emotional responses and experiences have been elicited in 4-6-year-old children who were victims of war and subsequently migrated to Turkey as a result of the Russian-Ukrainian conflict?
The sub-dimension questions guiding the research include:
2. What specific worries and anxieties are encountered by 4-6-year-old children

who have been affected by the Russian-Ukrainian war?

3. What are the expectations expressed by 4-6-year-old children who have experienced the effects of the Russian-Ukrainian war?
4. What objective assessments do 4-6-year-old children make regarding their experiences as victims of war resulting from the Russian-Ukrainian conflict?

Data Collection Tool of the Research

In this study, drawing was employed as a method of data collection, facilitating active and detailed expression of participants' emotions and experiences. Drawing serves as a crucial criterion for understanding children psychologically and pedagogically, offering insights into their intelligence, personality, immediate surroundings, and inner worlds. The dynamic relationship between drawing and children continuously shapes and defines each other, evolving. Drawing serves as a significant tool for children to articulate their feelings and thoughts, particularly for those with limited verbal communication skills. It provides a multidimensional means for children to communicate with the outside world (Artut, 2004; Matthews, 2003).

The drawing abilities of the 4-6-year-old children, comprising the participant cohort of this study, play a pivotal role in data collection. By the age of four, children begin to depict recognizable forms, progressing to purposeful drawings by age 5. By the time they reach 6 years old, their drawings exhibit increased realism

and thematic elements. Within this age group, the inclusion of details in drawings expands, accompanied by the emergence of emotional storytelling (Skybo et al., 2007). Pictures serve as a mode of communication, reflecting children's emotions, aiding in self-expression, and fostering self-confidence (Malchiodi, 2005). As children start verbalizing words, they often express their feelings through repetitive utterances. Similarly, those who incorporate shapes into their drawings delve into deeper emotional dimensions through repeated representation (Burkitt et al., 2005).

In children's artwork, particularly during the preschool years of ages 4 to 6, the subconscious impact of their experiences is frequently evident. During this developmental stage, emotions that may be challenging to articulate verbally are often more effectively conveyed through visual expression. The spontaneous nature of children's drawings often reveals profound emotions and offers insights into their perceptions of life, people, and their surroundings (Skybo et al., 2007). These perceptions serve as vital indicators in gauging the presence of positive emotions such as happiness, joy, and trust, or negative emotions such as unhappiness, pain, and insecurity, all of which may be influenced by the child's experiences (Cherney et al., 2006; Leslie et al., 2006).

Participants of the Study and the Implementation Environment

The participant group for this study was selected using the convenience sampling

method, chosen for its relevance to the research question and its effectiveness in accessing participants (Merriam, 2013). The sample consisted of 23 Ukrainian children aged 4 to 6 who had migrated to Turkey following their displacement due to the conflict between Ukraine and Russia. Necessary consent was obtained from the children's families, who were informed about the study through their instructors, and the research was conducted with the guidance of educator supervisors.

The study took place in the children's regular classroom setting to ensure a familiar and natural environment. To minimize disruptions to their daily routines, the research was carried out under normal classroom conditions, with only their teachers present during the implementation phase. The teachers, who were briefed beforehand by the researchers, facilitated the study to maintain consistency and prevent the children from experiencing any emotional disturbances.

During the implementation, each child was provided with blank paper and crayons and instructed to respond to the prompt, "What do you think about war?" by drawing a picture within a thirty-minute timeframe. This approach ensured uniformity in the data collection process. Each child produced a single drawing, resulting in a total of 23 drawings that corresponded to the number of participants.

The teachers reported no emotional changes in the children during the implementation phase, underscoring the effectiveness of conducting the study in

their natural classroom environment. By maintaining a familiar setting and avoiding external interference, the study ensured that the children could express their thoughts and emotions freely through their drawings, yielding authentic and meaningful data.

MATERIALS AND METHODS

Analysis of Research Data

The study's data underwent analysis using the content analysis method, which involved consolidating and organizing the data based on common concepts and themes. Initially, the drawings were pre-analyzed, and researchers independently assessed their relevance to the subject matter. Following this evaluation, 23 drawings were deemed suitable for analysis. The MAXQDA 2020 qualitative analysis program was utilized to transcribe and interpret the obtained data.

In qualitative research, the concepts of validity and reliability are often debated, and no universally accepted method exists for assessing the quality of such studies (Harrison et al., 2020). To address potential biases in picture analysis, the researchers took steps to minimize subjective interpretation. Educators served as supervisors during the drawing phase, and no identifying information (such as names, genders, or ages) about the children who created the drawings was provided. Codes and themes were then developed independently to ensure data reliability. The level of agreement and disagreement between the drawings and the codes was assessed to determine reliability, with the agreement-to-disagreement ratio exceeding 70% (95% in this study), meeting the reliability criteria. The data analysis

process followed a four-stage standard method: coding, sorting, categorizing, and ensuring validity and reliability, in line with established approaches (Bengtsson, 2016).

Given these considerations, drawing was selected as the primary data collection tool for this study because it aligns closely with the research question and the developmental characteristics of the participants. This method effectively captures and conveys the inner experiences and perceptions of 4-6-year-old children. Furthermore, employing a method that directly engages with the participants' unique means of expression enhanced the study's validity and reliability by enabling an objective evaluation of the collected data.

Research Findings

Following content analysis, the research data were categorized into four main themes and five sub-themes. The themes identified in the study were (i) "emotions," (ii) "values," (iii) "colors," and (iv) "objects." The specific themes and sub-themes are outlined in Figure 1.

Upon analyzing the first theme, "emotions," in Figure 2, fear, danger, and hopes for salvation emerged as sub-themes in the research findings. The drawings frequently depicted fearful figures, explosions, and weapons, highlighting the omnipresent dangers of war. Particularly notable were the depictions of individuals fleeing from war vehicles/weapons in a state of fear. It is believed that the emotions depicted in children's drawings mirror their feelings and experiences.

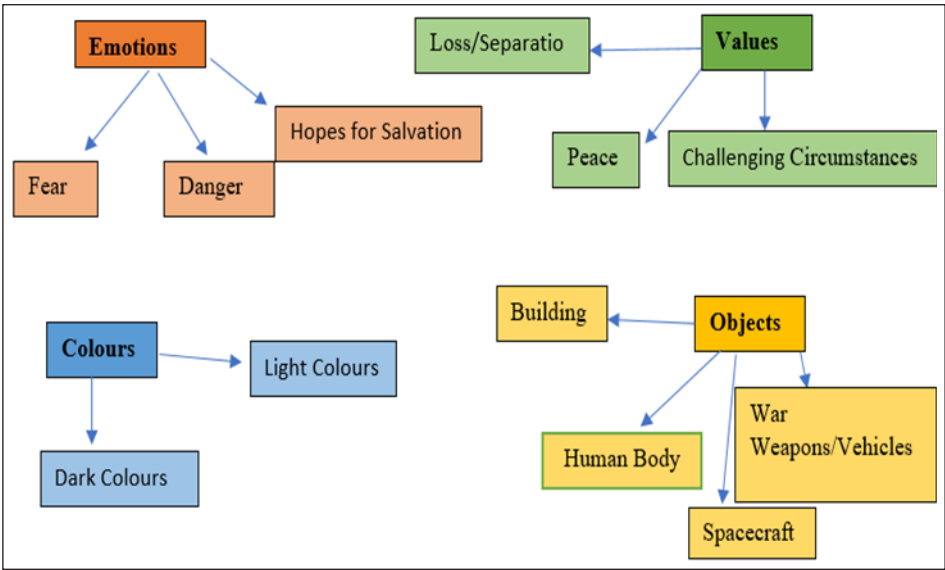


Figure 1. Themes and sub-themes



Figure 2. Theme (Emotions) examples

Emotions tend to be the predominant theme in children's drawings, often expressing feelings such as happiness, sadness, fear, or joy. Given that the drawings in this study centered on the theme of war, and the children originated from a war-torn environment, feelings of danger and fear were notably pronounced. However, the



Figure 3. Theme (Values) examples

presence of hope for the future in some drawings indicated the children's aspirations for a better tomorrow. This sentiment was exemplified by depictions of children boarding a ship and the inclusion of both Turkish and Ukrainian flags in the drawings, symbolizing optimism and the possibility of a brighter future.

Upon analyzing the theme of "Values," another significant aspect of the research, sub-themes including peace, loss, separation, and challenging circumstances were identified, as depicted in Figure 3. The breakdown of families, a lamentable consequence of war, results in the fragmentation of family units and the loss of parents or siblings among the children in the study. Depictions of individuals lying on the ground and children with sorrowful expressions in the drawings underscored this reality, suggesting that the children had experienced familial losses.

The inclusion of raindrops in drawings featuring individuals lying on the ground conveyed the children's profound emotional distress over this situation, with raindrops serving as symbols of sadness and grief. Additionally, the presence of doves in the drawings symbolized the longing for peace, while imagery depicting challenging circumstances formed the foundation of these peace aspirations. The children expressed a fervent desire for a swift resolution and a return to their previous way of life.

Upon examining the theme of "Objects" in the research, sub-themes including war weapons/vehicles, the human body, spacecraft, and buildings were identified, as illustrated in Figure 4. War weapons/vehicles such as tanks, rifles, and bombs depicted in the visuals symbolize the experiences the children have endured

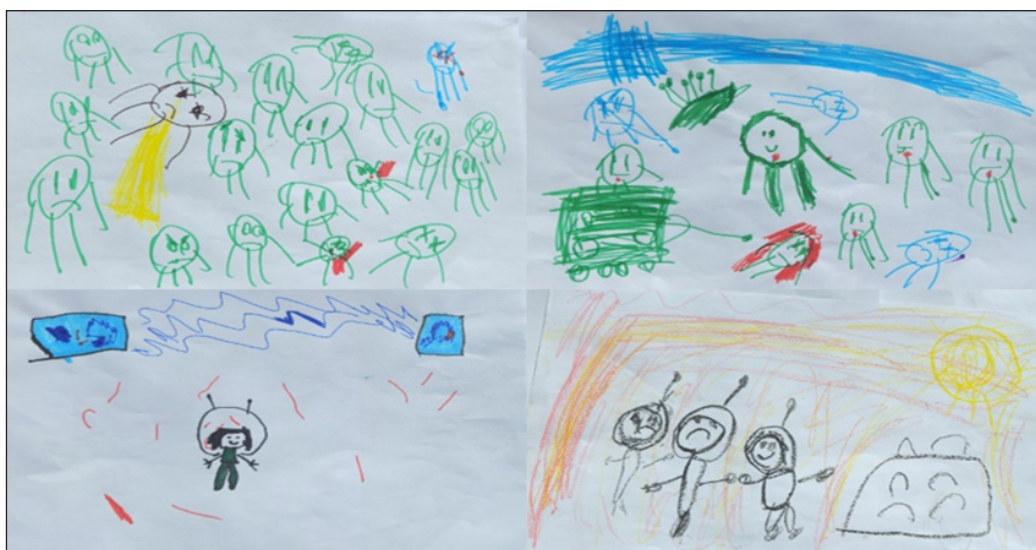


Figure 4. Theme (Objects) examples

in the war environment. Additionally, images of children and human figures are frequently present in the drawings, with depictions of the human body revealing noteworthy details. Notably, some drawings featured missing fingers, indicating a lack of ambition or goal-setting among the children. In certain images, the eyes were drawn in the form of crosses, suggesting a suppression of emotions and a prohibition on crying. This suppression reflects the children's efforts to cope with the traumatic events they have witnessed.

Moreover, the absence of noses in some drawings suggests that the children may not have a strong sense of self-awareness or an understanding of their abilities, weaknesses, and potential. Another significant aspect of the visuals is the inclusion of astronaut suits and space vehicles, symbolizing the children's distant hopes for a peaceful future away from their current environment.

Furthermore, depictions of houses in the drawings reflect the children's feelings about home and life. Ruined and dark-colored houses indicate a lack of peace in their living environment, while the absence of house figures or scribbles over drawn houses suggests further turmoil. The children's inability to experience a peaceful home environment due to the war disruption and the fragmentation of their families underscores the profound impact of conflict on their lives.

The theme of "Colors" in the research was examined through two sub-themes: light colors and dark colors. As depicted in Figure 5, the colors depicted in the drawings serve as a reflection of the drawer's emotions, offering insight into their inner feelings and complementing the themes conveyed by other objects. The prevalence of dark colors, particularly brown and black, suggests that the children who created the



Figure 5. Theme (Colors) examples

drawings harbour fear and anxiety due to the ongoing war. Furthermore, the presence of red among the dark colors signifies feelings of anger intertwined with fear.

On the other hand, the use of green and yellow hues in the drawings signifies the children's hopeful outlook for the future amidst their challenging circumstances. The tones of the colors used in the drawings align with the emotions and values of the children, indicating a pervasive sense of trauma. Overall, the colors depicted in the drawings provide a poignant representation of the children's emotional states and experiences.

CONCLUSION

The prolonged conflict between Russia and Ukraine has led to widespread forced migration and extensive destruction, particularly in residential areas. Vulnerable

groups, especially women, older adults, persons with disabilities, and children, have been disproportionately affected. As the most significant armed confrontation in Europe since World War II, this conflict has triggered one of the largest waves of migration in the region and created substantial risks across various domains, including security, housing, healthcare, and children's rights.

In response to these challenges, there is an urgent need to develop policies aimed at alleviating the trauma experienced by children in war-torn areas. Understanding the full extent of the war's impact on children is crucial for crafting appropriate policies and gaining deeper insights into their plight. The protection of children's rights, as enshrined in numerous international legal frameworks, must guide these policy

efforts, particularly in addressing the needs of children affected by war.

This study makes a significant theoretical contribution by utilizing visual narratives to explore the emotional impact of war on young children by offering a comprehensive insight into the emotional responses and experiences of children displaced by the Russian-Ukrainian war. Unlike most social policy research, which often addresses children's problems indirectly through adult perspectives, this study uniquely engages with children's own viewpoints. Notably, this study also identifies hope as a significant and novel theme, contrasting with the predominantly negative emotional narratives emphasized in previous research. These results have both theoretical and practical implications, advancing understanding in the fields of childhood trauma and emotional resilience.

Directly addressing the study's core research question, fear and danger emerge as the dominant emotions, while some drawings reveal elements of hope and aspiration, reflecting the children's struggle between trauma and resilience. Themes of loss and a yearning for peace underscore the profound impact of familial and social fragmentation caused by displacement. The frequent use of dark tones, such as black and brown, along with imagery of weapons and destroyed buildings, vividly illustrates the children's internal struggles. Taken together, these findings provide a nuanced understanding of how war profoundly shapes the emotional and psychological landscapes of young children.

This study makes a significant contribution to Narrative Psychology Theory by illustrating how children's visual narratives function as critical mechanisms for meaning-making, identity formation, and emotional regulation in the context of war-related trauma. Narrative Psychology Theory posits that individuals construct their sense of self and interpret their lived experiences through personal and collective narratives, which serve as frameworks for identity construction and psychological adaptation (Bruner, 1990; McAdams, 2001). Prior research has underscored the role of verbal and written narratives in self-concept development and psychological well-being (McLean & Pasupathi, 2012; Polkinghorne, 1988). However, relatively few studies have examined non-verbal narrative expressions, particularly children's artistic depictions, as storytelling mechanisms in conflict zones.

By analyzing war-affected children's drawings, this study extends Narrative Psychology Theory by demonstrating that visual narratives serve as more than just reflections of trauma—they actively mediate the psychological processes of self-construction, agency, and emotional resilience. The children's artwork not only depicts their lived experiences but also narrates their internal struggles, fears, hopes, and desires, revealing a complex interplay between trauma and resilience. Notably, this study identifies hope as an emergent and distinct theme, diverging from traditional research that predominantly emphasizes negative emotional responses in war contexts. These findings challenge prevailing assumptions and suggest that,

even in dire circumstances, children engage in a form of narrative identity construction that fosters resilience and the possibility of a future beyond war.

Furthermore, this study addresses a methodological gap in Narrative Psychology by incorporating a qualitative, art-based research approach. While past studies have largely relied on interviews, written accounts, and retrospective narratives, this study highlights how children's drawings function as an alternative narrative medium, providing a more direct and unfiltered insight into their psychological states. The visual narratives captured in the artwork illustrate a dynamic interaction between individual agency and socio-cultural influences, aligning with Bruner's (1990) conceptualization of narrative as a meaning-making process. Through this lens, the study underscores the importance of non-verbal storytelling as a critical yet underexplored dimension of Narrative Psychology, offering empirical support for the theory's application beyond verbal discourse.

By expanding the scope of Narrative Psychology Theory to include children's artistic expressions as narrative tools, this study contributes both theoretically and methodologically to the field. The findings not only enhance our understanding of how children process and communicate trauma but also offer valuable insights for therapeutic interventions and policy-making aimed at supporting war-affected children.

The practical implications of this study are significant for policymakers and practitioners working with war-affected children. The findings highlight

the importance of addressing not only the immediate physical needs of displaced children but also their emotional and psychological well-being. Incorporating visual narrative techniques into assessments and interventions can provide a nuanced understanding of children's psychological states, enabling the development of targeted support strategies. Programs designed to assist these children should integrate methods that encourage emotional expression, such as art therapy, while preserving cultural and familial bonds to foster resilience and recovery.

Creating safe and supportive environments in host countries is essential for promoting the integration and healing of war-affected children. As demonstrated in this study, analyzing children's drawings offers valuable insights for formulating policies aimed at protecting and nurturing displaced children. Drawings allow children to express their emotions and thoughts more authentically than words, with the objects and themes depicted reflecting their past experiences and providing a bridge between their external and internal worlds. These expressions can reveal conflicts, desires, disappointments, fears, and hopes, making art-based approaches an invaluable tool for understanding and addressing their needs.

Policymakers and practitioners can incorporate art-based therapeutic techniques, such as Expressive Arts Therapy, to address the psychological and emotional challenges faced by these children. Educators and social workers can implement structured drawing sessions as both diagnostic and therapeutic tools to better understand and

support children's emotional well-being. International organizations like UNICEF and UNHCR can integrate visual narrative methods into their child welfare assessments to design culturally and emotionally relevant interventions.

To build on these findings, future studies should utilize larger and more diverse samples to validate the results and explore cross-cultural differences in the emotional expressions of war-affected children. Longitudinal research could examine how children's emotional states evolve, offering critical insights into the long-term impacts of war and migration. Additionally, interdisciplinary approaches that combine visual data with interviews or focus groups could provide a more comprehensive understanding of children's experiences, supporting the development of holistic intervention strategies tailored to their unique needs.

War inflicts significant harm on children, not only on those directly experiencing the conflict but also on the future of the societies involved. The conflict sparked by Russia's invasion of Ukraine has turned numerous children into victims of war in a remarkably short time, with many forced to migrate to countries like Turkey. The study revealed that the children's drawings reflect not a singular issue but multiple traumatic experiences, including the breakdown of families, loss of loved ones, and displacement from their homes, all of which elicited profound emotional responses of fear, anxiety, and sadness.

Nevertheless, an important finding of the study was that, despite enduring

multifaceted traumatic events, the children expressed hopes for the future and a desire for a new, peaceful life, particularly outside the conflict-affected region. This suggests that with the implementation of appropriate policies, children can overcome the destructive effects of war and work toward a brighter future.

Ensuring the safety and well-being of children affected by war in the countries they relocate to, and safeguarding their mental and physical health, must be at the core of social policies. Efforts should focus on reinforcing family bonds, meeting fundamental humanitarian needs such as education and healthcare, and addressing emotional requirements. Preserving traditional cultures, religious beliefs, and customs, while implementing policies that instill hope, enhance safety, and expedite reintegration into society, is essential.

These policies should resonate with international public opinion and contribute to the overall well-being of the affected children. As Eglantyne Jebb aptly stated, "Every war is a war against children," underscoring the universal imperative to safeguard children's rights for the betterment of humanity's future (Fylkesnes et al., 2019). Therefore, the utmost priority should be placed on protecting and nurturing children, especially in environments ravaged by war.

Future research should expand on this study by including larger and more diverse samples to enhance the generalizability of the findings. Longitudinal studies could provide deeper insights into how the emotional impact of war evolves and how different interventions affect children's

well-being. Combining visual methods with other qualitative approaches, such as interviews or focus groups, could offer a more comprehensive understanding of children's experiences. Researchers should also investigate the impact of various interventions and support programs on the emotional health of war-affected children to identify best practices for policy development and implementation.

Limitations of the Study

Despite its valuable insights, this study has several limitations. The sample size of 23 children, although purposeful, is relatively small and may not fully represent the diverse experiences of all war-affected children. The use of a convenience sampling method limits the generalizability of the findings. Additionally, relying on drawings as the sole data source may not capture the full spectrum of children's emotional experiences, as some may express their feelings through other means. The study also does not account for variations in individual responses based on factors such as age, gender, or prior trauma.

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Shared Values of Students' Political Freedom: The Perspective of Public University Students in Peninsular Malaysia

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ABSTRACT

Each university in Malaysia has its shared values to guide its organizational staff and students despite being highlighted as political values. However, only a little research highlights or relates shared political values at the university level, particularly among university students in Malaysia. Therefore, the study was conducted with the purpose of finding a common ground of shared values that relate to political values emphasized by universities and embraced by students. This paper highlights the shared values of student political freedom held by public university students in Peninsular Malaysia. This study analyzed some of the perspectives of the students to provide some of their views towards the values of political freedom by conducting in-depth interviews with 60 participants. The study found three primary themes representing the core values guiding these students' political engagement.

Firstly, the importance of knowledge and *adab* in every aspect of students' political actions and decisions. Secondly, leadership and integrity values take centre stage, as participants stress the need for ethical leadership that prioritizes the nation's interests over personal gain. Thirdly, the value of patriotism and national identity becomes apparent, with students expressing a profound sense of loyalty and pride towards their nation. The study concludes that fostering these political values among university students is vital for a mature and responsible political culture. It suggests disseminating these values

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through formal, non-formal, and informal education, promoting civic responsibility and active citizenship. Collaborative efforts across all levels of society are deemed essential for achieving a humane and prosperous nation, where political freedom and engagement are guided by knowledge, *adab*, leadership, integrity, and patriotism. Embracing these values enables Malaysian students to contribute significantly to the nation's progress and democratic development.

Keywords: Democracy, shared values, student political freedom

INTRODUCTION

Since 2019, the amendment of the Universities and University Colleges Act 1971 (UUCA) has shown the improvement of supportive mechanisms for political freedom for university students. However, the provision and legal framework may not be sufficient to support the positive environment of students' political activism. A few incidents involving university students in public demonstrations, such as black flag demonstrations and protests related to Undi18 (Weiss, 2005), incite a concern about the values that guide the students in expressing their political freedom. Having more political freedom does not make the students sufficiently capable of driving themselves to be mature and ethical in their actions and decisions. Past studies (Altbach, 2006; Sigel, 1965) have shown the significance of political values and norms in driving the orientation of students' political activity. So, what are the political values embraced by Malaysia's university students in guiding their actions in expressing their political freedoms?

Reisinger (1995) highlighted the complex and dynamic nature of political value formation, influenced by factors like family, education, peer groups, and media.

Cultural factors, shaped by historical, social, and economic conditions, also play a significant role in shaping societal norms and values, which in turn influence individual political perspectives. Economic factors, such as wealth distribution and financial levels, can further impact how individuals perceive and engage with political issues. For instance, historical events like the May 13 Incident in Malaysia have had a lasting impact on the nation's political landscape, shaping the political values of subsequent generations, including university students (Othman & Ali, 2018). Educational institutions, through their curricula and extracurricular activities, can foster critical thinking and expose students to diverse perspectives, thereby influencing their political beliefs (O'Neill, 2022). Media, particularly social media, has emerged as a powerful tool for shaping public opinion and mobilizing political action, especially among young people.

It is important to consider the intersectionality of various factors, such as gender, ethnicity, and socioeconomic status, in shaping political values (Crenshaw, 1991). For example, female students may prioritize gender equality and women's rights, while students from marginalized communities

may be more concerned with issues of social justice and equity. Additionally, students from rural areas may have different political perspectives compared to those from urban areas, influenced by factors like access to education, employment opportunities, and exposure to diverse cultures.

By critically analyzing the dominant political discourse, we can uncover how it shapes the political values of university students. Dominant narratives, often perpetuated by mainstream media and political elites, can influence public opinion and limit the range of acceptable political viewpoints (Berry & Sobieraj, 2014; Tran, 2022). However, critical thinking and exposure to alternative perspectives can challenge these dominant narratives and foster more nuanced and independent political values.

Therefore, this study aims to explore the common ground of shared values that influence students' engagement in political activities. It is likely that students' political values are primarily shaped by their social upbringing, political socialization, and involvement in university activities, which are embedded within a broader political culture. The specific activities they engage in, their level of involvement, and their social circles can significantly influence their understanding and aspirations for political freedom.

Furthermore, the rise of social media has revolutionized political discourse, particularly among young people (Leong, 2019). Platforms like Twitter, Instagram, and TikTok can shape public opinion, mobilize

activism, and expose students to diverse political perspectives (Grigoryan, 2024). Student organizations also play a crucial role in fostering political awareness and activism, providing a platform for students to discuss political issues, organize events, and engage in social justice campaigns.

While this study does not get into the specific factors that influence students' perspectives, it posits that their expressed opinions reflect their conceptual understanding and aspirations for political freedom within the university context. Although they may not fully practise these ideals in their daily lives, their understanding of political freedom shapes their engagement with political issues and their potential to become active citizens.

THEORETICAL FRAMEWORK

The study of political values and political freedom is part of political culture theory. This theory was popularised by Almond and Verba (1963) in their seminal work *A Civic Culture*, which laid the foundation for understanding how cultural factors influence political systems and citizen participation. This political theory has been successful as a theoretical foundation in political science because it provides a convincing explanation of the role of culture as a mediator between citizens and the dynamics of the structure, organization, and operation of the state (Voinea & Neumann, 2020). Almond and Powell define political culture as compiled by Giang, (2024) as a set of personal beliefs and inclinations of members of subjective systems that form political action and make

the political action meaningful. In other words, political culture refers to a collective attitude, values, and beliefs about politics and government that are prevalent within a society. Meanwhile, as a theory, political culture is a framework used to understand the deeply rooted norms, values, beliefs, and attitudes that shape political behaviour and institutions within a society. It provides insights into how these cultural elements influence political systems and the actions of individuals and groups within them.

Political values may be understood as political relationships, institutions, organizations, views, and ideas resulting from the transforming, creative socio-political practice of the social forces that meet the requirements of social progress and the development of human personality on a social scale (Kallos & Trasnea, 1982). In essence, political values serve as a mediator in creating and assimilating other values, which shape and influence other values in society. It is important to note that no specific list of political values is embedded in any society. Therefore, in distinguishing the values, one may employ different approaches to values and the intrinsic characteristics of political values. Furthermore, political values are generally based on historical experiences, social institutions, ideas, or ideals that meet the requirements for the free and equitable development of the human personality, collectiveness, and, ultimately, humanity.

Halman (2007) groups political values into traditional and new political values. Traditional political values are those values

that have been established for a long time and have been passed down from generation to generation. Those traditional values are deeply ingrained in a society's culture and traditions, including respect for authority, loyalty to the nation's state, and adherence to traditional social norms and customs. Meanwhile, new political values are prevailing in the current contemporary society. The new political values centre around conflicts emerging from post-industrial societies and issues revolving around citizenship, democracy, and social justice. As seen everywhere, politicians and activists fight for environmentalism, feminism, multiculturalism, human rights, and individual freedom. Considering that we are in postmodernism, new political values do not entirely eradicate the traditional ones. Instead, these two coexist within the political realms.

Across all societies within the political sphere, political values play a significant role as the foundations of people's political behaviours, especially in voting and showing orientation towards political objects. In this matter, Karwat (1982) explains that people are inclined to use political values as their abstract ideas to reflect the beliefs and attitudes of different social groups towards their own needs and those of society. Social needs here could be implied as objectified ideas of social phenomena that bring lasting significance and importance to the satisfaction of the needs of large groups and society. Social needs may include equality, freedom, solidarity, and justice. As mentioned previously, political

needs are bound to complex dynamics. Hence, conservatives and liberals may have different ideas of social needs.

Malaysia's youth have emerged as a powerful force in shaping the country's political landscape. Their increasing engagement in social and political issues reflects a growing desire for change and a commitment to democratic values. This study examines the evolving political culture of Malaysian youth, focusing on how shared values influence their political participation. By drawing on Almond and Verba (1963) framework, we analyze the transition from a subject to a participant political culture among young Malaysians.

Almond and Verba (1963, p.16) identify three ideal types of political culture: parochial, subject, and participant. In a parochial culture, individuals have limited awareness of political processes and focus primarily on local issues. For instance, in traditional societies, people may be more concerned with family, clan, or village affairs than national politics. A subject culture, on the other hand, involves citizens who are aware of the political system but have limited influence over it. They may passively follow political developments but rarely engage in political activities. In contrast, a participant culture is characterized by active citizen engagement, where individuals actively participate in political processes, such as voting, protesting, and lobbying. Democratic societies often strive to cultivate a participant culture, as it is essential for a healthy and responsive democracy. In Malaysia, the political culture among youth

is increasingly shifting towards a participant culture, as evidenced by the rise of youth-led movements like Undi18.

Shared values, such as democracy, equality, justice, and freedom of expression, are the foundation of a vibrant and engaged citizenry. These values foster social cohesion and political legitimacy by providing a common ground for diverse individuals to come together. Past research suggests that Malaysian youth often prioritize values like democracy, justice, and freedom of expression (Zain & Din, 2022). These values are cultivated through a variety of socialization processes, including family, education, and media (Mia et al., 2021). Universities play a crucial role in shaping young people's political beliefs and attitudes. Through curricular activities, extracurricular organizations, and social interactions, universities can foster critical thinking, civic engagement, and a sense of social responsibility. Additionally, social media platforms have emerged as powerful tools for young people to connect with like-minded individuals, share ideas, and mobilize for social and political change (Literat & Kligler-Vilenchik, 2019). However, it is important to note that social media can also be a source of misinformation and polarisation, which may challenge the cultivation of shared values.

This study posits that shared democratic values significantly influence political participation. As Almond and Verba emphasize, a civic culture characterized by shared democratic values motivates citizens to engage in political activities such

as voting, protesting, and participating in civic organizations. This active participation is crucial for a healthy democracy, as it ensures that governments remain responsive to the needs and desires of their citizens. When individuals share common values, they are more likely to support political freedoms and participate actively in the political process, fostering the trust essential for democratic institutions to function effectively. Moreover, societies with strong democratic values tend to prioritize policies that protect political freedom and encourage civic engagement, further enhancing democratic health.

LITERATURE REVIEW

The study of political freedom in Malaysian public universities has not gained significant attention as an empirical study despite recent legislative changes and the evolving political landscape. Politics in Malaysian public universities can be a complex and significant aspect of campus life. As institutions of higher learning, public universities serve as platforms for academic excellence, critical thinking, and the development of future leaders. However, they are not immune to political influences and challenges. Politics in Malaysian public universities are characterized by several key aspects, including students' politics, freedom of speech, campus activism, and government influence (Zuan, 2021).

In essence, Malaysian public universities often have active student political bodies and organizations. Student elections are held to elect student representatives who

advocate for the interests and welfare of students. These student bodies can engage in various activities, including organizing events, voicing concerns, and participating in national issues (Ismail et al., 2016). While public universities are spaces for intellectual discourse, there have been occasional concerns about the limitations on freedom of speech and expression. Authorities may place restrictions on certain political activities or discussions that are deemed sensitive or against university policies. In the recent work Zain et al. (2023), student political freedom in public universities in Southern Malaysia is strictly regulated by university rules and regulations that contradict the 2018 Universities and University Colleges Act (UUCA) amendment. Public universities in Malaysia have a history of campus activism. Student groups may organize protests, demonstrations, and campaigns to address various social, political, and environmental issues (Weiss, 2020). These activities reflect the spirit of civic engagement and social responsibility among students. Malaysian public universities are funded and regulated by the government as public institutions. This factor may contribute to some level of government interference in university affairs, including the appointment of university leadership and funding decisions.

Like the broader Malaysian society, ethno-political considerations can influence public universities. Some student organizations and activities may align with specific ethnic or political groups, leading to diverse perspectives and debates on campus (Zuan, 2021). Maintaining academic freedom

and university autonomy can sometimes be challenging in the context of balancing the interests of various stakeholders, including the government, university administration, faculty, and students. This balance is essential for upholding the integrity of academic pursuits. University policies, guidelines, and governance structures, particularly those that encourage student involvement in decision-making and foster transparent communication, play significant roles in shaping the political climate on campuses. Examples include initiatives like student representation in university councils, co-curricular leadership programs, and debate forums that provide platforms for students to express opinions on social and political issues. These mechanisms allow students to actively engage with political concepts and foster political awareness, contributing to a practical foundation in political values through lived experience on campus. Such engagement, in turn, builds trust among stakeholders and promotes a supportive environment for student political activities.

Much like broader civil society, political values among university students vary widely due to the diversity of backgrounds, experiences, and ideologies present on campus. In Malaysian public universities, this diversity mirrors the multicultural nature of the country, where students value unity, social justice, and inclusivity, which are reinforced through campus activities, inter-university events, and community service projects. Malaysian students often advocate for issues such as equal rights, fair

treatment, and environmental sustainability (Ting & Ahmad, 2022; Zuan, 2021). These values are not developed in isolation but are shaped through a continuous socialization process involving interactions with peers, faculty, and university policies that support these values.

Furthermore, concern for the environment and sustainability is a prevalent political value among Malaysian students. They actively engage in environmental initiatives and call for action on climate change. Human rights advocacy is also one of the common political values in which university students in Malaysia often advocate for human rights and speak out against discrimination, social injustices, and human rights abuses both within the country and globally. Indeed, Malaysian students highly value education and often advocate for accessible, quality education that prepares individuals for future challenges (Weiss, 2012). Political values also encompass the preservation and recognition of cultural identity and rights. Students may advocate for preserving indigenous cultures, language rights, and cultural heritage.

The Universities and University Colleges Act 1971 (UUCA) is the primary legal framework that governs the political freedom and activism of university students in Malaysia. Enacted in 1971 and came into force on September 15, 1971, the UUCA has undergone several amendments over the years, with the most recent update being in 2023. It was originally enacted to regulate the establishment and administration of universities and university colleges

in Malaysia. Nevertheless, it has been criticized for restricting student political activities and freedom of expression on campus. The 2023 amendment has marked a rather significant shift in supporting political freedom and activism among university students. The recent update grants student bodies increased autonomy, allowing them to manage finances and organize activities independently. However, the UUCA remains a controversial piece of legislation as it has not yet addressed the fundamental issues of student freedom of expression and political participation.

As highlighted earlier, the recent amendments to the UUCA have undoubtedly opened new avenues for student freedom and activism. However, the broader political climate within Malaysian public universities remains complex and nuanced. While the legal framework has loosened up, societal and institutional pressures can still stifle student voices. Undeniably, university students across the country are anticipating more open policies on political freedom, both on and off campus—particularly under the leadership of Anwar Ibrahim, a former prominent student activist.

The November 2022 Malaysian general election (GE15) was a historic event that expanded voting rights to include 1.2 million new voters aged 18 to 20. This demographic, nearly 38% of whom were students in higher education, played a crucial role in influencing the outcome of the election (Morshidi et al., 2023). As a significant voting bloc, students in higher education hold significant influence over election results. To appeal to this demographic,

political parties have strategically included issues related to higher education and student welfare in their manifestos.

University students perceive this reform as a step towards greater political participation. Reflecting this sentiment, student groups have increasingly called for the abolition of the UUCA in recent years. During the parliamentary debate on March 28, 2023, Higher Education Minister Khaled Nordin pledged that the government would not allow any political parties to set up branches in tertiary education institutions, deeming it inappropriate. On top of that, Khaled firmly stated that the issuance of permits for politicians to enter universities or colleges falls under the jurisdiction of each institution's vice chancellor rather than his ministry's authority. While the ministry acknowledges that the current Act has been seen as repressive to students, it is committed to reforming it to enhance students' freedom to engage in political activities. The UUCA will be amended to allow university students to openly participate in politics, including joining political parties and running as candidates, among other rights (Parliament of Malaysia, 2023). Amending the UUCA would be a more practical approach to accommodate the evolving needs of university students rather than abolishing it entirely. The latter would require the development of a new university constitution for all public universities, a time-consuming process that could disrupt higher education operations.

Comparing the ideals of the National Education Philosophy (NEP) with the current restrictions on student political

freedom reveals a significant disconnect. The NEP, established in 1988, guides Malaysia's national education system. Aligned with the National Principles (Rukun Negara), NEP aims to cultivate a united and progressive society by fostering holistic development in students (Al-Hudawi et al., 2014). One of the principles highlighted in NEP is democratic principles, aiming to cultivate citizens who are active and responsible participants in society. Therefore, student political freedom is a critical aspect of accomplishing this goal. By engaging in political discourse, students can develop critical thinking skills, tolerance and respect for the rule of law, which are essential for democratic citizenship (DeLue & Dale, 2021). Additionally, students who participate in political activities instil a sense of civic responsibility that further empowers them to become catalysts for positive change (Chia et al., 2024). Along these lines, promoting student political freedom is not only consistent with the NEP but also essential for developing future leaders who can contribute to a just and progressive society.

While the UUCA continues to be a subject of debate, it is imperative to ensure that university students have the freedom to engage in political discourse. This aligns with the goals of the Malaysia Education Blueprint 2015-2025 (Higher Education), which seeks to produce well-rounded individuals capable of contributing to society. Through this blueprint, the Malaysia Ministry of Higher Education aspires to create holistic, entrepreneurial

and balanced graduates. In the spirit of this, fostering political freedom for students not only enriches their personal development but also invigorates society (Ganapathy, 2016). These experiences mould students into individuals who embody values-driven principles, foster political freedom and complement the blueprint's broader aspiration of developing values-driven Malaysians who are both globally aware and deeply rooted in Malaysian identity (MOE, 2015).

METHODOLOGY

This paper employs a qualitative approach, adopting in-depth interviews as the main method of data collection. The study covered 12 public universities in Peninsular Malaysia (Table 1).

A total of 60 informants (N=60) were purposively sampled based on the following inclusion criteria:

- i. Informants should be currently enrolled as students in the selected public universities. This would guarantee that the study focused on individuals who were actively experiencing the university environment and its policies regarding political freedom.
- ii. Informants should be individuals actively participating in campus politics. This meant that they could be representatives of student councils, student associations, and/or politics-related clubs. Informants with exposure and experience in campus politics would voice diverse perspectives and

develop comprehensive solutions to current challenges on campus.

- iii. Informants should voluntarily agree to participate in this study. Hence, informed consent was sought from each informant, ensuring that they understood the purpose of the study, potential risks, and their rights as informants.
- iv. Another criterion for the informants is their language proficiency. To facilitate communication during the online interview sessions, informants should have at least a professional working level in Malay and/or English.
- v. In addition to student informants, this study also involved student affairs officers providing insights, particularly into the institutional policies, regulations, and practices that influenced students' political freedom.

The 60 participants included 48 students and 12 student affairs administrators, selected to represent a diverse range of perspectives from 12 universities in Peninsular Malaysia. By involving students and student affairs officers from each university, the study captures variations in political freedom experiences across different institutions. The sample size of 60 participants was determined based on available time, resources, and practical constraints, as conducting in-depth interviews and data analysis with a larger group would have been challenging within the study's timeframe.

A case study of this nature often prioritizes depth over breadth, allowing for a thorough examination of each participant's experiences to yield more prosperous and more detailed insights. Additionally, data saturation was reached, as recurring codes and themes indicated that no new

Table 1
Universities included in the study

Zone	University	State
Northern	Universiti Sains Malaysia (USM)	Penang
	Universiti Utara Malaysia (UUM)	Kedah
	Universiti Malaysia Perlis (UniMAP)	Perlis
Southern	Universiti Tun Hussein Onn Malaysia (UTHM)	Johor
	Universiti Teknologi Malaysia	Johor
	Universiti Sains Islam Malaysia (USIM)	Negeri Sembilan
West Coast	Universiti Putra Malaysia (UPM)	Selangor
	Universiti Malaya (UM)	Kuala Lumpur
	Universiti Teknologi MARA (UiTM) Shah Alam campus	Selangor
East Coast	Universiti Malaysia Kelantan (UMK)	Kelantan
	Universiti Malaysia Terengganu (UMT)	Terengganu
	Universiti Malaysia Pahang (UMP)	Pahang

Table 2
Demographic characteristics of research informants

Demographic characteristics		Frequency
Gender	Male	45
	Female	15
Age	21-30	48
	31-40	7
	41-50	5
Ethnic group	Malay	48
	Indian	2
	Chinese	4
	Bumiputera Sabah	3
	Bumiputera Sarawak	3
Religion	Islam	51
	Christianity	3
	Hinduism	2
	Buddhism	4
Position	Students	48
	Student Affairs Officer	12

Source: Fieldwork 2021-2022

information emerged from additional interviews and collecting any further data won't produce value-added insights. Table 2 summarizes the demographic profiles of the informants is included to provide further detail on the participant distribution.

In this study, a gatekeeper approach was employed to access participants. A gatekeeper, or key informant, is crucial for entering research fields, especially during periods of restricted movement. This strategy is commonly used in qualitative research. Data collection for 12 universities in Peninsular Malaysia took place between August 2021 and September 2022, coinciding with a severe COVID-19 outbreak. Due to the challenges posed by travel restrictions, most data collection was conducted through online interviews using

the Zoom Meeting platform, except for three universities in the northern region where in-person interviews were feasible.

Informed consent was obtained from all participants to ensure ethical conduct. The privacy and confidentiality of participants were protected throughout the research process. Data analysis was conducted using thematic analysis facilitated by Nvivo software. Interviews were guided by a set of open-ended questions designed to elicit participants' perspectives on the values of political freedom they hold and how they apply these values in their on-campus political activities.

- a. What values of political freedom do you believe are most important in shaping your involvement in campus politics?

- b. What challenges have you faced in upholding the values of political freedom during your involvement in student politics?
- c. How do you personally apply these values of political freedom in your interactions with peers and university management?

The COVID-19 pandemic necessitated the use of gatekeepers to connect researchers with suitable participants. Student affairs officers at each university served as gatekeepers. They were informed about the research objectives and tasked with identifying potential participants within a specific timeframe. Once potential participants were identified, gatekeepers coordinated with both the research team and the students to arrange online interviews.

While online interviews offer flexibility and accessibility, it is important to acknowledge potential limitations compared to face-to-face interviews. To mitigate these limitations, the validation process adopted including open-ended questions, follow-up probes, and member checking were employed to enhance data quality and reliability. Additionally, efforts were made to minimize gatekeeper bias by requesting a diverse range of participants from different faculties and backgrounds.

DISCUSSION

This section presents the analysis of the patterns that emerged from the informants' responses to the interview questions. The questions were constructed to explore the

shared values of political freedom among university students in Peninsular Malaysia. The analysis of recurring themes across the interviews uncovers common points of view, concerns, and aspirations related to political engagement and freedom on campus. The findings are categorized based on the three major themes identified: the value of knowledge and *adab*, the value of leadership and integrity, and the value of patriotism and national identity. Each theme will be discussed in relation to the corresponding interview questions and the informants' responses, offering insights into the broader context of political freedom as experienced by university students.

The Value of Knowledge and *Adab*

The analysis shows that a strong and consistent pattern emerged from the interviews, where the informants stressed the need for knowledge to be paired with *adab* in their political engagement. Although freedom is the cardinal principle in political engagement, informants viewed that one should exercise it with a sense of responsibility, respect, and discipline, particularly in the context of Islamic ethics. The connection between knowledge and *adab* was seen as a guiding principle for making sound political judgements, aligning with the broader cultural values in Malaysia.

Knowledge and *adab* are inseparable, at least in the context of Islamic ethics. In discussing the conception of education, al-Attas (1980) emphasizes that *adab* is crucial. In the view of al-Attas, education should produce both good

citizens and good individuals all around. In this instance, *adab* is defined as “the discipline of body, mind and soul; the discipline that assures the recognition and acknowledgement of one’s proper place in relation to one’s physical, intellectual, spiritual capacities and potentials; the recognition and acknowledgement of the reality that knowledge and being are ordered hierarchically according to their various levels” (al-Attas, p. 42). Regarding the political sphere, *adab* cultivates citizens who are politically responsible and ensures a political order (Ryle-Hodges, 2021).

Knowledge equips students with the necessary information about political systems, ideologies, and current issues. It enables them to critically analyze and evaluate different perspectives, policies, and candidates (Ryle-Hodges, 2021). By making informed decisions based on reliable information, students can actively participate in the political process and exercise their freedom effectively. Such critical analysis is described as *tabayyun* by respondent USM5, who emphasizes the importance of informed decision-making. They explained:

“There needs to be clarification (*tabayyun*). These students should value clarification. They are intelligent individuals, capable of critical thinking. They will not unthinkingly follow anyone, not even political fanatics. Regardless of what is said, true or false, they should evaluate it. As students, we should maintain that level of discernment.” (USM 5)

Maybe it is about self-confidence. There are still many UMP students who lack confidence in their strengths and abilities. They are also unaware that by speaking up, they can bring about change at UMP. So perhaps they need to be more confident in voicing their ideas for the betterment of UMP itself. (UMP 2)

Furthermore, *adab* guides students in expressing their political views responsibly and respectfully. It emphasizes the importance of thoughtful and constructive communication, avoiding personal attacks or inflammatory language (Gräf et al., 2018). *Adab* encourages students to engage in meaningful discussions, listen to other people’s perspectives, and seek common ground to promote dialogue and understanding. An informant raised a concern about the lack of *adab* among students as below.

So, one of the things I can mention is the value of civility. This is because sometimes students are too fanatical about the ideology of free speech, which can negatively affect harmony within the university and among different ethnic groups, especially in a multicultural country like ours. This is something we can observe as an important value that should exist in students actively participating in the student movement. As I mentioned earlier, there are student movements that claim to represent all students at Universiti Malaya. However, they only

use their mother tongue, which means not all ethnic groups can understand it. Therefore, we can see that these student movements also need to be more accommodating and communicative so that all students can understand them. In my opinion, they should have civility and an understanding of the students' situation if they want to represent them effectively. (UITM 1)

Adab fosters an appreciation for diverse viewpoints and encourages students to respect and consider differing opinions. It teaches students to engage in respectful debates and discussions, even when disagreeing with others (Yusuf, 2012). This helps create an inclusive environment that values diverse perspectives and promotes open-mindedness, which is essential for a healthy democratic society. The statement below shows an informant's concern about some students' attitudes regarding their lack of appreciation for the diversity of views.

Show respect. Just as the opposition should respect the government, the opposition and the student management should all be based on the same principle. Even though we are still students, sometimes they say we are not mature, not good enough, or not knowledgeable. When we give suggestions, they say they have more experience. That is not right for us to practice because when we say a terrible thing's word to someone, it will be kept in the loop, and when we become officials, we might speak the same way

to our subordinates, and the loop will continue. Showing respect, in other words, means respecting everyone's opinions. Disagreements can happen, but they should be handled with grace and a better approach. (UITM 2)

Knowledge about digital literacy and *adab* can help students navigate social media platforms responsibly and critically. They can learn to distinguish between reliable and misleading information, engage in respectful online discussions, and use social media as a tool for constructive political activism (Jaafar & Sham, 2022). *Adab* encourages students to use social media to promote positive change while respecting the rights and dignity of others. An informant from UiTM highlights the impact that could be due to a low sense of responsibility.

Sense of responsibility. This ensures that we use the platform correctly. For example, we do not use the platform to incite, we do not use it to fight or argue, and we do not use public gatherings for personal interests. Instead, we use it as an entity to fight for our common agenda. That is the most important thing. Because I feel that without responsibility, whatever we do will become worse. For instance, the issue of freedom of speech to talk loudly about student deaths caused by universities, caused by stress, and so on. Then, inciting students to break down university doors and burn the VC's house, no, it is not allowed! A sense of responsibility is essential. For example,

we show solidarity, and in the end, we will deliver that resolution. And we demonstrate or speak up to ensure this issue reaches everyone with the same sympathy or empathy, with the same agenda and spirit. So, its use must be done responsibly. (UITM 2)

Looking at the value of knowledge and *adab* from the perspective of political culture theory essentially highlights the holistic development of students as informed, ethical citizens. As (political) knowledge is acquired alongside *adab*, students are not only informed about their political rights and responsibilities but conscious of engaging with the political process in respectful and ethical manners. The duality in this approach further encourages responsible political participation, ensuring that students, as citizens, contribute to societal change with integrity and respect for diverse perspectives. In a civic culture, Almond and Verba (1963) emphasize the political cognition of people to be an informed citizen. They highlight that people in the participation culture have an awareness toward all four classes of political objects, towards the government, the processes of political input, the outputs of government, and adopting an activist view of their role as citizens. A sense of awareness of political objects would be more beneficial to a citizen who participates in a political system ethically.

The Value of Leadership and Integrity

The interviews portrayed a clear consensus among informants on the importance of

leadership and integrity in upholding political freedom. Informants emphasized that leadership involves not merely inspiring others but also setting a standard for political conduct. Integrity was viewed as pivotal for maintaining respect and civility in political discourse. Informants connect these values directly to their political engagement on campus.

The values of leadership and integrity are essential in preserving and enhancing political freedom among university students. This value is vital in shaping the campus environment, representing the students, and contributing to the university students' overall growth, particularly in political freedom. Leadership involves inspiring others to work towards a common goal (Palanski & Yammarino, 2009; Storr, 2004). Students with leadership qualities can inspire their peers to become more politically engaged, encouraging them to exercise their freedom, express their opinions, and participate in the political process. Student leaders can inspire others to follow suit by setting an example and demonstrating their commitment to political freedom. One of the informants supports this point as follows:

Indeed, practising these values will encourage them not to act inappropriately. Another value, as I mentioned earlier, is to be polite and refrain from using disrespectful and uncivilized language. If they possess such values, they will understand the importance of etiquette. The significance of etiquette is crucial in all

aspects of their activities and politics. (UTHM 4)

Integrity is essential in political engagement. Students with integrity uphold strong moral and ethical principles, ensuring that their actions align with their values and the greater good. They make decisions based on honesty, transparency, and fairness, even in challenging situations (Colby & Sullivan, 2009; Jensen, 2009; Putman, 1996). By embodying integrity, students demonstrate a commitment to ethical, political practices, fostering a culture of trust and respect. The essential of this value is shown in a statement by the following informant,

The most important value is honesty. This means being truthful in every administration or management we engage in. It requires us to be transparent in our actions. To me, it signifies having high ethical and moral standards in all our dealings. It means combining knowledge with proper conduct and etiquette when interacting with others. It implies that when we encounter someone, we should demonstrate the appropriate manners and ethics, showing respect to that person. Honesty is vital in all our activities and political engagements. (UPM 3)

Effective leaders understand the importance of building trust and credibility among their peers (Simons, 1999; Williams et al., 2023). Students who demonstrate integrity in their words and actions can establish themselves as trusted figures within the student community. This trust is

crucial for fostering an environment where students feel comfortable expressing their political views and engaging in open and honest discussions. The following statement made by one of the informants indicates the importance of the university's trust being integral in providing a healthy political surrounding of student leadership potential to grow effectively.

The value of trust is crucial. We must start believing in each other. This means that the university, through Student Affairs, needs to trust the students in their abilities and talents. Conversely, the students also need to trust the university, understanding that everything the university does is solely for their benefit and well-being. So, I see trust as an integral part of this whole service. Student Affairs starts to demonstrate trust when they begin giving students opportunities to be involved in decision-making processes, for example, managing their own affairs, being part of the Senate, and being invited to participate in management meetings concerning student affairs. Before this, they had no such opportunities, and their voices were not heard. Thus, building trust between all parties is extremely important. (UM 5)

Furthermore, students with leadership qualities can facilitate discussions, encourage diverse perspectives, and seek common ground on political issues (Nauman et al., 2022). By fostering an inclusive and

collaborative approach, student leaders can create an environment that respects and values different opinions, which will contribute to the promotion of political freedom. This approach also shows the value of integrity. An informant shared the experience of how their student council compromised their group after the campus election to reduce conflict within the council and focus on collaborating with others in the student council to value the trust to lead given to them as student leaders.

The shared values that should be in student leaders are “Amanah”, which means trustworthiness and integrity. This involves speaking truth to power and acknowledging both right and wrong. For example, after the election, the Student Council disbanded the X group it formed before the election. This demonstrates our commitment to collaboration with other parties and student councils. We prioritize truth and transparency, ensuring our members are trustworthy in their knowledge and actions. (UTHM 2)

A university lecturer we interviewed also agrees that integrity is integral to effective leadership. This kind of leadership can nurture a high respect for political freedom among students.

Integrity is the cornerstone of effective leadership. As university lecturers, we strive to instil this value in our students. We encourage them to respect themselves and to approach their

work with honesty. Our assessments focus not only on correct answers but also on how they present their arguments and engage in discussions. Integrity is a powerful shield that protects individuals. If we fail to cultivate integrity, we risk producing individuals who lack character. Such individuals can have a detrimental impact on society. Therefore, it is crucial to emphasize the importance of integrity, which encompasses honesty, trustworthiness, fairness, and other related qualities. (UITM 5)

Leadership involves working collaboratively with others and building consensus (Slater, 2005). By incorporating leadership and integrity into their political engagement, students can become effective advocates for political freedom, fostering a culture of ethical and responsible participation. These qualities can empower students to contribute positively to their communities and make a lasting impact on the political landscape. In the context of political culture theory, particularly the concept of subject culture, student engagement infused with leadership and integrity represents a significant departure from passive participation. While subject culture often characterizes students as aware of political structures but limited in their agency, the cultivation of leadership and integrity empowers students to engage in a more informed and morally conscious manner, even within the constraints of a passive political environment. This approach not only enhances their understanding of

political systems but also positions them as advocates for responsible political freedom. By embodying these values, students contribute positively to the political culture of their communities, fostering a foundation of ethical engagement that could influence the broader political landscape over time.

Furthermore, higher education institutions play a crucial role in cultivating critical thinking, ethical engagement, and social responsibility among students. By providing opportunities for students to engage in meaningful political discourse, participate in student organizations, and undertake community service, universities can empower students to become active and informed citizens. As future leaders, these students have the potential to shape the political landscape by advocating for policies that promote social justice, environmental sustainability, and human rights. By fostering a culture of ethical leadership and responsible citizenship, higher education institutions can equip students with the knowledge, skills, and values necessary to address the challenges of the 21st century.

The Value of Patriotism and National Identity

The interviews revealed that patriotism and the national identity of the students were of great importance in influencing them politically. Most informants felt that patriotism went beyond academic study and encompassed a sense of responsibility, compassion and attachment towards the nation, which, for instance, called on the

students to carry as opposed to avert. The informants also mentioned that the promotion of patriotic concepts and a strong sense of nationality will enhance political participation among the students as they are likely to care about the health of the nation and democracy. The discussions also highlighted that the students' concept of nationhood, which encompasses a collective history and nationalistic feeling, reinforces the sense of purposeful democracy and political activity free from abuse by the myriads of ethnic diversities.

Patriotism is an ideology that concerns individuals' attachment and loyalty to their nation and country (Bar-Tal & Staub, 1997). Thurairaj et al. (2018) deliberate that there are five categories of patriotism, each owning its own complexity. Constructive patriotism is referred to as genuine, constructive, critical, civic and reasonable in a democratic society. Constitutional patriotism deals with the idea of political attachment to the universal norms and values of a democratic constitution. Meanwhile, patriotic education is the education towards inspiring the spirit of patriotism, either carried out through formal or informal means. Next, symbolic patriotism defines the emotional attachment of belongingness and 'weeness'. Another category is blind patriotism, which is defined as total obedience toward authoritarian government activities and policy formation. In a democratic country like Malaysia, these types of patriotism are portrayed by different groups of societies. Eventually, patriotism, in essence, is the basis of national identity that leads to good governance and fosters trust among citizens.

Patriotism and national identity can instil a sense of civic responsibility in students (Straughn & Andriot, 2011). By nurturing love and pride for their country, students are more likely to feel a personal stake in its well-being (Westheimer, 2006). This can motivate them to participate in political processes actively, engage in community service, and contribute to the betterment of their nation. An informant shows his concern over the political apathy among students, which may jeopardize their values as citizens.

Today's youth must understand that regardless of our country's current challenges, this nation is ours. Instead of passively complaining about issues like budget allocations and police engagement, we should actively contribute to positive change. We should not be overly distracted by entertainment and superficial trends. In this rapidly changing world, political apathy can lead to a sense of detachment, making young people believe that their vote does not matter. We must encourage young people to be informed and engaged citizens. (UITM 1)

Patriotism can help foster national unity among students with diverse backgrounds. It can provide a common ground that transcends differences and brings people together (Othman et al., 2021). When students share a sense of national identity, it promotes understanding, empathy, and cooperation, enabling them to work collaboratively towards shared goals,

including preserving and advancing political freedom (Westheimer, 2014). Patriotism and national identity can reinforce students' commitment to democratic principles. Students who feel strongly connected to their nation are more likely to value and protect democratic ideals, such as freedom of speech, equality, and the rule of law (Wang & Jia, 2015). This can drive them to actively engage in defending and advocating for political freedom, ensuring that these values are upheld and preserved. As in the Malaysian case, this political engagement is closely related to the respect of values instilled in the Federal Constitution and Rukun Negara, as mentioned by the following informant.

The values that we can adopt are the positive values that can be embraced by themselves. If we look at several parties like UMNO, PKR, PAS, Pribumi Bersatu, and others, I believe the most important aspect is their fundamental struggles. The fundamental struggles of these Malay parties, as reflected in their constitutions, are as follows: firstly, safeguarding the sovereignty of the nation. Secondly, preserving Islam as the official religion. Thirdly, defending the special rights of the Bumiputera and the Malays themselves. So, in my opinion, this is related to what was mentioned earlier, the values from the Federal Constitution and the principles of Rukun Negara that should be embraced, especially in terms of the interests or love for the country. (UITM 4)

National identity can help build a sense of collective identity among students (López, 2014; Safran & Liu, 2012). This shared identity can create a sense of solidarity, common purpose, and a collective vision for the nation's future. Students can leverage this collective identity to mobilize and organize around political causes, fostering a sense of unity and empowerment. An informant from UMP believes that university students should be patriotic to their university and country as part of their motivation for political engagement.

Students must have a strong sense of identity and patriotic spirit that genuinely loves their university. I, too, honestly joined the Student Council with the intention of promoting UMP's name because I noticed that many students from other universities were proudly representing their respective institutions. So, if possible, I personally want UMP's name to be recognized, and people should know that there are student leaders or even top management figures from UMP. Hence, student leaders need to have a high sense of self and patriotism that genuinely cares for the university. Therefore, everything they do should be aimed at promoting the university's name. If they participate in competitions, their spirit to win should be for the sake of their university. (UMP 2)

The above statement shows how patriotism can inspire students to actively participate in political processes, such as

voting, running for office, or joining political organizations (Richey, 2011). However, this is not limited to the national level; it also includes the spirit of the university community itself. By recognizing the importance of their individual contributions to their university community, students can take an active role in shaping the political landscape and exercising their political freedom. According to an informant, one of the important qualities of any candidate for the student representative council should be more concerned about students' problems to show their belongingness to the core of the university community.

The candidate must be sensitive and empathetic to the issues faced by students. Resilience is essential to have strong leadership capabilities. Also, considering the students' perspectives is crucial in making informed decisions. (UMP 4)

In a context characterized by subject political culture, where individuals are aware of political structures but may not actively participate, instilling patriotism and citizenship can foster a sense of belonging among students. Universities, as significant socializing institutions, shape students' political perspectives through interactions with peers, faculty, and the broader university culture. By exposing students to democratic values such as equality, freedom, and justice, universities can cultivate a sense of civic responsibility and a commitment to the nation's progress.

While subject culture often limits active political participation, it can still foster a thoughtful appreciation for democratic principles. This form of engagement aligns with broader nation-building goals, enabling students to contribute to political freedom and progress in a meaningful, albeit passive, way.

THEORETICAL CONTRIBUTIONS

This study makes significant contributions to the understanding and enrichment of political culture theory by presenting a perspective on how shared values among university students shape their political engagement. By analyzing the themes of knowledge and *adab*, leadership and integrity, and patriotism and national identity, the findings enhance the contextualization of the theory in the following ways.

First is the integration of knowledge and *adab*. The study highlights the interplay between knowledge and *adab* as a guiding principle for ethical-political engagement. This duality enriches the civic culture dimension of political culture theory, as proposed by Almond and Verba (1963), by emphasizing the importance of ethical awareness alongside political cognition. The findings suggest that informed citizenship when paired with respect and discipline rooted in cultural and religious values, can foster responsible political participation. This perspective broadens the civic culture concept by integrating ethical considerations into the framework of political awareness and activism.

Second, the leadership and integrity in the subject culture. The study challenges the traditional notion of subject culture, which often portrays individuals as passive participants. By demonstrating how leadership and integrity empower students to engage in morally conscious political activities, even within constrained environments, the findings redefine the understanding of subject culture. This contribution positions students not merely as passive observers but as active contributors to a more ethical and informed political discourse, thereby advancing the discussion of agency within the subject culture.

Third, patriotism and national identity as catalysts for engagement. The study underscores the role of patriotism and national identity in fostering a sense of belonging and civic responsibility among students. This aligns with the broader goals of nation-building and democratic participation, even within the context of the subject culture. By illustrating how universities act as socializing agents that instill democratic values, the findings expand political culture theory to include the institutional role in shaping political perspectives and fostering purposeful, though limited, democratic engagement.

Overall, this study emphasizes how political culture and political freedom interact within the context of a democratic environment. Political culture, as demonstrated through shared values of ethical engagement, leadership, and patriotism, provides the foundation for understanding and exercising political

freedom responsibly. By fostering informed citizens who engage with respect, integrity, and a commitment to democratic principles, political culture shapes the way individuals perceive and practice their political rights. Within a democratic framework, this relationship ensures that political freedom contributes to societal progress rather than conflict, reinforcing the role of universities as vital institutions in cultivating civic responsibility and a thriving democracy.

CONCLUSION

By exploring the essence of political values, our case study illuminates three distinctive political values espoused by public university students in Peninsula Malaysia. The value of knowledge and *adab* plays a crucial role in creating a mature political culture for university students. In the complex world of politics, university students ought to be conscious that knowledge and *adab* are two interlinked values that become the guiding principles that essentially shape their political behaviour, interactions, and contributions to society, as supported by Gräf et al. (2018). Furthermore, the value of knowledge and *adab* reflects that political engagement or participation is not based on sentiments but heavily relies on knowledge and understanding (Ryle-Hodges, 2021). They can practise this value through informed political engagement, respectful and civic discourse, as well as ethical-political participation

The value of leadership and integrity as a political virtue is instrumental in creating a responsible political landscape among

university students (Palanski & Yammarino, 2009; Storr, 2004). Student leaders who embody this value foster an environment of trust, accountability, and responsible governance, which is a condition that must not be jeopardized in the political sphere (Simons, 1999). This effort can be achieved by building trust and credibility, collaboration, consensus building, advocacy, and activism (Smith et al., 2024).

Further, the value of patriotism and national identity guides university students to prioritize the importance of their nation before personal or political interests (Bartal & Staub, 1997). Essentially, this value instils a profound sense of loyalty and attachment to the country, which becomes their moral compass to contribute to the well-being and progress of their nation (López, 2014; Safran & Liu, 2012). This value fosters a collective spirit of unity, resilience, and shared responsibility, driving university students to work together towards a common goal: the country's prosperity (Westheimer, 2014).

The three major political values highlighted in the findings are fundamental in shaping an encouraging, mature, and responsible political sphere for university students. These values foster democratic principles, responsible citizenship, and ethical leadership (Wang & Jia, 2015). By upholding these shared values, universities can be an environment where political freedom is protected, and students are empowered to actively participate in shaping the country's direction (Chamhuri et al., 2019). Furthermore, embracing these

political values is key to nurturing a vibrant, inclusive, and democratic political culture, which aligns with the tenets of participatory political culture (Warren & Mark, 2001).

In the political culture framework, these shared values contribute to the development of a more participatory political culture, where students are actively engaged in shaping political discourse. By promoting knowledge, leadership, integrity, and patriotism, universities can foster a sense of civic duty and empower students to become active agents of change. This aligns with the goals of civic culture, which emphasizes the importance of active citizenship and political participation (Almond & Verba, 1963).

By integrating these principles into student political engagement, universities help to cultivate individuals who are prepared to lead with integrity, critical thinking, and a commitment to social justice. These values are essential for building a strong and resilient democracy, where citizens are empowered to hold their leaders accountable and work towards a better future.

Limitation

While this study provides valuable insights into the political values of university students in Peninsula Malaysia, it is not without limitations. The qualitative design, sample size and geographical scope may limit the generalizability of the findings to other regions or student populations. Additionally, the study's reliance on self-reported data may introduce biases that

affect the accuracy of the reported values and behaviours. Future research should consider a broader sample and incorporate mixed method approaches to enhance the robustness of the findings.

Recommendations

Based on the study's findings, several recommendations can be made further to enhance the political engagement and education of university students. While many universities in Malaysia have implemented efforts to promote civic engagement and political awareness, such as through student clubs and societies, there is still room for improvement. To further strengthen these initiatives, universities should foster environments that integrate knowledge, *adab*, leadership, and patriotism into their curricula and extracurricular activities (Ting & Ahmad, 2022). Additionally, policies and programs should be developed to support ethical, political participation and civic responsibility among students (Weiss, 2012), in parallel with the latest amendment of UUCA in 2022 that essentially has increased student autonomy and removed some restrictions. Engaging students in activities that encourage critical thinking, and active citizenship will not only contribute to their personal development but also the overall democratic health of the nation (Zainon et al., 2017).

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Free Expression and Human Dignity: Looking into the Malay Cultural Expression

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ABSTRACT

Much of the recent literature on freedom of expression focuses on human rights. This study argues that discussions about free expression in Malay Muslim society, especially regarding political expression, should include the fundamental value of human dignity. From a Western perspective, the meaning of human dignity has a limited manifestation, often subsumed under the concept of human rights. However, in Malay culture, human dignity is the highest value that demands protection not just by individuals but through the collective responsibility of society. This is reflected in their communication and expression, which are guided by Akhlak (Islamic moral guidelines) and customary conduct. Therefore, understanding this cultural approach to human dignity is vital for addressing issues of immoral expression in Malay Muslim society, including inflammatory remarks and problematic speech. This study used a qualitative approach, analyzing secondary data from books and journal articles to explore the Malay philosophical and cultural background. It also examined Hikayat Hang Tuah and Sulalat Al-Salatin to understand how these works illustrated Malay expressions of human dignity in communication and political expression. The findings indicate that Malay expression is characterized by a high level of politeness, which upholds the

dignity of individuals and the community. This cultural expression is integral to Malay identity, highlighting the necessity of reaffirming human dignity in today's political discourse, which has strayed from these core cultural teachings.

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INTRODUCTION

The Malay civilization is deeply rooted in Islamic values, which have profoundly shaped its cultural and social identity. Before the advent of Islam, Malay traditions were influenced by Hinduism. However, the arrival of Islam introduced the principle of equality, which resonated strongly with Malay society and became a driving force behind its rapid Islamization. According to W.F. Wertheim, Islam emphasizes individual worth and rejects social hierarchies, fostering a sense of equality among people (Ishak & Abdullah, 2012). This principle has evolved into the Malay Muslim identity, characterized by peace, purity, and submission to Allah. Malay culture is also known for its gracefulness, tolerance, humility, and hospitality, deeply tied to their sensitivity towards others' feelings and commitment to harmony (Ibrahim & Hamdan, 2020; Swift, 1965; Zakaria, 2015).

These values are reflected in Malaysia's legal framework, where the federal constitution, under Article 10, guarantees freedom of speech and expression yet permits restrictions to ensure public order and security (Federal Constitution, 2016). The concept of free expression in Malaysia is not solely rooted in liberal human rights. However, it is also shaped by Asian values that emphasise harmony, respect for authority, and cultural conformity. Former Prime Minister Mahathir Mohamad popularised this concept, critiquing Western human rights models for prioritising individualism at the expense of social stability (Karunan, 1997; Manan, 1999;

Mohd Sani, 2017). In Malaysia, freedom of expression is therefore balanced against the necessity of preserving the Malay Islamic cultural framework, which prioritises communal harmony and dignity.

However, contemporary Malay Muslim society has observed a decline in ethical and moral expression, particularly on social media platforms. Inflammatory remarks, hate speech, and politically motivated rhetoric centred around racial and religious bigotry have become increasingly prevalent (Chin, 2022; Saleem, 2021). This moral decline is partly attributed to the diminishing reliance on the Malay moral system, which emphasises the protection of human dignity. This study argues that discussions on freedom of expression in Malaysia should be grounded in human dignity and shaped by religious and communal values.

While Malaysian regulations have generally adhered to international human rights principles, they have neglected the unique dynamics of Malay cultural expression that embody the integration of Islamic moral values. Through qualitative research and document analysis, this paper explores Malay cultural expression, emphasising the significance of human dignity and drawing on examples from Malay literature to illustrate its distinctive cultural values. This paper stresses that reinstating these values necessitates re-examining the foundational principles of Malay civilisation and its cultural aspects, and it also suggests greater academic integration among civilisation, cultural, and political studies in Malaysia's political and

social analysis, particularly as the Malay community possesses values that can be collectively applied to the common good.

LITERATURE REVIEW

This literature discusses the dynamics of freedom of expression in Malaysia by pointing out the attitude of the government and the citizens toward the right. It is an important aspect in helping to map the moral discourse of expression that would ultimately link to Malay's cultural expressions and the concept of human dignity. Western philosophers such as Cicero, Thomas, and Kant have long discussed the concept of human dignity. Stoic philosopher Marcus Tullius Cicero and Christian philosopher Thomas Aquinas emphasise that the value of dignity is derived from the theological understanding that human reasoning abilities are created in the likeness of God (Lebech, 2004; McCrudden, 2008) and bestowed by God as part of Creation (Lee, 2008), which is what makes humans dignified beings. In recent developments, the German philosopher Immanuel Kant has often been regarded as a key figure in developing the modern concept of human dignity. Kant's fundamental notion regarding human dignity is that every rational individual is inherently dignified due to their capacity to act autonomously and self-regulate, thereby creating moral laws to uphold each person's dignity (McCrudden, 2008).

At present, human dignity is discussed within the field of Human Rights. The concept of 'human dignity' is equated with the value of human rights, suggesting that

safeguarding human rights is also a way of safeguarding human dignity. The Universal Declaration of 1948 proclaimed that human rights are based on the intrinsic dignity of individuals and that all people are born free and equal in dignity and rights (Habermas, 2010).

For the Malay-Muslim society of Malaysia, human dignity is integral to the cultural moral system and character development. The foundational Islamic values, derived from the Quran and Hadith, shape social conduct, relationships, attitudes, and perspectives. This connection is encapsulated in the Malay proverb, "*adat bersendi hukum, hukum bersendi kita Allah*," meaning "custom is linked to law, and law is linked to God's command." This intertwined with Malay identity, which comprises three elements: *Adat* (custom), *Adab* (virtues), and Islam (Ali, 2022). It is evident that Islam has been intricately woven into the Malay cultural and social framework, and the notion of human dignity is not foreign to Malay society. As noted, *Adab*, or in Arabic, *Akhlak*, all convey similar meanings related to good conduct and behaviour that form an essential part of Malay identity, has been uniquely interpreted within Malay cultural expressions. *Adab* serves as the primary symbol of the social stance of Malay society, often emphasising a kind expression such as *halus* (soft), *budi bahasa* (tact), *sopan santun* (well-mannered) that aims at protecting *harga diri* (self-esteem) and *nama baik* (one's good name) (Mohd Sani, 2020; Wilson, 1967) has significantly influenced the framework of Malay customs and moral systems.

The significance of human dignity is also recognised in discussions surrounding free expression. In Western culture, freedom of expression is protected by law. Upholding the principle of free speech and deliberative interest, everyone possesses the political right to free speech, and any restriction violates individual rights (Cohen, 1993; Young, 1982) as cited in Bousquet, (2022). However, the dignity approach to regulating articulation and expression that causes harm, proposed by Bousquet (2022) and Langos and Babie (2021), emphasises that the principle of dignity can provide a legal rationale for restricting expressions of racial hate speech. Such expressions can potentially undermine the rights and social status of others, as they can portray a person or group as less deserving of humanity, thereby fostering a hostile environment. Consequently, the harm inflicted by these expressions far outweighs the principle of free speech, which John Stuart Mill argues should not restrict any form of speech in the pursuit of truth, which Bousquet (2022) disagreed with, as for him, hate speech lacks the intellectual and truthful elements that warrant such protection. Furthermore, Langos and Babie (2021) noted that due to the myriad types of immoral expressions lacking legal definition introduced via social media platforms—such as religious speech that conveys harmful messages and impugns the dignity of targets—the Australian court has recognised human dignity as a decisive legal principle in safeguarding against such expressions. This argument shares that the values of dignity are vital not only

in addressing fundamental human rights such as the right to life and shelter, but also concerning free expression. In contemporary Malaysia, the discourse regarding human dignity has been overlooked, with strict regulations imposed on such expressions, including hate speech, justified in the name of protecting social harmony in its multi-racial society.

The Malaysian government has a substantial historical record of strict regulations on the freedom of expression. Given Malaysia's multi-ethnic society and multicultural background, the restrictions were deemed essential to maintain racial harmony and safeguard political stability. In terms of Internet and media regulation, Lent (1978) introduced the concept of "guided media" to characterise the press system in Malaysia, wherein the nation's authorities emphasise the importance of the mass media, particularly broadcasting, to refrain from critically evaluating government policies and actions (Wok & Mohamed, 2017). This has led to consistent scrutiny from international media watchers over the level of media freedom in Malaysia and scepticism towards the justifications provided by the state. Besides that, Malaysia faces the same challenges of breeding unvaried information on social media. The government passed the Anti-Fake News Act 2018 when the issue of fake information became so severe that it inflicted significant harm on society. Furthermore, Ries et al. (2018, as cited in Yatid, 2019) stated that due to the enormous amount of information in social media, Malaysians are experiencing

heightened confusion and a lack of ability to differentiate between authentic and fabricated news and information that is further borne into political propaganda pieces that could stir racial harmony.

According to Brown (2018), the sanctity of anonymity profoundly complicates efforts to curtail the proliferation of such remarks on the platform. Zamri et al. (2023) argued that the increasing hate speech in Malaysia is due to its inconclusive definition, making it hard to identify and categorise it. Moreover, digital populist remarks have opened the door to a cultural confrontation that produced racial and religious hate speech in Malaysia. Shukri and Smajljaj (2020) stated that cultural populism is a political approach that emphasises the promotion of Malay Islamic identity and values through rhetorical remarks and religious sentiment at the expense of minorities and other ethnicities. Similarly, Yilmaz and Morieson (2022) discovered that religious populism had taken hold in Malaysia but with distinct hues. It suggested that Malaysia's legislative structure, which is Malay and Muslim, with Islam as the country's official religion, provides space and allows the government to justify authoritarian moves in orchestrating the issues of race and religion.

With such leverage, Malaysian politicians frequently make false claims, disseminate fake news, and issue defamatory remarks about one another. Every Malaysian Prime Minister since 2009 has faced at least one such allegation, often raised by political opponents ("Malaysia's politicians," 2023). The latest incident occurred on 3 May 2023,

when Mahathir initiated legal proceedings against Anwar Ibrahim for allegedly suggesting that an unidentified former leader amassed wealth during his tenure. However, Malaysia's regulations remain responsive and uphold the values of protecting dignity within its justice system by ensuring that those who instigate harmful expressions towards others face legal consequences. A notable example is when former Prime Minister Muhyiddin Yassin was ordered by the court under the Defamation Act 1957 to pay RM 1.4 million to former Finance Minister Lim Guan Eng over defamatory remarks posted on Facebook ("Muhyiddin pays", 2025), demonstrating that the law applies to everyone, including politicians who attempt to undermine an individual's dignity and reputation through harmful expressions in political speech. This illustrates that Malaysia is a country that makes every effort to ensure its culture aligns with Islam, making it the ideal candidate to adopt a dignified approach to expression and champion a concept that is not foreign but has long been part of its culture and practices.

The literature above has shown that Malaysia's free expression dynamic remains progressive. The government believes in freedom of speech and respects citizens' free articulation of views and expression. Nevertheless, the values of dignity in expression have not been given as much attention as its culture has emphasised, as Malays have misused it by instigating harm contradicting their identity as Malay Muslims. Therefore, this study argues

that this factor must be considered when researching Malay society regarding expression. This study would like to discuss the concept of human dignity more deliberately, as it is the foundational value of Malay cultural expression that stresses the duty to protect each other's dignity instead of depending on an 'open book', inconclusive definition of right.

METHODS

This paper adopted a qualitative approach by utilising secondary data, including literature reviews from books, journal articles, and other online databases. The analysis employed document analysis, which involved examining and interpreting data to derive meaning, gain understanding, and develop empirical knowledge (Bowen, 2009). To understand the Malay concept of human dignity in expression, the paper first investigated the background of Malay civilisation and how its cultural expressions significantly shaped its identity. Secondly, it examined Malay literary works to uncover how Malay society appreciated and integrated the teaching of cultural expression into their daily conversations. The literary works were selected based on prior studies that explored Malay expression in linguistic terms, drawing on many selections cited from *Hikayat Hang Tuah* by Muhammad (2014, 2018) and *Sulalat Al-Salatin*, which was studied by Faizal et al. (2020). This paper enriched the discussion by analysing them through the lens of human dignity. It demonstrated that such expressions have been employed and

evolved into unique cultural instruments for addressing high-intensity scenarios. This reinforces the argument of this paper that Malays should embrace this cultural aspect of expression, particularly in political speech and expression, which can be justified through the values of dignity.

RESULT AND DISCUSSION

'*Bangsa Melayu*,' or the Malay nation, is a group of human societies broadly classified as Malays. It is mainly concentrated in a Southeast Asian region known as the *Malay Archipelago*, which shares these four factors: the Malay language, Malay works of literature, the religion of Islam, and the Malay government, making it a greater unity of civilisation (H. Ahmad, 2004; Musa et al., 2006). Of the four, Islam has become a significant complement to the formation of the Malay custom and one of the most essential structures (Borhan et al., 2006; Musa et al., 2006). Therefore, the central part of Malay identity is shaped by diverse cultural elements guided by the principle of *Tauhid* (oneness of God), which upholds Islamic values and fulfils the purpose of its existence.

Islam also introduced some values that did not exist in Malay society then. In *The Other Malaysia*, Farish Noor stated,

In time, Islam introduced notions and values of individualism, humanism, and a rational agency to a society that was stultified and static. It gave a new life to a people who had until then come to accept their political situation as final

and given (cited in Matzger, 2007, p. 52).

Similar to Dr Mahathir Mohamad, who stated that “religion is the first principle of the Malay people's value system” (cited in Matzger, 2007, p. 56). The Federal Constitution of Malaysia solidified the prominence of Islam by establishing a clear link between Malay ethnicity and religion. “*Malayness*” is defined in Article 160, Clause 2, which specifies that a Malay individual practises the Islamic faith, regularly uses the Malay language, and adheres to Malay customs (Federal Constitution, 2016, p. 198). Accordingly, Hamayotsu (2002) has expressed similar characteristics regarding the evolving concept of *Malayness* throughout time, as Malay was previously primarily associated with three key elements: language, religion, and royalty, and has now shifted towards a greater emphasis on Islamic principles.

Besides that, the enculturation process is one of the fundamental elements in Malay society (Bujang et al., 2006). The process focuses on integrating cultural values and traits to ensure that a person acts within the rules, norms, and values of the society he is a part of. In Malay society, the principal moral value is politeness, which is based in Islam called *Akhlak*. Frank Sweetenham in *Malay Sketches*, Henrey Fauconnier in the novel *Malaisie* and Victor Purcell, an Asian researcher, have highlighted this trait of the Malays by respectively stating that ‘for the Malays their manners are polite’, ‘the Malay people are so polite because they are proud’ and ‘(the Malay's) good

manners are famous’ (cited in Matzger, 2007, p. 27). However, the socialisation process is equipped with social control and social sanction. The purpose is to ensure that members of society comply with all rules and act within the environment that their culture allows. Society will impose pressure (sanctions) through insults, ridicule, or fines if a violation occurs. Accordingly, for Malays, prioritising religiosity, morality, and virtue is central to socialisation and acculturation.

The Islamic moral system embedded in Malay society has also captured Malay's cultural expression. This study contended that when discussing Malay expression, the concept of human dignity has significantly influenced the moral psyche of the Malays, which many scholars argue has not been found in other societies (Ali, 2022; Mastor et al., 2000; Rashid, 2005; Richardson et al., 2016; Zakaria et al., 2017). The concept of human dignity mirrored Islamic principles, emphasising Islamic moral values to strive for a benevolent personality and manners. Protecting one another's dignity is embedded in every aspect of Malay culture's value system and character development process. This is demonstrated by the Malay proverb ‘*adat bersendi hukum, hukum bersendi kita Allah*,’ or custom is linked to law, the law is linked to God's command. It is also evident that Malay expression culture has long been marked by the Islamic ethics and moral system (Atoh & Idris, 2013; Rashid, 2005). This strong emphasis on this politeness is attributed to the duty of every Muslim to ‘*Amar makruf nahi mungkar*’ or

enjoining good and preventing evil, which has shaped these courteous characters of Malays (Sariyan, 2015).

Politeness of language and expression can be defined as the use of language based on a set of rules and conduct that follows the rules of language, such as linguistic rules, sociolinguistics, and pragmatics or implicature (Omar, 2002). In Malay society, politeness and the use of language are intertwined concepts and have become one of the core essentials in their traditional cultural teaching and values. Malays consider politeness based on how one communicates and expresses oneself. It shows that even though the communication aspect is not directly related to politeness, a person's conduct and way of expression have become a measurement of one good characteristic and behaviour as it is an essential medium in shaping good personality and moral conduct (Kiram & Ariffin, 2012; Mahshudi et al., 2013).

One of the ways for Malays to express themselves with politeness is by inducing the traits of *Malu* or shyness into their personality traits. Zakaria et al. (2017) stated that shyness is intrinsic to Malay culture and a form of emotion that must be worn to maintain one's dignity. Tangney (1991, as cited in Furukawa et al., 2012) states that self-experienced feelings such as shyness, shame, guilt, and other self-conscious emotions are the type of emotions that are felt by oneself. Conversely, Tomkind et al. (1995, as cited in Wong & Tsai, 2007) characterised shame as a feeling resulting from a loss of dignity, defeat, and

transgression. Usually, shame arises when others criticise someone for behaving in a way that goes against cultural norms (Lewis 1974, as cited in Wong & Tsai, 2007). In this sense, culture enormously affects what people perceive internally as self-conscious emotions.

Moreover, as Fessler (2004) suggests, cultural conformity significantly influences the motivation for feelings of shyness and shame. In Malay society, these emotions encompass many aspects of understanding, including the most important ones concerning the morals and dignity of the individual, family, and society. The Malay proverb '*menconteng arang di muka*', or scribble black coal on the face, is a metaphor for dishonouring one's family or oneself due to shameless behaviours. This shows how important the concept of shame is in the culture, extending beyond an individual's internal experience to encompass the social and cultural consequences of one's behaviour.

The concept of shyness and shame in Malay society is also linked to the use of language and expression. Malaysian culture considers it rude to make derogatory comments about another person. The things one says, even if true, should be said politely to avoid embarrassing oneself and others. The Malay proverb '*kerana mulut badan binasa*' or because of the mouth, the body could perish warns that careless or thoughtless speech can disgrace oneself and others. Therefore, keeping one's honour is prioritised in the culture to prevent social strife and the erosion of high ideals in favour

of social cohesion. Secondly, the concept of '*face*' is prominent to the Malays. Omar (2000) suggested that Malay culture has introduced the term '*air muka*' or personal honour. The term '*air muka*' carries a profound meaning in that it covers not only expression but whole moral conduct, including behaviour that is not only in public but also in private and not only for individuals but the whole society needs to be self-caution about it (Faizal et al., 2020; Kiram & Ariffin, 2012; Omar, 2000).

Thirdly, Malays avoid and impose self-restraint when it comes to any conflict related to being aggressive with language (Abdullah, 1996; Omar, 1992; Sariyan, 2015). According to Omar (1992), indirectness is a rule of speaking among Malays. Indirectness or implicature, or in the Malay term '*mesej tersirat*', can be defined as a subtle way of delivering a message that might not carry the original intention or may have used a complete opposite of words or phrases from what is supposed to be used. As Mastor et al. (2000) stressed in Malay cultural expression, it is important to analyse who speaks what to whom, where, why, and how to understand the message's true meaning (Horn, 2004; Jalaluddin, 1992). Thus, to be considered a refined person in Malay society, a person must express indirectly that a verbal expression must be constructed gently and politely to avoid sounding aggressive.

Besides that, Malays frequently use *beating-about-the-bush* or BAB to offer indirectness and be polite (Omar, 1992). Malay is known for its non-straightforward

character that would not be straight to the point in conversation. However, the Malays would greet and talk about things before moving slowly into the main topics. Even at rejection, Malay society would utilise implicature as their polite strategy in rejecting, as it is more impactful to the receiver and will not harm the future relationship of both parties (Omar, 1992; Yaakub & Mohamed, 2018; Yusof, 2000).

Furthermore, this paper analyses literary works as evidence to highlight the uniqueness of Malay cultural expression. Malay literature is renowned for its exquisite language style, academic components, rich emotional content, and emphasis on imparting knowledge. It has served its society as a medium for delivering and shaping cultural values. Besides that, it is interesting that Malay literary works are called '*al-Adabi*', denoting sophisticated intellectual creations intended to enlighten public consciousness with virtuous principles, refining and nurturing their souls (Jamian & Radzi, 2015).

Firstly, through the work of *Hikayat Hang Tuah*, Hang Tuah practised polite expression and highly strategised interpersonal communication, together with an honorary salutation. Muhammad (2018) discovered that Hang Tuah had utilised excellent interpersonal communication to resolve conflict and establish diplomatic relations with other countries. Interpersonal communication functions to solve a dispute between two parties. It is not only the exchange of information but also a psychological factor that involves eye

contact, body posture, and facial expression, appearance, tone, and language during conversing, and a skill that allows the other party to give feedback and ensure two-way communication is established (Pearson & Nelson, 2000; Yusof, 2000).

In the story, Sang Jaya Nantaka, who is the brother of the Sultan of Malacca, was faced with an unfair punishment when he was the victim of slander that said he was after power and control, which caused him to be thrown out of office and live as an ordinary citizen. This matter became tense when Parmadewan, a wealthy businessman and merchant from India, wanted to make Sang Jaya Nantaka the king of India. When this news reached the Sultan of Malacca, he welcomed and agreed to let his younger brother become King of India. The Sultan of Malacca also gave Sang Jaya Nantaka a gift of appreciation for his services. However, this appreciation gift also conveys that the Sultan of Malacca wants to contain his brothers' influence and always be in control, which has strained the cold war between the two sides.

Nevertheless, the Sultan of Malacca did not intend to continue this cold war. He sent Hang Tuah as an envoy to represent him to ease the situation and resume diplomatic relations between the two kingdoms and brotherly ties. One of Hang Tuah's ways to improve the relationship between these two kingdoms, apart from successfully taming a wild horse as commanded by the Kisna Rayan (Sang Jaya Nantaka changed his name to Kisna Rayan after becoming the King of India) and being fluent in a foreign

language, is to show a friendly and polite character. One of Hang Tuah's attractions is in his beautiful, well-articulated language and eloquent words that "*everyone who sees him loves him*," and many sultans or kings who meet him are attracted to Hang Tuah's courteous manner (Borhan, 2010; Muhammad, 2018).

As mentioned below:

Setelah dilihat oleh Kisna Rayan akan Laksamana datang itu, maka diperamat-amatinya oleh Kisna Rayan Laksamana berjalan itu, terlalu muhtasyam dengan merendahkan dirinya, terlalu baik barang lakunya dan sikapnya berjalan di hadapan Kisna Rayan itu. Maka fikir baginda, 'Adapun Laksamana itu terlalu baik sekali sikapnya, patut menjadi hulubalangku dan seratus buah negeri dipegangnyanya dan duduknya di atas segala hulubalangku'

[When Kisna Rayan saw the Laksamana approaching, he observed how the Laksamana walked, with a great honour through humility, his manners exceedingly fine and courteous, as he passed before Kisna Rayan. And His Majesty thought to himself, 'The Laksamana is very fine, I should make him my warrior, and one hundred territories under his command, and he chief among my warriors'] (K. Ahmad, 1997, p.397)

Hang Tuah has also showcased his humbleness through an honorific salutation to the king of India, as illustrated below:

Maka Laksamana pun menyembah lalu duduk. Maka titah Kisna Rayan, "Lain daripada Laksamana tiada kita bawa masuk ke dalam taman kita bermain dengan permaisuri ini." Maka sembah Laksamana, "Daulat tuanku, patik ini hamba yang hina".

[Hang Tuah gave a title of respect to Kisna Rayan, and the admiral bowed and sat down. So Kisna Rayan said, "Other than the Admiral, we will not bring anyone into the garden to play with this queen." So, the Admiral prayed, "My lord, I am a lowly servant."] (K. Ahmad, 1997, p.402)

Hang Tuah's interpersonal communication skills helped resolve the conflict between Kisna Rayan and the Sultan of Malacca. This is proven when Hang Tuah are awarded suits of gold cloth, given a place to stay, and shown the most excellent hospitality in the Indian kingdom (K. Ahmad, 1997). From this, Hang Tuah's interpersonal skills, from his physical ability to emotionally impress the King to his fluent and beautiful language of politeness, can heal the tension between these two nations, shadowed by the darkest of slander and fabricated betrayal. Other than that, Hang Tuah has also utilised an honorific salutation as a sign of humility and modesty. Honorific salutation is a form of greeting and part of a communication strategy used according to

one cultural norm and the norms of a society (Sariyan, 2015).

According to Muhammad (2014), the utilisation of honorific salutation by Hang Tuah not only exemplifies the civilised and moral uprightness of the Malay society but also garnered the government's attention in establishing close diplomatic ties. Other than that, the Malay polite language and expression announce a universal value. The King of India, after seeing Hang Tuah's quite simple but gentle attitude, becomes very affectionate with such an attitude that the King does not take advantage of the kindness, but becomes well respected and honoured in the eyes of the King of India.

Secondly, in the same work, Hang Tuah displayed his brilliance by giving elusive responses that demonstrated indirect speech and implicature. He encountered cultural and religious conflict when he was sent to Siam to purchase an elephant. King Phra Cau, the King of Siam at the time, instructed Hang Tuah to meet him alone and not with the entourage from Malacca. He also instructed Hang Tuah to crawl and bow while approaching him.

As mentioned below:

...maka kata Syahbandar, "Adapun hamba datang ini disuruhkan Oya Bagelang mengajar perintah mengadap Phra Cau, kerana perintah Siam lain, Melayu lain. Pertama, masuk ke dalam itu dengan seorang dirinya, tiada boleh masuk dengan budak-budak. Apabila sampai ke hadapan raja, merangkak sambil menyembah.

[...then Syahbandar said, "As for the servant who came here, Oya Bagelang was told to teach the order to face Phra Cau because the orders of the Siamese are different from those of the Malays. First, go there by yourself. No one can go in with the entourage. When you reach the king's front, crawl while worshipping the king.] (K. Ahmad, 1997, p.436)

Nevertheless, the cultural and religious differences between Hang Tuah and the king of Siam were resolved when Hang Tuah used a clever, elusive, yet subtle response technique without offending the king. With his wisdom, Hang Tuah explained that it was customary for Malays to live in groups with a leader to guide them. Thus, all the entourage and followers from Malacca needed to accompany him to meet the king. Secondly, Hang Tuah explained that his health prevented him from crawling to meet the Siamese king.

For instance:

Maka kata Laksamana, "Yang syahbandar mengingatkan hamba itu benarlah sudah. Adapun akan hamba segala Melayu ini umpama perahu; adapun perahu itu, apabila tiada terkemudi, nescaya tiadalah betul haluannya. Dan seperkara pula, tiada dapat hamba merangkak, kerana ada penyakit pada tubuh hamba ini. Jika ada kasih syahbandar, persembahkan ke bawah Duli Oya Bagelang, minta persembahkan ke bawah Duli Phra Cau".

[Then the Admiral said, "It is true that the mayor reminded the servant. As for the slaves of all the Malays, they are like a boat; as for that boat, if there is no rudder, it will not be heading in the right direction. Moreover, one more thing: the servant cannot crawl because there is a disease in the servant's body. If you have any love, present it to Your Highness Oya Bagelang to ask to present it to Your Highness Phra Cau."]

(K. Ahmad, 1997, p.436-437)

In Malay culture, the implicature strategy in communication has become customary for conveying messages that may not be favourable to the listener while maintaining politeness. According to Omar (1992), Malay expression encompasses four types of implicature: convoluted or twisted speech, figurative speech, indirect speech, and using representatives to communicate the message. In this story, Hang Tuah utilised figurative and indirect speech through his brilliant and rational responses, which enabled him to meet the Siamese king without the imposed conditions. Consequently, his primary aim of acquiring the elephant was successfully achieved. The story illustrates how the Malay polite expression strategy became a problem-solving technique, particularly when relations between two nations are at stake. Furthermore, despite differing cultural and religious backgrounds, Hang Tuah's elusive yet eloquent response led the King of Siam to perceive Hang Tuah as a person of principle and politeness, thereby earning the

King of Siam's respect for Malay customs without further disputes.

Lastly, the work of *Sulalat Al-Salatin* from the story of Sultan Mansur Syah and Puteri Gunung Ledang showcases a high degree of politeness through the Malay art of polite rejection. According to Faizal et al. (2020), the story exemplifies the height of manners and the value of politeness when conveying a rejection message through her representative, employing figurative language and indirectness, as well as 'Bahasa pelunak' or soft language. In the story, Sultan Mansur Syah's marriage proposal is rejected by Puteri Gunung Ledang subtly and courteously. Her rejection method involved requesting something nearly impossible for anyone to fulfil, even a king. Puteri Gunung Ledang also asked Sultan Mansur Syah to provide a bridge of gold and silver, seven trays of mosquito hearts, seven trays of germ hearts, and a bowl of the blood of a king and prince, among other impossible tasks.

This can be illustrated through the following excerpt:

Maka kelihatan pula seorang perempuan tuha, bongkok lipat tiga dibelakangnya. Maka ia berkata kepada Tun Mamad, "Adapun segala kata tuan hamba itu telah sudah dipersembahkan oleh Dang Raya Rani pada Puteri Gunung Ledang. Akan titah puteri, "Jikalau Raja Melakahendak akan daku buatlah aku jambatan emas satu, jambatan perak satu, dari Melaka datang ke Gunung Ledang. Akan peminangnya hati nyamuk tujuh

dulang, hati kuman tujuh dulang, air pinang muda{h} setempayan, air mata setempayan, darah raja sema(ng)kuk dan darah anak raja-raja sema(ng)kuk. Jikalau demikian maka kabullah pada hamba akan kehendak Raja Melaka itu." Maka titah Sultan Mansur Syah, "Semuanya dapat kita adakan, tetapi akan mengeluarkan darah anak kita itulah yang tiada dapat kita adakan, karena tiada sampai hati."

["If the King of Malacca wants to marry me, make me one gold bridge, one silver bridge, from Malacca come to Gunung Ledang." The suitor must obtain seven trays of mosquito hearts, seven trays of germ hearts, a pot of young betel nut water, a pot of tears, and the blood of kings and sons of kings. If such is indeed the situation, bestow upon me the determination and desire of the ruler of Malacca." So, Sultan Mansur Syah said, "We can do everything, but it will be the blood of our son that we cannot do because it is not up to the heart."] (Borhan, 2017, p.125)

Sultan Mansur Syah responded to Puteri Gunung Ledang as below:

"Semuanya dapat kita adakan, tetapi akan mengeluarkan darah anak kita itulah yang tiada dapat kita adakan, karena tiada sampai hati."

["We can do everything, but it will be the blood of our son that we cannot do

because we could not bear to do it.”] (Borhan, 2017, p.125)

According to Faizal et al. (2020), Sultan Mansur Shah accepted the rejection gracefully after comprehending the messages. This is because, as emphasised by Anis and Esa (2016, as cited in Faizal et al., 2020), Malay culture places significant importance on politeness and courtesy in communication, often employing figurative language to convey the speaker's true intentions to the listener without offending, much like Puteri Gunung Ledang communicated with Sultan Mansur Shah. Furthermore, through his writings and choice of language, the book's author aims to enlighten readers about the subtleties of the Malay language and culture in polite discourse, ensuring that mutual respect, the preservation of dignity, and strong relationships can be maintained in any situation.

THEORETICAL CONTRIBUTION

This study provides new theoretical perspectives on freedom of expression in Malaysia. It shows that understanding free expression should not depend solely on human rights; the values of dignity must also play a crucial role in fostering a safe, prosperous, and democratic environment while promoting speech, expression, and ideas for the public good. The prevailing theories of human dignity depend on a universal understanding grounded in liberal-democratic traditions. This stems from the uniform and indifferent definitions of

human rights and human dignity, which have repercussions that limit the values of dignity and diminish its significance both as a concept and in practice (McCrudden, 2008; Steinmann, 2016). On the other hand, some scholars argue for the importance of human dignity as an alternative to human rights, as it can bridge the gap in arguments when defences of human rights are limited and exhaustive, mainly when rights conflict (Habermas, 2010; Lewis, 2020). Liberal human rights have established the standard for freedom of expression, striving for absolute freedom and protecting all types of speech (Bonotti, 2014; Bousquet, 2022). In contradiction, scholars argue that the liberal concept of absolute free speech fails to safeguard against harmful speech, asserting that restrictions are justified through the ethical and moral concept of human dignity, which limits the right to free expression to address hate speech and harmful expression (Bousquet, 2022; Simpson, 2013; Soutphommasane, 2006).

Considering the contradictory views of Westerners, this study introduces the concept of human dignity in expression, reflecting Malay cultural values as its foundational philosophy in daily communication. Works related to '*expression with dignity*' through Malay literature above illustrate the uniqueness of Malay culture and how this concept has become ingrained in the norms individuals navigate regarding self-expression within communal and religious boundaries. This challenges existing assumptions: first, that human rights are a universal concept applicable to all

cultures, and second, that in the context of Malaysia, the Malay-Muslim society should begin to re-navigate its approach to free expression and shift from a 'right-centric' to a 'duty-centric' perspective. As this study reveals, Malays are well-informed about the rationale behind their community-oriented concept of dignity, which interweaves Islamic values that promote harmony and modesty. This approach reflects their manifestation to align with the aspiration to become the best form of *Ummah* or society (Wahid, 2017), a concept that has always been at the heart of Malay philosophy, though less consciously reflected in recent public discourse. Therefore, this study suggests that a thorough cultural context is necessary to understand the values of dignity in Malay culture and can help shape a productive landscape for free expression in Malaysia.

CONCLUSION

This study argues that Malay cultural expression has long been established based on human dignity and cultural landscape according to Islamic moral values. The integration of Islam into Malay culture was accomplished through a sophisticated and intricate process to foster a cohesive and unified society that appreciates and respects each other. One crucial component in this culture is that one must express oneself with manners and courtesy. The practices of polite language and expression, such as interpersonal communication, elusive response, and the subtle art of rejection, have made the Malay cultural expression

distinguish itself from others by strongly emphasising preserving one's dignity and prioritising diplomacy over incivility. It emphasises the importance of carefully choosing words to prevent offending others. This study also highlighted the Malay moral system, crafted to harmonise differences through refined expressions of courtesy elegantly, but now demands relearning by many Malays.

As informed, Malaysia has always shaped its laws and policy conduct in an Islamic way and should also consider the installation of dignity values. One aspect of this is in the realm of freedom of expression. The success of incorporating values of dignity into the practices of Malay expression necessitates the collective efforts of policymakers and Malay society to help integrate these values into the dynamic discussion surrounding free expression in Malaysia. As we observe today, the topic of free expression in Malaysia remains politically charged concerning the "right to express," which has not adequately addressed inflammatory and harmful expressions that persist as barriers to achieving social cohesion. Furthermore, this inclusive concept of dignity, rooted in Malay culture and Islam, risks alienating and marginalising non-Muslims in the country. Hence, this poses a challenge for Malays, as the ethnic majority, to integrate universal values to effectively serve society, making recognising dignity values relevant to current issues. This is because a 'polite expression,' as introduced, is not intended to restrict political and public discourse but

serves as an effective tool in navigating the myriad societal demands without jeopardising unity and diversity.

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Designers Co-Create with AI-Based Painting Software: An Empirical Analysis Based on TAM and FsQCA

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ABSTRACT

The launch of DALL-E by OpenAI in January 2021 has generated considerable global interest in AI's impact on art and design. Midjourney, a prominent and widely adopted AI drawing tool, has become a key focus for many designers, who eagerly seek to explore and utilize its capabilities. Currently, scholars are more inclined to explore the algorithms and functions of artificial intelligence-based painting systems (AIBPS). However, there is still a research gap in understanding what individual factors or configuration elements influence the experience of using AIBPS by one of its mainstream audiences, the designer community. In the first phase, this research identifies innovative variables that may influence designers' use of Midjourney and develops hypotheses based on the Expanded Technology Acceptance Model (ETAM). The analysis of 322 questionnaires revealed important factors that drive the user experience. In the second phase, a fuzzy set qualitative comparative analysis (fsQCA) was used to further research the configuration effects of these factors. The results of the research indicate that Personal Innovativeness (PI), Perceived Enjoyment (PE), Perceived Performance (PP), Perceived Safety (PS), Perceived Cost (PC), and Perceived Inspiration (PINS) significantly influence designers' willingness to use Midjourney. At the same time, function developers need to reflect on the traditional concept of focusing only on usability and ease of use. The influence of these two factors is being weakened by other factors. Adding considerations to user PE or PS will make specific AIBPS software stand out in the market.

Keywords: AI-based painting systems (AIBPS), behavioral intentions, fuzzy-set qualitative comparative analysis (fsQCA), technology acceptance model (TAM), user experience (UX)

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INTRODUCTION

In the contemporary era, the pervasive influence of Artificial Intelligence (AI) technology is reshaping diverse aspects of

human existence and professional spheres. Amidst the surge of novel technological innovations, Midjourney has emerged as a focal point for design industry practitioners, serving as an AI drawing tool capable of generating images from textual inputs. Leveraging natural language commands and intuitive operational algorithms, Midjourney swiftly produces highly realistic or imaginative visuals. Its integration with Discord servers further facilitates an interactive platform for open communication and collaborative sharing. It has attracted more and more designers to use it in their own practical creations. At the same time, the rise of new technologies is facing many social problems (Audry & Ippolito, 2019). In current research, most of the research on AIBPS focuses on the technological development itself, while there is less research on the acceptance level of specific user groups and their influencing factors. As Sinitsa and Fried (2023) pointed out in their research, as an emerging technology, fully studying its user experience issues is the key to promoting the real-time development of artificial intelligence. Therefore, this research is based on such a need and will be empirically researched around the following two questions: How is the AIBPS experience for designer-users? How to improve the user experience of designers and promote the development of AIBPS?

This research design consists of three parts: the first section actively explores the development of AI painting and the connection between designers and AIBPS through a literature review, and reviews the

expansions and innovations that scholars have made to TAM in a variety of fields. It also describes the feasibility and necessity of TAM's complementary analysis by combining fsQCA in the field of AI art; In the second section David (1985) stated that by inviting professionals from the design industry to participate in a questionnaire survey, 322 valid scale data were collected regarding their perceptions of the AI painting tool Midjourney This dataset reflects the experiential aspects and acceptance of Midjourney. Subsequently, this study used a unique and original hybrid approach based on TAM and fsQCA to analyze the data multidimensionally. The final section provides a summary and discussion based on the data results, addressing both theoretical and practical perspectives. It reflects on the limitations of the research and outlines new directions for future studies as well as the development trajectory of AIBPS. The unique theoretical significance of this research lies in its empirical analysis of user experience within the subfields of artificial intelligence, thereby filling research gaps at the intersection of multiple disciplines. The innovative practical significance of this research is found in its provision of guidance for the iterative development of AINPS science and its future directions.

LITERATURE REVIEW

AIBPS and Designer

AI-based painting software has received a lot of attention from the design industry in recent years for its ability to create high-quality, creative images with a simple textual

description (Ploennigs & Berger, 2023). As a co-creation partner with the designer, these tools can quickly generate visual images from accidental bursts of design inspiration, enriching the creative process and content of designers, and enhancing effective communication between designers or between designers and other industry practitioners (Paananen et al., 2023). As the ecosystem of text-to-image tools improves, it is increasingly important for design practitioners to understand and utilize these tools to support the realization of their creative work. Therefore, the traditional product-centered view of creativity is deficient in this context, and this creativity in the creation process is simultaneously reflected in the interaction between the designer and the AI (Ko et al., 2023; Oppenlaender, 2022). In Liu et al.'s (2023) investigation, it was also demonstrated that there is potential for text-generated image systems to enhance the experience of the design process and provide new avenues for inspiration generation.

Based on these needs and the great potential of AIBPS to enhance the experience of the design process and the generation of design inspiration, it is also natural for designers to be an integral part of the audience (Liu et al., 2023). However, the ability of AIBPS to help users from various industries to easily create impressive works (Lyu et al., 2022) has given it a rather wide target audience, so much so that the focus on the community of designers has been neglected in previous scholarly studies. AI intervention in the art of drawing and painting brings more possibilities

while at the same time subverting the paradigm of traditional art and design and changing the way people think about evaluating design works and designers (Sun et al., 2022). This has led to a wealth of challenges and opportunities for design industry practitioners in the AIBPS space (Di Bartolomeo et al., 2023). Based on this inherent conflict, how do practitioners in the design industry embrace AIBPS as represented by Midjourney? What factors directly or in combination influence their intention to use it? And what insights can AIBPS find to further develop itself? These are the themes that this research hopes to explore.

Theoretical Framework

Structural Equation Model

Structural equation model (SEM) is a model based on factor analysis and linear regression methods for analyzing the path relationship between complex variables (Cui et al., 2021). It can combine two or more structural models to realize a statistical framework for modeling multivariate relationships, thereby solving the causal relationship that cannot be obtained in correlation analysis and distinguishing between direct and indirect effects. It is a very important multivariate data analysis tool. Unlike linear regression, SEM is based on scales, that is, the scale is reduced to 1 principal component through factor analysis (multiple variables are converted into one variable), and then path analysis is performed (M. S. Chen & Huang, 2023; Marikyan et al., 2023). As a powerful statistical technique, SEM is very good at

analyzing complex relationships between multiple variables. Therefore, using SEM for analysis and verification in TAM is very popular.

Technology Acceptance Model

The Technology acceptance model (TAM) has been widely used in many research areas to understand the use and acceptance of emerging technologies, and the external variables in this model affect the Attitude Toward Use (ATU) through Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), which directly or indirectly impact the user's Intention to Use (ITU) a particular technology (Al-Okaily et al., 2021; M. S. Chen & Huang, 2023; Drljevic et al., 2022; J. Kim & Kang, 2023). It has proven to be effective in explaining and predicting the use of emerging information technologies (Marikyan et al., 2023). However, it has also been shown in several studies that the underlying TAM factors may not be sufficiently complete to predict technology acceptance (Edmunds et al., 2010, in the study of Yousafzai et al.(2007), by reviewing the empirical studies based on TAM and then summarizing and analyzing them, a total of more than seventy kinds of variables containing organizational, individual, system characteristics and other related variables were counted, which confirms that TAM, with reasonable expansion and modification, can better discover and explain the process of user's acceptance of the new technology, reflecting the wide applicability of TAM. Therefore, to better understand exactly how users accept a particular

new technological product, researchers must consider the effects of different external variables on user perceptions. Such extended and refined TAMs have also been used in many emerging technologies, such as VR devices (Shen et al., 2022), biometrics (Nakisa et al., 2022), ChatGPT (Ofosu-Ampong et al., 2023), or the use of robots (Savela et al., 2017). The expansion of TAM is also widely used in the design industry. For example, the importance of the fit between BIM technology and designers' task expectations was explored by integrating a theoretical model of TAM and Expectation Confirmation Theory (ECT) to study the Continuous Use Intentions (CUI) of BIM (Cui et al., 2021).

However, TAM, which posits that Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are the primary factors influencing technology adoption, tends to oversimplify the complexities of user behavior. Research by Ali and Warraich (2024) highlights that TAM's linear approach does not fully account for the variety of external factors that might influence adoption, such as system and information quality (Ali & Warraich, 2024). Furthermore, the model's neglect of social and organizational factors can make it less applicable in some real-world settings (Mvondo & Niu, 2024). Another significant limitation is that TAM typically assumes linear relationships between variables, which may not capture the true dynamics in some contexts. Recent studies by Zabukovšek et al. (2022) show how advanced techniques like Artificial

Neural Networks (ANN) and Importance-Performance Matrix Analysis (IPMA) help overcome TAM's linearity by uncovering more complex, nonlinear relationships that influence acceptance.

Theoretical Support

Complexity theory is a theoretical framework for understanding complex systems and their behavior. Complex systems are composed of many interacting parts that interact with each other through simple rules, resulting in the system as a whole exhibiting complex behaviors and patterns. This behavior is usually non-linear, i.e., small changes may lead to large outcomes, which applies to explaining complex social phenomena (Izquierdo, 2010).

Configurational Theory is an approach used to understand and analyze complex causal relationships, with a particular focus on how different combinations of conditions work together to influence outcomes. Thus, outcomes are often produced by many different combinations of factors, while different configurations can lead to similar outcomes, reflecting multiple realizations (Braumoeller, 2008).

Based on the suitability of these two theories, the use of fuzzy-set qualitative analysis (fsQCA) in this research is necessary. fsQCA is a case-oriented research method, which is based on set-theoretic ideas and groupthink, effectively linking qualitative and quantitative analysis, and examining the relationship between antecedent conditions and combinations of conditions and the results from the

perspective of a set, to explain the complex causal relationships behind the phenomena. While fsQCA is praised for identifying multiple configurations leading to an outcome, its interpretation can be difficult. The process of calibrating fuzzy sets and deriving meaningful conclusions from them often requires expert knowledge, which can limit its applicability in broader contexts (Wandira et al., 2024). Moreover, fsQCA is sensitive to the choice of thresholds and the granularity of fuzzy membership, which can sometimes lead to inconsistencies or overfitting. This complexity is especially notable when attempting to validate fsQCA results with other methods (Mvondo & Niu, 2024).

Combining TAM with fsQCA allows for a more comprehensive approach to understanding technology acceptance. While TAM offers a structured framework focusing on individual variables like PU and PEOU, fsQCA can uncover complex configurations of factors that lead to adoption outcomes. For instance, by integrating fsQCA with PLS-SEM, researchers have demonstrated the value of using TAM alongside fsQCA to identify both individual variables and their interactions (Mvondo & Niu, 2024). The fusion of TAM and fsQCA addresses the individual weaknesses of both models. TAM's simplistic approach to adoption can benefit from the configurational depth provided by fsQCA, which accounts for the multivariable nature of user acceptance. As an example, fsQCA can be applied to map configurations that explain high and low user acceptance outcomes, complementing

TAM's insights into the direct effects of ease of use and usefulness (Wandira et al., 2024). This integration offers an innovative solution to the problem of linearity in TAM, as fsQCA can identify more complex, nonlinear relationships that TAM is unable to capture. Furthermore, combining both models could lead to the development of a more robust and holistic framework for understanding technology adoption. A recent example of this innovative approach is seen in research on portable intelligent personal assistants, where TAM was extended with fsQCA to explain user acceptance from multiple angles (Mvondo & Niu, 2024). Moreover, based on the ETAM quantitative analysis method, which primarily measures the impact of individual factors on outcomes from an individual perspective, employing Fuzzy-set Qualitative Comparative Analysis (fsQCA) enables further supplementary analysis of data from both "qualitative" and "configuration" aspects. This approach yields more profound and comprehensive mixed-method analytical results (Chen et al., 2025).

Based on the shortcomings and strengths of TAM and fsQCA, and after examining the feasibility of combining the two research methods as explored by scholars in the past, this paper finds that no scholars have applied a mixed analysis method combining TAM and fsQCA to the field of AI art. Moreover, empirical studies combining TAM with AIBPS are scarce, and there is a lack of further exploration into potential external variables that may have an impact. The purpose of this research is to propose a new Extended Technology

Acceptance Model (ETAM) for Midjourney, a representative product in the field of AIBPS, to conduct regression analysis on the questionnaire data, supplemented by fsQCA for configuration analysis, and to explore single and combined causal factors affecting users' intention, to fill the research gap in the theory and to promote the development of AI art in reality. Fill the research gap and promote AI art in reality.

RESEARCH MODELS AND ASSUMPTIONS

TAM Original Framework

Based on the previous research results, we constructed a new theoretical model using TAM as the original framework, aiming at exploring the acceptance of "Midjourney", a text-to-image AI drawing tool, and the related influencing factors of the target individuals (practitioners in the design industry).

As shown in Figure 1, Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Intent to Use (ITU) are the classical components of TAM. Perceived usefulness refers to an individual's perception that new technology improves his or her performance of a task after an experience with the new technology (Morosan & Jeong, 2008), which in this research is the target user's perception of whether Midjourney is useful or not; Perceived ease of use describes an individual's subjective feelings about the convenience and ease of using new technology (Davis, 1989), which in this paper mainly reflects the target users' perception that Midjourney can be used

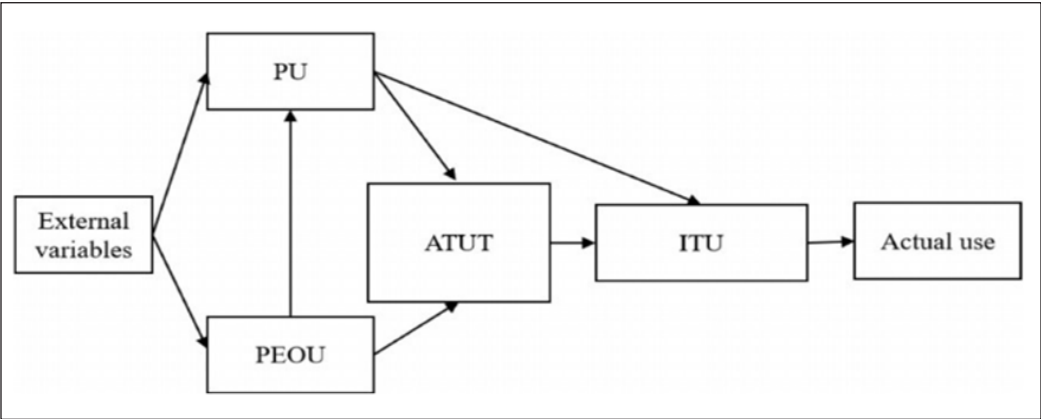


Figure 1. TAM designed by Davis, Bagozzi, and Warshaw
Source: Davis (1989)

proficiently without much effort. Numerous studies (Lou et al., 2017; Man et al., 2022) have shown that PEOU has a positive effect on PU and that both have a positive effect on the intention to use the technology. Therefore, based on the TAM expansion model, a total of eleven sets of hypotheses are proposed in this research.

- H1: PEOU has a positive impact on PU.
- H2: PEOU has a positive impact on ITU.
- H3: PU has a positive impact on ITU.

Personal Innovativeness (PI)

PI is generally used to measure a person's willingness to try and accept new things, especially new technologies (Agarwal & Prasad, 1998). In a study conducted by Rosen (2005), an attempt was made to demonstrate the position of individual innovativeness in a technology acceptance model by investigating individual innovativeness from three distinct logical positions in UTAUT,

a model used to predict and explain user behavior. In the study by Yi et al. (2006), it was also shown that PI has a positive impact on PEOU. Therefore, in the current study, faced with Midjourney, a new AI drawing tool, the following hypotheses were made regarding the relationship between subjects' PI and PEOU:

- H4: PI has a positive impact on PEOU.

Perceived Enjoyment (PE)

Scholars have argued (Davis et al., 1992; DeLone & McLean, 2003; Oghuma et al., 2016), PE that personal intrinsic motivation is a foundational determinant in the technology acceptance system and a significant predictor of perceived ease of use and intention to use. Therefore, for the relationship between the influence of PE using Midjourney on the overall technology acceptance, the following hypotheses were made in this research:

H5: PE has a positive impact on PEOU.

H6: PE has a positive impact on ITU.

Perceived Performance (PP)

When people use new technologies, they usually evaluate the systems and services they use, such as the functionality, speed, and stability of the technology. In Vitaliy et al.'s study on the status of SBSE technology acceptance (Mezhuyev et al., 2019), it was concluded that PP has a positive impact on the PU of SBSE technology. Although Vitaliy et al. highlighted the importance of PP in their study, they did not work on exploring the specific TAM structural relationship between it and the new technology PE. Therefore, the current study suggests that PP may have a positive effect on the perceived enjoyment of Midjourney. Accordingly, the following hypotheses were made:

H7: PP has a positive impact on PU.

H8: PP has a positive impact on PE.

Perceived Security (PS)

The use of web-based technology products often raises issues of personal data privacy, and many users are concerned that their data may be unconsciously collected, leaked, or misused. Han et al. (2021) examined whether the use of new smart technologies in hospitality services impacts users' acceptance of new technologies to varying degrees due to concerns about their phone numbers, email addresses, or credit card information. They concluded that PS impacts users' attitudes toward the

use of new technologies and, consequently, their intentions to use them. Therefore, the following hypotheses were made in this research regarding the use of Midjourney's PS:

H9: PS has a positive impact on ITU.

Perceived Cost (PC)

PC is the trade-off between the benefits consumers derive from using a technological product and the costs they incur (Venkatesh et al., 2012). In many cases, the price of a commodity is a significant factor in a user's decision to adopt a new product; for instance, Luarn and Lin (2005) found that the perceived cost of using mobile banking services limited users' usage. Therefore, it is reasonable to suspect that the willingness of design industry practitioners to use Midjourney is also influenced to some extent by PC, and PC was included as a variable in this research:

H10: PC has a positive impact on ITU.

Perceived Inspiration (PINS)

Inspiration allows one to go beyond the limits of what one would normally be able to do (Thrash & Elliot, 2004). In Wu and Ding's (2023) study, based on the Customer Inspiration Theory, users' inspiration was categorized into "Inspired-by" and "Inspired-to" components. These two components interlocked to mediate the relationship between short travel videos and tourists' intention to travel. Through Rodger's (2014) investigation, it was concluded that inspiration affects individual

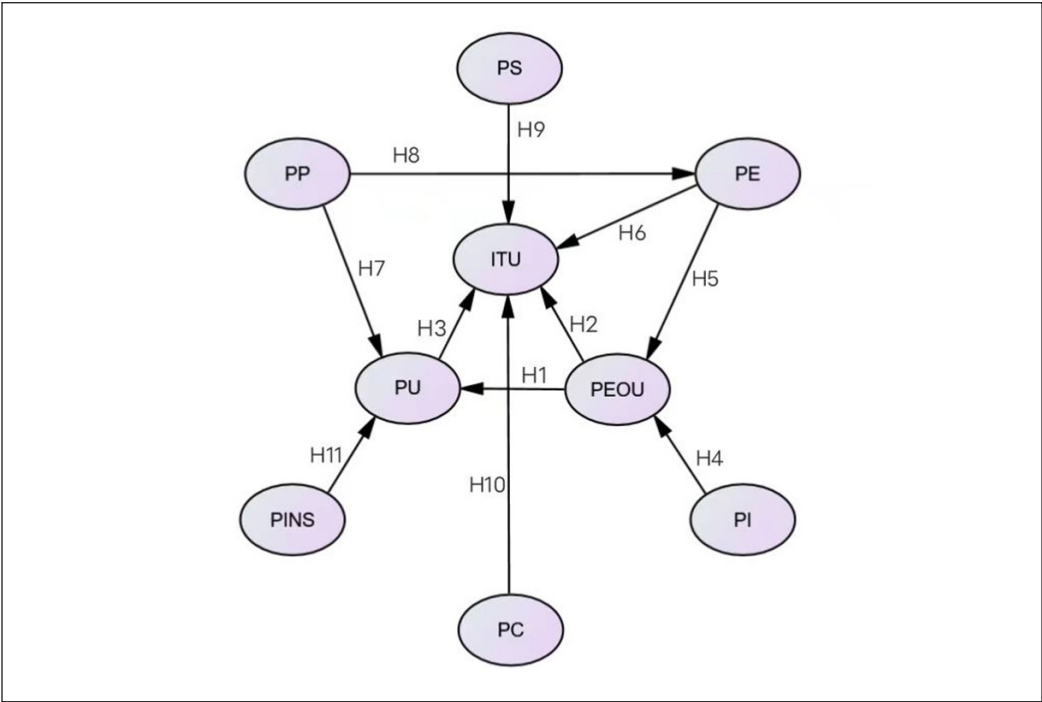


Figure 2. Hypothetical modeling of Midjourney acceptance

behavior as well as inspiration affects the acceptance of technology through memory. The research subjects of this experiment are designers, who have a stronger need for inspiration than other research subjects. Midjourney, as an AI creation tool, the inspiration it brings will be an important influencing factor for users to perceive the usefulness of this AI drawing tool, so the hypothesis is proposed:

H11: PINS has a positive impact on PU.

Research Models

Based on the above assumptions, a preliminary sketch of the research model is drawn in Figure 2.

RESEARCH METHODOLOGY

This research combines literature and questionnaire methods. First, a literature review was conducted, aiming to understand the status of AIBPS development and research, while selecting appropriate theoretical research models used to support subsequent research. Secondly, scales were designed for comprehensive data collection, analysis, and testing. Finally, the empirical data are discussed to understand the reasons and motives behind the research data, to reveal the potential mechanisms behind the results of this experiment, and finally to draw the theoretical and practical value of the conclusions of this research.

Research Tool

After completing the literature research, the present study unfolded a questionnaire design. This research used a questionnaire to collect quantitative data from professionals within the design industry to test the research hypotheses. Before completing the questionnaire, subjects were required to read the instructions for participation in full to fully understand the content and purpose of this experiment. To increase the credibility of the participants and provide comprehensive quantitative information, the questionnaire included inquiries about gender, age, education, and specific design-related occupations. Responses to all questions were evaluated and summarized using a Likert scale ranging from 1 to 5 (Pikkarainen et al., 2004), representing

strongly disagree, disagree, neutral, agree, and strongly agree, respectively.

At the same time, to ensure the reliability and validity of the variables, the measurement questions of this questionnaire were taken from existing literature and appropriately adapted to the characteristics of Midjourney and design industry practitioners. To ensure the reliability and validity of the adjusted questionnaire and avoid ambiguity in language expression or other errors, five PhDs in psychology, design, and other majors were invited to pre-test and evaluate the existing questionnaire before the questionnaire was distributed. Modify and adjust the questionnaire based on relevant feedback and finalize the questionnaire design. The specific content and sources are shown in Table 1 below.

Table 1
Measurement items of this research

Construct	Item	Content	Reference
Perceived usefulness (PU)	PU1	Using Midjourney increases my productivity.	Ashfaq et al. (2020)
	PU2	Using Midjourney helps me perform many things more conveniently.	
	PU3	Midjourney allows for solving complex problems.	Mezhuyev et al. (2019)
	PU4	Midjourney increases productivity and enhances the quality of work development.	
Perceived ease of use (PEOU)	PEOU1	Learning to use Midjourney is easy for me.	Lou et al. (2017)
	PEOU2	I find it easy to get Midjourney to do what I want it to do.	
	PEOU3	It is easy for me to become skillful at using Midjourney.	
	PEOU4	My interaction with Midjourney is clear and understandable.	

Table 1 (continue)

Construct	Item	Content	Reference
Perceived enjoyment (PE)	PE1	I enjoy a mode of communication with Midjourney.	Ashfaq et al. (2020)
	PE2	It is enjoyable to create with Midjourney.	
	PE3	Creating with Midjourney is exciting.	
	PE4	I enjoy creating with Midjourney more than any other software.	
Perceived security (PS)	PS1	I trust Midjourney's ability to protect my privacy.	Pikkarainen et al. (2004)
	PS2	Using Midjourney is financially secure.	
	PS3	I am not worried about the security of Midjourney.	
Perceived performance (PP)	PP1	Midjourney has a good performance.	Mezhuyev et al. (2019)
	PP2	Midjourney allows us to achieve valuable results in a reasonable time frame.	
	PP3	Midjourney allows us to achieve a comprehensive resolution.	
Personal innovativeness (PI)	PI1	I like to experiment with new technologies.	Yi et al. (2006)
	PI2	If I hear about a new technology, I am always keen to try it out.	
	PI3	Among my peers, I am usually the first to try out new technologies.	
Perceived inspiration (PINS)	PINS1	Midjourney has inspired me in a way.	Faqih (2022)
	PINS2	Midjourney stimulated my thinking.	
	PINS3	Midjourney gave me new ideas and views.	
Perceived cost (PC)	PC1	Midjourney was expensive.	K. Kim & Shin (2015)
	PC2	Subscribing to Midjourney was a burden to me.	
	PC3	I am willing to pay additional prices for more advanced Midjourney services.	Ni & Cheung (2023)
Intention to use (ITU)	ITU1	I would like Midjourney to assist me in making creations.	Wixom & Todd (2005)
	ITU2	I intend to use it as a routine part of my job over the next year.	Lee & Choi (2017)
	ITU3	I am satisfied with using Midjourney because it is easy to use and better than having to do it myself.	
	ITU4	I would recommend Midjourney to others.	

Sample Design

Aleamoni suggests that the sample size in relation to the number of variables is very important when using factor analysis techniques. It is generally recommended that the sample size should be at least 10 times more than the number of variables to ensure the reliability of the analyzed results (Aleamoni, 1976). In terms of the specific selection of the sample, we implemented maximum inclusion in terms of population and gender, and partitioned it according to general research norms, thus obtaining a greater breadth of sample data (Yi et al., 2006). In terms of occupation, we limited the questionnaire to designers only; if the subject is not a designer, the questionnaire will be automatically canceled. At the same time, there is a very detailed description of the experiment at the beginning of the questionnaire, and this research needs to be carried out on the premise that the research participants fully understand the purpose of the experiment. During the review stage, if it is found that the difference between the time spent on certain questionnaires and the

average time spent is too large, this research will cancel this part of the data to ensure the authenticity of the data.

Data Collection and Sample Analysis

A total of 330 copies of this questionnaire were distributed through the online platform, and a total of 322 valid samples were obtained after screening, with a sample validity rate of about 97.6%. Analysis of the sample reveals a balanced gender representation; Regarding age demographics, participants spanned all age groups, with the 26-35 age bracket comprising the highest number of respondents, while the category of individuals younger than 18 years old constituted the smallest sample size; Occupationally, the distribution was relatively even, with a notable presence in the graphic design sector; In terms of education, nearly 70% of the respondents held bachelor's or graduate degrees, while the sample size for high school and below was comparatively smaller, as detailed in Table 2.

Table 2
Sample characterization

Variant	Categories	Frequency	Effective	Cumulative
Gender	Male	162	50.3	50.3
	Female	160	49.7	100.0
	Less than 18	3	0.9	0.9
Age	18-25	75	23.3	24.2
	26-35	141	43.8	68.0
	36 and above	103	32.0	100.0

Table 2 (continue)

Variant	Categories	Frequency	Effective	Cumulative
Careers	Graphic designers	76	23.6	23.6
	Product Designer	37	11.5	35.1
	Interior Designer	62	19.3	54.3
	Interaction Designer	23	7.1	61.5
	Animation Designer	37	11.5	73.0
	Environmental Designer	28	8.7	81.7
	Fashion Designer	41	12.7	94.4
	Other	18	5.6	100.0
	High school and below	38	11.8	11.8
Education	Bachelor	190	59.0	70.8
	Postgraduate	94	29.2	100.0

DATA ANALYSIS

Reliability Test

In this research, data were gathered using a scale, necessitating a rigorous evaluation of measurement data quality to ensure the meaningfulness of subsequent analyses. Firstly, the internal consistency of each dimension was assessed through Cronbach's Alpha coefficient, a widely employed reliability measure. The Alpha coefficient ranges from 0 to 1, where values closer to 1 indicate higher reliability. Typically, a coefficient below 0.6 signifies an unreliable level, while values between 0.6 and 0.7 denote acceptable reliability, 0.7 to 0.8 indicate good reliability, and above 0.8 represents a highly credible level of reliability. Through meticulous data analysis, all test results in this research exceeded 0.8, affirming the highly credible reliability of the measurements (Manly

& Alberto, 2016). This robust reliability supports the subsequent analyses conducted in this research. Table 3 below shows the reliability testing for this study.

Table 3
Reliability test

Variable	Cronbach Alpha (α)	No.
PU	0.864	4
PEOU	0.857	4
PE	0.861	4
PS	0.840	3
PP	0.858	3
PI	0.846	3
PINS	0.845	3
PC	0.830	3
ITU	0.849	4

Model Fit Test

Confirmatory Factor Analysis (CFA) serves as a research method employed to assess whether the interrelationships

Table 4
Table of model fitness test

Statistics	Recommended Value	Computed
CMIN/DF	1-3 excellent, 3-5 good	1.111
RMSEA	0-0.05 excellent, 0.05-0.08 good	0.019
GFI	0.9-1 excellent, 0.8-0.9 good	0.916
IFI	0.9-1 excellent, 0.8-0.9 good	0.992
TLI	0.9-1 excellent, 0.8-0.9 good	0.991
CFI	0.9-1 excellent, 0.8-0.9 good	0.992

among variables align with the researcher's theoretical framework (Li et al., 2019). The results of the model fitness test, as depicted in Table 4, reveal a Chi-Square Minimum/Degrees of Freedom (CMIN/DF) value of 1.111, falling well within the optimal range of 1-3. Furthermore, the Root Mean Square Error of Approximation (RMSEA) value stands at 0.019, which also falls within the desirable range of 0-0.05. Additionally, metrics such as Goodness-of-Fit Index (GFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) demonstrate values of 0.916, 0.992, 0.991, and 0.992, respectively, all of which lie between 0.9-1, indicating exceptional performance. Consequently, based on the comprehensive analysis of these results, it can be concluded that the present model exhibits an outstanding fit.

Convergent Validity and Composite Reliability Tests

Given the satisfactory fitness of the Confirmatory Factor Analysis (CFA) model, a meticulous examination of the Average Variance Extracted (AVE) and Composite Reliability (CR) for the scale's

dimensions was conducted. The inspection process unfolded as follows: First, the standardized regression coefficient for each measure corresponding to its dimension was calculated from the established CFA model (Fig. 2). Subsequently, the values for mean-variance extracted and composite reliability were computed utilizing the relevant formulas. As per established standards, a minimum AVE value exceeding 0.5 and a CR value surpassing 0.7 are essential indicators of robust convergent validity and composite reliability.

Upon analyzing the computation results detailed in Table 5, it becomes evident that, in this validity assessment, all dimensions exhibited AVE values exceeding 0.5 and CR values surpassing 0.7. This substantiates that each dimension displays strong convergent validity and composite reliability. (Manly & Alberto, 2016).

Differentiation Validity Test

The analysis results in Table 6 indicate that the standardized correlation coefficients among the dimensions in this differential validity test are below the critical value corresponding to each dimension,

Table 5
Individual dimensions convergent validity and composite reliability tests

	Path relationship		Estimate	AVE	CR
PE1	<---	PE	0.881	0.608	0.860
PE2	<---	PE	0.725		
PE3	<---	PE	0.754		
PE4	<---	PE	0.750		
PI1	<---	PI	0.908	0.656	0.850
PI2	<---	PI	0.744		
PI3	<---	PI	0.769		
PS1	<---	PS	0.860		
PS2	<---	PS	0.753	0.640	0.842
PS3	<---	PS	0.784		
ITU1	<---	ITU	0.853		
ITU2	<---	ITU	0.685		
ITU3	<---	ITU	0.760	0.588	0.850
ITU4	<---	ITU	0.759		
PC1	<---	PC	0.869		
PC2	<---	PC	0.756	0.627	0.834
PC3	<---	PC	0.745		
PINS1	<---	PINS	0.894		
PINS2	<---	PINS	0.766	0.651	0.848
PINS3	<---	PINS	0.753		
PU1	<---	PU	0.926		
PU2	<---	PU	0.738	0.618	0.865
PU3	<---	PU	0.707		
PU4	<---	PU	0.756		
PEOU1	<---	PEOU	0.890	0.602	0.857
PEOU2	<---	PEOU	0.754		
PEOU3	<---	PEOU	0.721		
PEOU4	<---	PEOU	0.726		
PP1	<---	PP	0.901	0.675	0.861
PP2	<---	PP	0.780		
PP3	<---	PP	0.778		

Table 6
Differentiation validity test table (AVE values for divisions on the diagonal)

	PU	PEOU	PP	PE	PI	PS	ITU	PC	PINS
PU	0.618								
PEOU	0.529	0.602							
PP	0.581	0.574	0.675						
PE	0.497	0.509	0.572	0.608					
PI	0.564	0.572	0.622	0.580	0.656				
PS	0.521	0.547	0.606	0.567	0.628	0.640			
ITU	0.553	0.562	0.563	0.561	0.602	0.615	0.588		
PC	0.590	0.612	0.629	0.611	0.635	0.653	0.663	0.627	
PINS	0.569	0.583	0.622	0.568	0.647	0.622	0.650	0.653	0.651
AVE ²	0.786	0.776	0.822	0.780	0.810	0.800	0.767	0.792	0.807

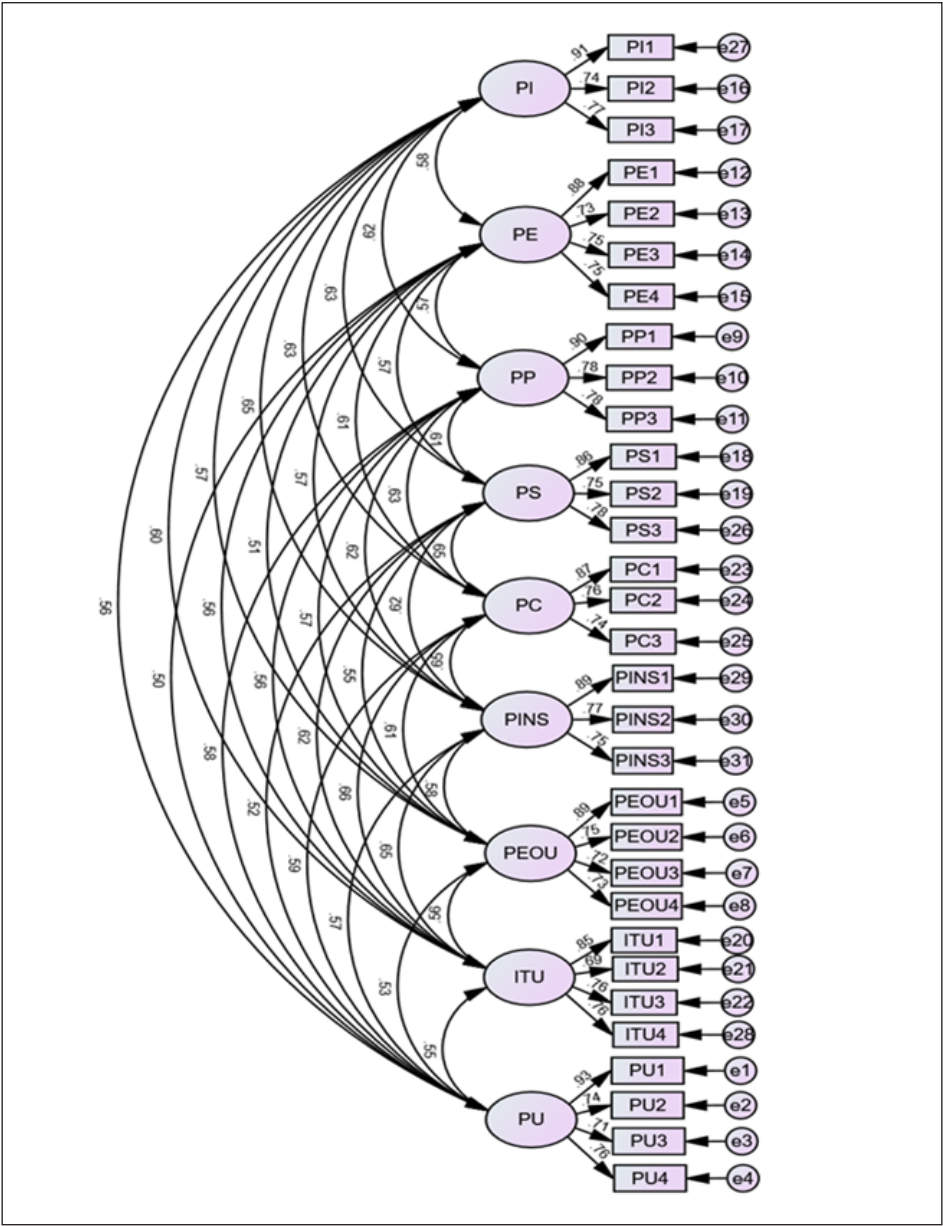


Figure 3. Validation factor analysis CFA model plot

represented by the square root of the Average Variance Extracted (AVE) value. Therefore, it can be shown that there is good discriminant validity between all

dimensions (Manly & Alberto, 2016). Figure 3 shows the validation factor analysis CFA model plot based on the Table 6.

Descriptive Statistics and Normality Tests

Table 7 presents the results of the normality test conducted in this research. The descriptive analysis reveals that the mean scores of the variables range from 3.02 to 3.66, within a positively scored scale of 1-5. So, this research has a more than moderate

level of perception of the impact of the use of Midjourney on the practitioners in the design industry.

In this analysis, we utilized skewness and kurtosis to assess the normality of individual measurement items. Following Kline and Little's (2016) established criteria. Skewness values within the range of -3 to

Table 7
Normality test table

Variable	Average value	Standard Deviation	Skewness	Kurtosis
PU1	3.47	1.370	-0.530	-0.949
PU2	3.23	1.194	-0.138	-0.780
PU3	3.17	1.118	-0.079	-0.600
PU4	3.21	1.177	-0.134	-0.702
PEOU1	3.37	1.357	-0.431	-0.952
PEOU2	3.14	1.172	-0.099	-0.800
PEOU3	3.08	1.112	0.010	-0.590
PEOU4	3.08	1.153	-0.042	-0.640
PE1	3.50	1.324	-0.524	-0.874
PE2	3.26	1.166	-0.088	-0.766
PE3	3.24	1.167	-0.150	-0.661
PE4	3.23	1.156	-0.117	-0.679
PS1	3.51	1.293	-0.526	-0.795
PS2	3.32	1.163	-0.258	-0.636
PS3	3.29	1.206	-0.212	-0.817
PP1	3.23	1.395	-0.161	-1.238
PP2	3.10	1.197	-0.089	-0.802
PP3	3.02	1.154	-0.036	-0.740
PI1	3.30	1.413	-0.301	-1.182
PI2	3.14	1.176	-0.002	-0.711
PI3	3.12	1.161	-0.076	-0.669
PINS1	3.52	1.358	-0.579	-0.863
PINS2	3.15	1.152	-0.153	-0.691
PINS3	3.23	1.150	-0.193	-0.592
PC1	3.55	1.369	-0.637	-0.797
PC2	3.33	1.162	-0.246	-0.607
PC3	3.25	1.172	-0.266	-0.566
ITU1	3.66	1.302	-0.809	-0.429
ITU2	3.35	1.121	-0.278	-0.426
ITU3	3.37	1.164	-0.356	-0.594
ITU4	3.42	1.136	-0.358	-0.514

+3 and kurtosis values between -8 and +8 are regarded as indications of data closely approximating a normal distribution. The analysis results, as delineated in Table 7, reveal that the absolute values of skewness and kurtosis coefficients for every measurement item in this research are within the established standard range.

Correlation Analysis

In this analysis, the relationship between variables was examined using Pearson correlation coefficient analysis Table 8 below. The findings unequivocally demonstrate a substantial and positive correlation among all variables considered.

The significance levels, exceeding 99%, indicate robust statistical significance. Moreover, the correlation coefficients, consistently greater than 0 ($r > 0$), signify a strong positive relationship between the variables under scrutiny. Thus, the combined results of the analysis can indicate that there is a significant positive correlation between all the variables in this analysis.

Structural Equation Modeling (SEM) Fitness Tests

Table 9 shows the results of the fitness test of this model, as shown CMIN/DF = 1.317, which is excellent in the reference standard range of 1-3; RMSEA = 0.031, which is

Table 8
Pearson correlation coefficient between dimensions

	Pua	PEOUa	PEa	PSa	PPa	Pla	PINSa	PCa	ITUa
Pua	1								
PEOUa	0.431**	1							
PEa	0.409**	0.437**	1						
PSa	0.446**	0.457**	0.477**	1					
PPa	0.499**	0.490**	0.491**	0.513**	1				
Pla	0.493**	0.491**	0.497**	0.540**	0.547**	1			
PINSa	0.476**	0.499**	0.469**	0.531**	0.540**	0.549**	1		
PCa	0.482**	0.504**	0.510**	0.554**	0.534**	0.537**	0.553**	1	
ITUa	0.456**	0.472**	0.483**	0.521**	0.489**	0.521**	0.540**	0.560**	1

Note. **: At the 0.01 level (two-tailed), the correlation is significant

Table 9
Model fitness test table

Statistics	Recommended Value	Computed
CMIN/DF	1-3 excellent, 3-5 good	1.317
RMSEA	0-0.05 excellent, 0.05-0.08 good	0.031
GFI	0.9-1 excellent, 0.8-0.9 good	0.899
IFI	0.9-1 excellent, 0.8-0.9 good	0.977
TLI	0.9-1 excellent, 0.8-0.9 good	0.974
CFI	0.9-1 excellent, 0.8-0.9 good	0.977

excellent in the reference standard range of 0-0.05; the GFI value is 0.899, which is very close to the excellent interval of 0.9-1; the values of IFI, TLI, and CFI measurements were 0.977, 0.974, and 0.977, respectively, all in the 0.9-1 range of excellence. Therefore, it can be concluded that the structural equation model constructed in this case has excellent fitness and can be further analyzed for model test results.

Results of Testing the Path Relationship Hypothesis

In conducting the path analysis of structural equation modeling, IBM Amos 26 was employed, and the resulting standardized regression coefficients are detailed in Table 10. According to Fisher's theory (Fisher, 1970), all 11 sets of hypotheses (H1-H11) proposed in the hypothesis stage of this research were evidenced by the data, presenting a significant impact ($p < 0.05$). Notably, PP ($\beta = 0.639$, $p < 0.001$, H8) exhibited a substantial positive influence on

PE; PE ($\beta = 0.264$, $p < 0.001$, H5) and PI ($\beta = 0.48$, $p < 0.001$, H4) displayed significant positive effects on PEOU; PP ($\beta = 0.339$, $p < 0.001$, H7), PEOU ($\beta = 0.195$, $p < 0.01$, H1), and PINS ($\beta = 0.26$, $p < 0.001$, H11) exerted significant positive impacts on PU; PC ($\beta = 0.309$, $p < 0.001$, H10), PS ($\beta = 0.218$, $p < 0.01$, H9), PEOU ($\beta = 0.135$, $p < 0.05$, H2), PE ($\beta = 0.133$, $p < 0.05$, H6), and PU ($\beta = 0.147$, $p < 0.05$, H3) had notable positive effects on ITU. Figure 4 shows the TAM and pathway relationships diagram.

Fuzzy-Set Qualitative Comparative Analysis (fsQCA)

Variable Selection

Based on the analysis of this TAM, it was found that all five hypothesized paths that directly and significantly influenced the intention to use Midjourney were valid. However, among the five variables directly influencing ITU, the p-values for four of them (PE, PS, PEOU, and PU) range

Table 10
Path relationship test results

	Hypothesis	Estimate	S.E.	C.R.	P	Result
PE	<--- PP	0.639	0.067	9.479	(***)	Accept
PEOU	<--- PE	0.264	0.082	4.270	(***)	Accept
PEOU	<--- PI	0.480	0.088	7.296	(***)	Accept
PU	<--- PP	0.339	0.079	4.261	(***)	Accept
PU	<--- PEOU	0.195	0.046	3.174	0.002(**)	Accept
PU	<--- PINS	0.260	0.076	3.461	(***)	Accept
ITU	<--- PEOU	0.135	0.058	2.147	0.032(*)	Accept
ITU	<--- PE	0.133	0.076	2.159	0.031(*)	Accept
ITU	<--- PC	0.309	0.098	3.904	(***)	Accept
ITU	<--- PS	0.218	0.087	2.862	0.004(**)	Accept
ITU	<--- PU	0.147	0.077	2.351	0.019(*)	Accept

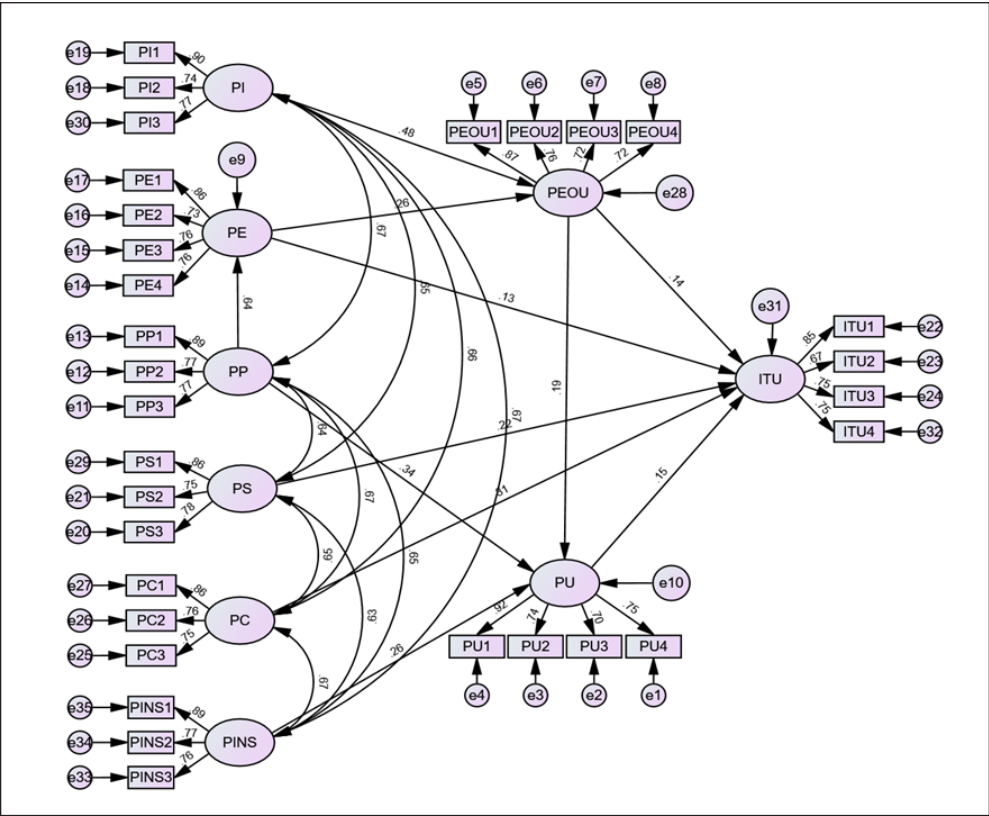


Figure 4. TAM and pathway relationships

between 0.05 and 0.001, and the β -values are all less than 0.25. This suggests that the direct effects of these four variables on ITU, while statistically significant, are relatively small compared to those of PC (Urbach & Ahlemann, 2010). Research has demonstrated that fsQCA can enhance the examination of the average net effect in SEM by analyzing the outcomes arising from the interdependence of multiple conditions (Du & Jia, 2017). Therefore, this research selected these four variables as antecedent variables and further analyzed their data through fsQCA. The aim was to investigate whether, given that their individual impact

on the outcome variable ITU is relatively small, they collectively form a complex causal joint effect on the outcome.

Data Calibration

In this research, perceived enjoyment, perceived security, perceived usefulness, and perceived ease of use are chosen as antecedent variables. As the data for this research are derived from Likert scale responses in a questionnaire survey, before analysis, the scores for each measurement item need to be summed and then averaged. Following the theoretical framework proposed by Ragin (2009), the 5% (Fully

Out), 50% (Fully In), and 95% (Crossover Point) percentiles of the averaged data are selected as anchor points. Finally, the membership scores for each variable are assigned between 0 and 1.

Necessity Analysis

Before conducting a configurational analysis on the calibrated data, it is necessary to perform an analysis of the necessity of individual conditional variables. This research utilized fsQCA 4.1 software for analysis. The results, as shown in Table 11, indicate that the consistency results of individual antecedent variables are all less than 0.9 (Schneider & Wagemann, 2010). This suggests that none of the four antecedent variables is a necessary condition for triggering the outcome. Therefore, further configurational analysis is needed to explore their combined impact on the outcome variable ITU.

Table 11
Necessity analysis results (~indicates absent or low)

	Consistency Coverage	
Perceived performance	0.860	0.898
~Perceived performance	0.535	0.575
Perceived usefulness	0.845	0.903
~Perceived usefulness	0.536	0.563
Perceived security	0.877	0.905
~Perceived security	0.522	0.568
Perceived ease of use	0.814	0.906
~Perceived ease of use	0.552	0.559

Adequacy Analysis

Before the conditional configuration analysis, the truth table is constructed,

and the frequency threshold should be set to ensure that the retained sample size is not less than 80% of the total sample size according to the practical operation standard (Rihoux & Ragin, 2008). In this research, the frequency threshold is set to 2, the original consistency threshold adopts the default value of 0.8, the PRI Consistency threshold is 0.7, and the final conditional configuration and analysis results are shown in Table 12. The results indicate that the solution consistency of the three configurations formed by the four conditional variables is 0.956, exceeding the threshold of 0.75. This suggests that

Table 12
Results of adequacy analysis

	Construct 1	Construct 2	Construct 3
Perceived enjoyment	●	○	
Perceived usefulness	⊗	●	●
Perceived security	●	⊗	○
Perceived ease of use	⊗	●	●
Raw coverage	0.809	0.725	0.727
Unique coverage	0.120	0.036	0.037
consistency	0.953	0.949	0.950
solution coverage		0.882	
solution consistency		0.956	

Note. ○: The antecedent variable is an auxiliary condition of the structure. ●: The antecedent variable is a core condition of the construct. ⊗: The antecedent variable does not exist in the construct

all configurations have high reliability and serve as sufficient conditions for designers to accept Midjourney, and with these three configurations in place, the probability of achieving the outcome variable reaches 95.6%; the three configurations' solution coverage is 0.882, which shows that the probability of being explained by these three configurations in all successful cases reaches 88.2%.

DISCUSSION

The current research was conducted with a sound theoretical foundation. Based on the results of previous research, this study is the first to incorporate six new latent variables, PI, PS, PC, PP, PE, and PINS, into the Technology Acceptance Model (TAM) to elucidate the user experience of AIBPS (Midjourney) among design industry professionals. Different from other studies on AIBPS, this research no longer focuses on the details of AI technology, nor on the testing of product performance. Instead, it focuses on the human-centered user experience in AI technology and product development, and focuses on the designer group. In this way, this paper possesses new perspectives and findings.

This research holds significance from both theoretical and practical standpoints. The validation of H1, H2, and H3 implies the applicability of traditional TAM theories to the realm of AIBPS. Designers, as an important user group of Midjourney, have their Perceived Usefulness (PU) also significantly influenced by Perceived Ease of Use (PEOU), and at the same time,

both of them significantly affect designers' intention for the Midjourney's to use Midjourney. Based on ETAM, this research also introduced personal innovativeness (PI) and perceived enjoyment (PE) as external variables affecting PEOU; perceived performance (PP) and perceived inspiration (PINS) as external variables affecting PU. The results show that designers who are more willing to try new things, or who are good at finding joy in doing, are less likely to find AIBNPS difficult to use. Some management scholars have found that if a company adopts a dual strategy of simultaneously enhancing efficiency and fostering innovation, it can gain a competitive edge in intense market competition (Sarkees & Hulland, 2009). This proved to be true for Midjourney's PUs as well, with the efficiency gains and bursts of inspiration that AIBPS brought to the designers significantly influencing their evaluation of whether it was useful or not. The establishment of H8 underscores that the enhancements in performance and efficiency resulting from Midjourney significantly impact users' positive experiences with the software. This finding affirms that PP not only directly influences PU but also has the capacity to affect PEOU and ITU by influencing PE, which undoubtedly affirms the importance of the efficiency improvement of AIBPS. In the subsequent maintenance and development, it is possible to optimize performance and improve efficiency in order to enhance the user experience, strengthen the perceived ease of use and usefulness of the product, and ultimately promote the tendency of designers to use AIBPS.

Methodologically, the research is distinguished by its innovative hybrid approach that combines a thorough literature review, a well-structured questionnaire survey yielding 322 valid responses, and an integrative analysis using both TAM and fsQCA. This design not only allows for the rigorous testing of individual variable relationships within the TAM framework but also uncovers the complex, multifactorial configurations that drive user acceptance in a nuanced manner. By bridging quantitative analysis with qualitative comparative insights, the research addresses the limitations of traditional single-method studies and provides a more comprehensive framework for exploring technology acceptance phenomena. This methodological advancement enriches the empirical analysis of user experiences with emerging AI technologies, offering a replicable model that can be applied across interdisciplinary contexts to investigate the dynamics at the intersection of technological innovation and creative design.

It is worth noting that, given the characteristics of the study population (designers) and the research subject (AIBPS), the inclusion of the perception of inspiration (PINS) holds significant importance in the construction of TAM in this paper. The establishment of H11 also suggests that future researchers exploring the usage of emerging technological products in such user groups should consider external variables with specific group needs, such as "creativity or inspiration." This encourages developers to consider the

unique requirements of different professional groups. Design industry practitioners use Midjourney not only in the hope that this tool can quickly and excellently help them complete their work, but also in some cases, in the hope that AI algorithms can inspire them so that they can break through the limitations of their own thinking and expand the boundaries of their own thinking. Therefore, considering this dimension, combined with this demonstration of the significant effect of perceived inspiration on perceived usefulness, this paper suggests that this external variable will have a non-negligible impact in any future research on the acceptance of AIBPS.

This research also innovatively introduces Perceived Cost (PC) and Perceived Security (PS) as variables directly affecting designers' intention to use Midjourney. The two also happen to have relatively high β -values among the factors constructed in this paper that directly affect ITU. It should be noted that since the subjects in this study were all from China (with network-specific limitations), the costs in this study also include the cost of crossing the limitations, which makes the perceived costs here unique, and as the world's second-most populous country, China has a huge number of users, so this variable deserves to be taken into account more. For perceived security, the reason for this situation may be, on the one hand, because with the rapid development of information technology, the importance of information security has gradually been placed in a relatively high dimension of consideration;

on the other hand, Midjourney operates as an AI drawing tool integrated into Discord, a global commercial community platform with servers maintained overseas, leading to heightened concerns among design industry practitioners about information security. Therefore, while providing a convenient service of free information exchange and communication, Midjourney is an online AI drawing tool. Compared with the AI drawing tool installed on the local computer (Stable Diffusion), the risk of its information security is more concerning the design industry practitioners. For the perception of the cost of use, on the one hand, it may be because Midjourney, as an emerging AI painting tool, the market is still in the exploratory stage of judging its value, and has not yet been able to have a clear measure of the value of the subscription price it sets; on the other hand, for Chinese designers, accessing community platforms such as Discord and using Midjourney requires the use of a Virtual Private Network (VPN), which is an additional cost, and the time and effort required to apply for a VPN can put pressure on some companies or individual designers, these factors will make them have to think further about the additional costs they have to face by using Midjourney.

The unique contribution of this research is that we propose to combine TAM and fsQCA to measure the impact of various factors on designer acceptance in the AIBPS domain. This hybrid approach can combine the strengths of both quantitative and qualitative analyses, not only considering the impact of individual factors but also

being able to reveal the impact of selective multifactorial. We believe that this approach can also be applied to other fields to obtain more convincing results. The analysis of fsQCA reveals that individual factors directly affecting the outcome variables may not be significant, but by combining them, they can have a significant impact on ITU. This also suggests that it is not necessary to consider all the influencing factors in the development of AIBPS, that any combination of design factors may emphasize or ignore certain factors, and that the development of AIBPS can be based on its own actual needs and environment to choose the appropriate structure.

In terms of practical significance, due to the occupational characteristics of the subjects in this study, the introduction of perceived inspiration is highly significant for the construction of ETAM in this paper. This reminds developers to focus more on how Midjourney induces inspiration in users during the process of generating works. For the actual operation and development of the software, this study suggests that, in addition to making users feel that Midjourney is good and easy to use, it is also important to put ourselves in the shoes of users in different regions to consider the cost they need to pay, so that the price can be adjusted appropriately in accordance with the different situations. At the same time to strengthen the publicity of Midjourney, to enhance the user's subconscious awareness of the value of using Midjourney can bring, of course, for the user's information security and the use of experience should be further

in-depth investigation, investigation of user pain points and continuous improvement, to affect the user's perception of the price, the safety of the security of the peace of mind, the use of the satisfaction of the experience. Ultimately, it will increase the probability that Midjourney will be chosen by users. As for how to improve users' perception of Midjourney's usefulness and ease of use, this study suggests that the tool can be made more useful by both improving software performance and tuning AI creativity; And making Midjourney more accessible to users by enhancing the mental pleasure of using it and by filtering more creative users as the main promotional demographic.

CONCLUSION

Theoretical Contribution

This research uses the Technology Acceptance Model (TAM) as the main research basis and theoretical framework. By innovatively introducing 6 variables and proposing 11 sets of research hypotheses, it explores the user experience of the artificial intelligence drawing tool "Midjourney" among design industry professionals. By shifting the focus from AI technology details and product performance to a human-centered perspective, the research provides new insights into how traditional constructs of perceived ease of use (PEOU) and perceived usefulness (PU) are moderated by additional factors like innovation, inspiration, cost, and security. This enhanced model not only broadens the empirical applicability of TAM in the creative sector but also underscores the

significance of addressing domain-specific needs, such as the role of inspiration, in understanding technology acceptance among designers. The findings can guide developers, marketers, and researchers in creating, promoting, and studying AI tools that meet the needs of the design community.

Practical Contribution

The findings of this research offer valuable guidance for developers, marketers, and practitioners in the art and design industries. The empirical validation of key hypotheses demonstrates that improvements in system performance and efficiency, alongside enhancements in user enjoyment and inspiration, can significantly boost the perceived usefulness and ease of use of AI drawing tools. Furthermore, the study highlights the critical role of perceived cost and security, suggesting that software developers should tailor subscription strategies, optimize user interfaces, ensure robust data protection, and incorporate interactive tutorials to enhance user engagement. Although the development of AIBPS is still incomplete, it has already demonstrated its value for use and development potential that cannot be ignored. Developers should pay more attention to its impact on the art and design industry, and turn the contradiction into motivation, and designers will be an important user group in promoting the development of AIBPS. For art creators, the emergence and rapid development of AIBPS are both facts and future trends. While it is essential to discuss the advantages

and disadvantages of AI, we must not let the balance of pros and cons deter us from understanding and mastering these new tools. By inheriting through critique and adapting with innovation, the art industry can better harness and control these technologies. At the same time, some limitations that emerged from the research need to be further explored and addressed in future research.

Practice Recommendations

To increase the adoption and effectiveness of AI-based drawing software such as Midjourney among design professionals, several strategic recommendations can be implemented. First, focus on improving the user interface and overall user experience by making the software intuitive and easy to navigate. Comprehensive tutorials and support resources should be provided to help users quickly become proficient with the tool. The marketing strategy should target early adopters and innovators in the design industry by emphasizing innovative features and providing opportunities for hands-on experimentation through free trials or interactive demos.

Incorporate features that stimulate creativity and provide inspiration, such as customizable templates, AI-generated design suggestions, and collaboration tools that allow users to share and give feedback seamlessly. Highlighting these creative support features in promotional materials can appeal to designers who are looking for tools to enhance their creative process.

Addressing security concerns is critical; therefore, developers should implement strong data protection measures and clearly communicate them to build user trust. Transparent privacy policies and secure data handling practices should be prioritized. To mitigate cost-related barriers, offering a variety of subscription plans, including free trials and discounted prices for long-term commitments, can make software more accessible. Emphasizing value for money and potential productivity gains can help justify the investment to potential users.

In addition, collecting ongoing feedback from users and incorporating it into the development process will ensure that the software evolves according to user needs and preferences. Regular updates and improvements based on user input can increase satisfaction and foster long-term loyalty. By implementing these comprehensive strategies, developers can significantly increase the adoption and utilization of AI-based drawing software by design professionals, thereby driving innovation and efficiency in the industry.

Finally, based on further fsQCA of the four variables with small β -values, this research makes recommendations in response to the findings. In the development and design of AIBPS, the traditional idea of only considering usability and ease of use needs to be changed. Because the influence of these two factors on the user experience of emerging AIBPS is diluted by other factors, such as the perceived safety and perceived enjoyment of designers in this study. In the market, while the developers

of various AIBPS strive to ensure excellent PEOU and PU, if a product considers the user's PS or PE, it will make it stand out.

Limitations and Future Research

The limitations of this current study can serve as a source of inspiration for future researchers. While this research effectively utilized internet-based questionnaires to collect a wide range of high-quality data across various dimensions, it encountered challenges in achieving sample balance within different age groups. Notably, subjects from distinct age groups may possess varying perspectives on new technology, and this research did not sufficiently address the perceptions of older design industry practitioners concerning Midjourney. In future research, it is recommended that researchers expand their inquiry both horizontally and vertically. This expansion can be achieved by selecting representative subjects from diverse age groups within the design industry and employing research methodologies like "interviews."

Additionally, this research gathered user data through the distribution of questionnaires, and the data derived from the scales contained a certain level of subjectivity. The uncertainty associated with subjective cognition can introduce a degree of inaccuracy in the study's conclusions. To address this limitation, future research endeavors should seek additional objective data to further substantiate the findings of this research. At the same time, although this study used an innovative mixed analysis research method, the entire research

conclusion is rooted in the empirical data collected by the research team. Although these data have advantages such as timeliness and authenticity, there is still the possibility of bias. In future research, it may be possible to combine more official panel data to reduce limitations and bias.

Lastly, the research sample was exclusively composed of design industry practitioners in China. Consequently, the conclusions drawn may bear regional limitations. These limitations may stem from factors such as the geographical constraints of network access, which may influence the perception of Midjourney's cost. Future research could enhance the robustness of findings by incorporating subjects from diverse countries, thereby gathering more multidimensional data and facilitating more comprehensive studies.

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Women's Narratives on the Intergenerational Transmission of Intimate Partner Violence in Mindanao, Philippines

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ABSTRACT

Intimate Partner Violence (IPV) remains a critical public health issue globally, with significant implications for women, particularly those from marginalized ethnic communities. In the Philippines, IPV continues to affect women, with ethnic minority groups facing heightened vulnerability. This study investigates the lived experiences of ethnic minority women victims of IPV in Malaybalay City, Bukidnon, between October 2021 and July 2022, employing a transcendental phenomenological approach. The research involved in-depth interviews with three purposively selected women who have experienced IPV. Experts validated the interview guide to ensure its relevance to the participants' socio-cultural contexts. Data analysis was conducted using Moustakas' (1994) Van Kaam method. The findings reveal sociocultural and several psychosocial factors contributing to IPV, including systemic gender inequality, economic dependency, and cultural norms (e.g., machismo and the idealization of a "good man"). These factors create an environment in which emotional, verbal, and physical abuse, along with alcoholism, are pervasive. The study also highlights the impact of intergenerational trauma in perpetuating cycles of abuse. The findings underscore the systemic nature of IPV, where entrenched cultural and economic structures reinforce violence. This research emphasizes the need for improved support services and culturally sensitive, gender-responsive policies that address the unique challenges faced by Indigenous women. It also advocates for a

multi-sectoral approach to address IPV more effectively. The study contributes to the growing body of knowledge on IPV in marginalized communities and highlights the importance of integrating gender equality principles into public health policies.

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INTRODUCTION

Violence continuously plays a role in the lives of women and children, particularly in the transmission of violence from one generation to the next, despite efforts to bring about change and prevent it. Studies have shown that intimate partner violence (IPV) remains a primary social concern because of its human rights, anchored on SDG 5, Gender Equality, and public health implications (Meyer et al., 2021; Kerridge & Tran, 2016).

Worldwide, 6% and 71% of women aged 15 to 49 have been victims of physical or sexual abuse by an intimate male partner (Kerridge & Tran, 2016). In the Philippines, 17.5% of Filipino women aged 15-49 have experienced any form of physical, sexual, and emotional violence from their intimate partners (data were taken from Philippine Statistics Authority, 2022), with domestic violence affecting one in every four women aged 24-49 with 8,399 reported cases of physical violence, 1,791 on rape, and 1,505 on acts of lasciviousness as cited by Philippine Commission on Women (2021). This was affirmed by the study of Yoshioka et al. (2020) among 11,727 women and girls in the Philippines (data were taken from the Philippines National Demographic and Health Survey). Violence is often thought to cover more situations in which partners in dating, cohabiting, and marriage relationships are threatened, harassed, coerced, or intimidated (Corvo, 2019; World Health Organization [WHO], 2013).

Although there have been studies regarding intergenerational transmission

of violence, the assumptions are primarily focused on the psychological traits of the offender. For instance, Holt (2012) and Miles and Condry (2015) link parental IPV with child-parent abuse. The same is true with the works of Anderson et al. (2018), showing that childhood maltreatment, psychological distress, and exposure to intimate partner violence (IPV) are all associated risk factors for perpetrating child abuse. Further, as demonstrated by the studies of Chan et al. (2022) and Avakame (1998), as children mature into adults, they repeat the aggressive behavior they learn. Even though numerous studies have been undertaken to understand domestic violence, one question must be explored, and that is how intimate partner violence is transmitted from generation to generation.

Several theories can explain this phenomenon. Hence, an integrative approach was employed to examine the intergenerational transmission of IPV in Indigenous communities. For instance, Standpoint Theory provides the foundational lens, centering Indigenous women's narratives to reveal how macro-level power relations—shaped by colonial hierarchies and patriarchal structures—position them as vulnerable to abuse (Harding, 1991). This aligns with and extends Connell's (2005) hegemonic masculinity, demonstrating how perpetrators exploit dominant social statuses reinforced by cultural norms like machismo while also exposing how these dynamics are intensified by institutional failures (Smith & Freyd, 2014), such as inadequate legal protections and economic marginalization.

Furthermore, Bandura and Walters' (1977) Social Learning Theory explains the normalization of violence through generational exposure, while the study culturally specifies this process by showing how tribal kinship systems and community expectations mediate behavioral replication. For instance, children in Indigenous families may learn violence not only through direct observation but also through culturally sanctioned gender roles and communal silence around abuse, reflecting the interplay between familial and community ecological systems. Bowen's (1978) Family Systems Theory further elucidates intergenerational transmission through two key mechanisms: (1) the multigenerational transmission process, where emotional patterns (e.g., suppressed trauma from colonial violence) perpetuate IPV cycles across ecological levels—from macro-historical oppression to micro-relational dynamics—and (2) differentiation of self, which helps explain resilience variations among Indigenous women. Those with strong ties to cultural revitalization movements often exhibit more excellent resistance to abusive patterns, highlighting the chronosystem's role (Heise, 1998) in fostering protective factors.

Furthermore, transcendental phenomenology was used to understand how violence is transmitted through generations based on the participants' experiences. Transcendental phenomenology, developed by Husserl, explores human experiences by looking at how people perceive and interpret the world through their senses

(Moustakas, 1994). It focuses on how individual consciousness and subjective experiences shape our understanding of social actions. Phenomenology also emphasizes intersubjectivity, where people share a common understanding and interpret events based on their collective knowledge and social norms. This approach helps reveal how shared perceptions influence how violence is transmitted and understood across generations (Smith & Thomasson, 2005).

Despite the efforts to understand IPV, the need to focus on racially diverse mothers in domestic violence shelters is under-studied (Anderson et al., 2018) to understand the intergenerational transmission of abuse. Hence, in this case, women victims from the same family were taken into account to get a holistic picture of IPV across generations. This study aimed to fill the gap in exploring other aspects of the transmission of intimate partner violence and identify the factors, patterns, and effects based on the narratives of these women victims.

METHODS

This study adopts a phenomenological approach to examine the lived experiences of ethnic minority women who have been victims of intimate partner violence (IPV). Data was collected through in-depth interviews, each lasting **45 minutes to one hour**. Informed consent was obtained from all participants before data collection. A panel of subject matter experts reviewed and validated the interview guide used in this study. To ensure a comprehensive

exploration of their experiences, each participant engaged in three interviews: a pre-interview, a primary interview, and a post-interview. Before the interviews, participants were thoroughly briefed on the purpose of the research to ensure they were fully informed and comfortable with the process. During the interviews, the researchers were accompanied by a licensed Social Worker and Psychologist to ensure the well-being of the participants. Multiple theoretical perspectives were used to analyze the participants' conditions and experiences. Bukidnon State University's Research Ethics Committee granted this research ethical approval.

The study was conducted in Malaybalay City, Bukidnon, between October 2021-July 2022. Interviews took place in the participants' respective homes to ensure privacy and comfort. The participants belong to one of the seven tribes of Bukidnon but no longer reside within their ancestral domain. The study included three participants, aged between 18 and 79, all of whom had experienced IPV in heterosexual relationships and had children. All participants were from the maternal

lineage (Grandma). Grandma entered marriage at the age of 15, but could not specify the duration of her first marriage due to the passing of her husband. Mama married at 14, subsequently remarried, and had been separated for nine years. Apo was never legally married but had children from two different partners.

Participants were recruited using purposive sampling, focusing on residents from a single neighborhood. While this sampling strategy ensured the inclusion of individuals with relevant experiences, it also presented limitations, such as potential biases and reduced generalizability. Confidentiality and providing a coherent structure for analysis were maintained. Thus, the participants were assigned pseudonyms: Grandma, Mama, and Apo. (See Table 1)

The researcher analyzed the data from the participants' in-depth interviews using the Van Kaam analysis proposed by Moustakas (1994). The typical responses of the participants were identified by the researcher from the transcripts using the coding procedures of Saldaña (2013). The researcher then reviewed, defined, and named the themes from the coding process.

Table 1
Characteristics of the participants

Pseudonym	Civil Status at the time of the study	Age	Number of Children	Ethnicity	Rank in the Family	Current family arrangement
Grandma	Live-in	79	4	Higaonon	6 th	Cohabiting with current partner
Mama	Married but separated for 15 years	56	9	Higaonon	2 nd	Living with children
Apo	Live-in	18	2	Higaonon-Cebuano	8 th	Living with mother

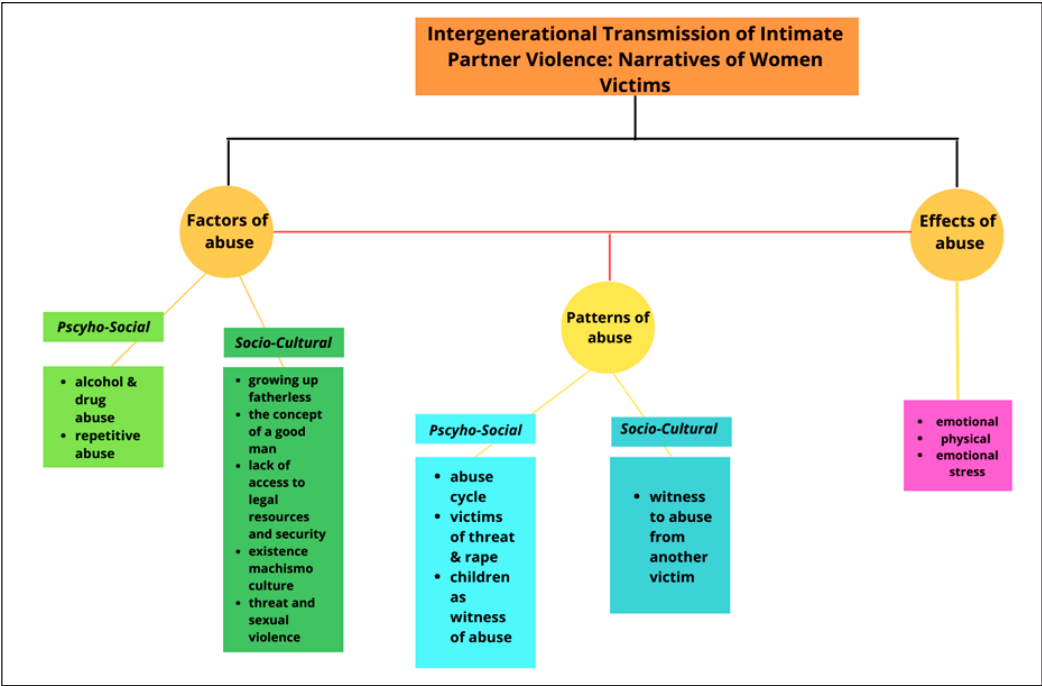


Figure 1. Emerging themes of the study

Further, to increase trustworthiness and data validity, the researcher considered several study validation processes by employing theory triangulation and member-checking.

FINDINGS AND DISCUSSION

The study's findings elucidate the psycho-social and socio-cultural causes of intimate partner violence (IPV). Additionally, the study identifies the effects and patterns of IPV to understand its dynamics better. Each theme is categorized into distinct categories detailed in this section (refer to Figure 1).

Lived Experiences of Women Victims of IPV

This section presents and analyzes the experiences of women victims of intimate

partner violence (IPV), with a focus on the psycho-social and socio-cultural factors. It also explores the effects and patterns of IPV to comprehensively understand the phenomenon under investigation.

Psycho-Social Factors in Indigenous Women's Experiences of Intimate Partner Violence (IPV)

This theme addresses how psychological and social factors shape Indigenous women's experiences of intimate partner violence, highlighting alcohol abuse, coping mechanisms, emotional trauma, and gendered psycho-social dynamics. These psycho-social elements not only influence the nature of the abuse but also dictate how victims respond to and survive it.

Alcohol and Substance Abuse as a Psycho-Social Trigger and Amplifier of IPV

The role of alcohol abuse in intimate partner violence is a central theme in the experiences shared by the participants. For many victims, alcohol misuse by their partners directly contributed to aggressive and violent behavior. For example, Grandma shares: *"We always fight, and if he ever goes out, he will start a fight with me. He drinks a lot and causes problems for me."* Apo also recounts: *"He is very *abusive*; he hurts me physically here. He also drinks a lot and goes violent when very drunk."* These accounts demonstrate how substance abuse impairs the cognitive and emotional regulation of perpetrators, leading to an increase in physical aggression.

The psychological impact on the perpetrator is well-documented in studies (e.g., Fritz et al., 2023; Sontate et al., 2021; Vitoria-Estruch et al., 2018; Heinz et al., 2011), which suggests that alcohol consumption impairs cognition and increases aggression. This impairment can lead to violent outbursts, as evidenced by participants' experiences, where alcohol often triggers physical abuse (National Institute on Drug Abuse, 2014). Substance Use as a Cycle of Violence Studies, like Tadesse et al. (2020), reinforce this connection, suggesting that women whose partners use substances are three times more likely to experience IPV. The psychological impairment induced by alcohol contributes to the perpetrator's aggression, while the victim becomes more vulnerable due to the

normalizing effects of substance abuse in the relationship. This creates a complex, interwoven situation in which substance abuse both triggers and amplifies IPV.

Psychological Impact of Repeated Abuse and Coping Strategies

Learned Helplessness and Survival Mechanisms. Participants of IPV reported feeling powerless and trapped within their relationship, mainly when the abuse occurs repeatedly. Grandma reflects on how she internalized the abuse, saying: *"Before, I never fought back whenever he started the fight; I kept thinking that this was only because 'he is drunk'..."* This rationalization, a form of learned helplessness, demonstrates the psychological toll that repeated violence can have on a victim's ability to assert control. Victims may start to believe that their partner's behavior is temporary, rationalizing the violence as something beyond their control, such as the partner's drunken state.

However, over time, these victims develop survival mechanisms that allow them to endure and sometimes respond to the abuse. Consider Mama's narrative: *"Now, we would beat each other up and learn to fight back."* This shift from passivity to active defense is indicative of a coping strategy developed out of necessity. Repeated exposure to abuse forces victims to adapt, changing from feeling helpless to learning how to protect themselves. This adaptation is not a sign of empowerment but rather a response to the ongoing trauma and abuse.

Emotional and Psychological Trauma.

Prolonged exposure to IPV results in profound emotional and psychological trauma, as in the case of the participants. The fear and helplessness felt by ethnic minority victims during these abusive episodes can lead to anxiety, depression, and a sense of degradation. For example, Mama shares: *"I was afraid, I did nothing, that is why I felt degraded, and I kept it within myself. I have no choice."* This statement reflects the internalized emotional toll of living in constant fear and powerlessness. As the violence continues, victims may experience emotional numbness or detachment as a defense mechanism, but the underlying psychological harm remains. The continued abuse affects their sense of self-worth and emotional stability, leaving them vulnerable to further abuse and trauma.

Gendered Psycho-Social Dynamics of IPV

IPV often follows a gendered pattern, with men being the primary perpetrators of severe abuse, including physical violence, sexual coercion, and emotional manipulation. As the study by Swan et al. (2008) suggests, men's aggression in relationships is often more severe, while women's violence tends to be a response to self-defense and fear. This is evident in the participants' experiences where abuse, driven by the abuser's aggression and alcohol misuse, leads women to either internalize their suffering or, in some cases, defend themselves physically.

Socio-Cultural Aspect of IPV***Impact of Family Dynamics and Childhood Experiences***

Fatherlessness and Early Exposure to Violence. A key socio-cultural aspect in these women's experiences of IPV is the lack of father figures during childhood. As shared by the participants, growing up without a father or in unstable family situations (such as with alcoholic or abusive stepfathers) has far-reaching effects on their psycho-social development, particularly in shaping gender roles and expectations. Exposure to violence and frequent parental conflicts, as mentioned by Apo and Mama, can normalize violent behavior in relationships. Consider the narratives of Grandma, Mama, and Apo as they recount their experiences.

"I grew up without a father since he passed away when I was three (3) years old," - Grandma.

"It was hard after our father passed away because of that; my mother would frequently change partners. With her former partner, they had a child, a daughter who now resides abroad. There was a gap between us since it was also because of my mother." - Mama.

"When I was three (3) years old, my father was in prison. When I was 12 years old, my father got released... then my father would always drink. He and my mother would always fight, like every time." - Apo

Growing up without a father appears to have had a profound impact on the women's

emotional and psychological development, which is compounded by the absence of a stable family environment. For these women, the loss of a father figure and the instability that followed — such as frequent changes in parental relationships — may have played a crucial role in shaping their understanding of gender roles and relationships. Apo's narrative reveals the effects of witnessing domestic violence between her parents, mainly driven by alcohol use. This exposure likely normalized violent behavior and impacted her perception of relationships.

Research suggests that fatherless homes, particularly those where IPV is present, can lead to adverse developmental outcomes for children, including problems with identity formation, difficulties in emotional regulation, and an increased risk of experiencing or perpetrating IPV in their adult relationships (Shorey et al., 2012). The lack of a father figure may lead to the internalization of gender roles that are shaped more by observed behavior than by nurturing, leading to a higher tolerance or expectation of abuse in relationships.

Machismo and Aggression in Intimate Partner Violence (IPV)

The Concept of a Good Man. The narratives above expose the profound contradictions between the cultural ideal of a "good man" and the abusive behavior experienced in relationships.

Below was the recount of the experiences of participant Grandma:

“My advice for you is to marry a Godly man. Since marrying someone like that

would never hurt you, since they would fear doing that because someone is watching us.”-Grandma

Grandma's ideal of a “Godly man” who would never hurt her because of societal oversight and Mama's disappointment in her abusive partner reflect a central conflict. These women's lived experiences directly challenge the traditional notion of masculinity, where strength, dominance, and the role of protector are revered. However, as these victims reveal, violence and control often take the place of these idealized virtues.

Grandma's cultural advice reinforced the concept of a good man, but it also placed a moral and gendered expectation on what women should seek in a partner: a man who exhibits "good" behavior or one who adheres to a moral or religious framework. In contrast, Mama's experience of coercion and emotional confusion questions the ability to live up to the societal expectation of a good man, especially when manipulation and physical violence mar the relationship.

Pollak (2004) provides a framework for understanding the intergenerational transmission of domestic violence and highlights that the backgrounds and experiences of both partners influence the likelihood of domestic violence in a relationship. Specifically, Pollak identifies three key factors in domestic violence: (1) the likelihood that a partner/husband will be violent is dependent on whether he grew up in a violent home; (2) the likelihood that a wife/partner will stay with a violent partner/husband is dependent on her

environment at home; and (3) a person tend to marry individuals with violent behaviour. The concept of a good man represents an idealization that is in direct contrast with the violent behaviors these women experienced in their relationships. The idea of the "Godly man" as someone who does not inflict harm aligns with the expectations that women have for safety, respect, and love in relationships. However, Pollak's (2004) framework provides an essential lens for understanding why the perpetrators failed to meet these expectations. The intergenerational transmission of violence, coupled with personal history and learned behaviors, often shapes the dynamics within IPV situations, as evidenced in Mama and Apo's experiences.

Pollak's findings underscore that the idealized image of a "good man" may remain elusive because partners often carry the legacies of their own past experiences. These expectations, however, can sometimes be misaligned with the reality of what men have internalized about relationships, power, and control, which may explain why Mama and Apo found themselves in abusive partnerships despite their hopes for love and safety.

Machismo and Masculinity. One of the significant socio-cultural influences in IPV is the deeply rooted machismo culture, which emphasizes male dominance and aggression. This culture pressures men to display authority and strength within the household, often manifesting in physical and emotional abuse toward women. For

example, Mama and Apo spoke about how their partners displayed violent behavior, sometimes triggered by minor frustrations. These actions are linked to the aggressive enforcement of masculinity and power.

Below are the narratives of the women victims:

"I told him, 'Leave me, if all you want is to hurt me.' "-Grandma

"The only problem is that he [referring to first former husband] has a short temper that would lead to physical assault... what is more confusing is that he does not drink (alcohol). "-Mama

"He would be triggered and irritable. That even the smallest things he would get mad easily. For example, you would do something small that would irritate him, he would suddenly take something and throw it at you. "-Apo

The narratives highlight a key characteristic of machismo culture — the inability to control emotions, especially aggression, and the tendency for small triggers to escalate into violent outbursts. Apo's description of her partner getting angry over minor irritations, like throwing objects, and Grandma's statement about being hurt repeatedly, suggest that this form of aggression is not only common but also normalized within relationships marked by a machismo culture.

In many societies that emphasize machismo, men are socialized to express dominance through aggression and control.

Machismo is the embodiment of exaggerated masculinity, where men are expected to assert power, maintain dominance, and often use aggression or violence as a means of reinforcing their authority. This system of thought is often ingrained in childhood through family structures, peer interactions, and social norms, which leads to the internalization of these behaviors. For Apo's partner, even minor triggers led to violent reactions. This aggression might be a way for the perpetrator to reassert control, especially when feeling insecure or threatened. Apo's narrative shows the frustration with the partner's inability to express emotions healthily.

In cultures that hold strong beliefs in machismo, aggression can arise even in the absence of intoxication, indicating that violence is more deeply rooted in the perceived need for dominance and control. Mama's partner's short temper and the resulting violence are clear examples of how machismo expectations can manifest without the added complexity of substance abuse. This supports the notion that machismo culture can independently fuel violent behavior through rigid gender expectations, where men feel entitled to dominate and control their female partners regardless of external circumstances.

The incident where Apo's partner threatened her with a blade after suspecting infidelity highlights how machismo often involves not just emotional dominance but physical control as well. Apo shares: *"Another incident when she was still in the place of the perpetrator, wherein she*

went to a neighboring house to watch television when her perpetrator suddenly ran towards her with a blade, thinking she was cheating with another man. The need for Apo's partner to demonstrate his authority by threatening her with violence over a perceived betrayal (even if unfounded) is a typical reflection of the intense fear of losing control or masculine power in relationships. In machismo culture, men often feel compelled to defend their honor at all costs, including through physical violence. This can also reflect broader societal expectations where men must defend their masculinity, often violently, to retain respect and authority, both from their partners and others. Apo's partner's reaction, thinking she was cheating, may have been driven by feelings of shame or embarrassment. Thus, he resorted to aggression as a way to regain control of the relationship and prove his masculinity.

The concept of machismo, or exaggerated masculinity, plays a critical role in shaping how men and women experience and navigate intimate relationships. Men who adhere to traditional gender roles often feel they are compelled to dominate their partners, leading to abusive behaviors when they feel their power is threatened. Ceballos (2013) explains that machismo can be seen as a protective and destructive cultural value. When men feel disrespected, disempowered, or threatened by a partner's actions, they often respond with aggression as a means to reaffirm their masculinity and control. Further, it was said that the expression of machismo can shift from

positive to negative depending on the circumstances. Men who feel that their respect and power are undermined may turn to aggression to prove their dominance (Ceballos, 2013).

The cultural dimension of machismo is linked to the perpetuation of violence through intergenerational patterns. Research by Graham-Bermann and Brescoll (2000) and Levinson (1984) suggests that ethnic minorities, especially those in close-knit communities, may be more likely to condone or justify physical discipline, perpetuating a belief system that violence is an acceptable way to handle conflict. In the case of these participants, their cultural backgrounds and family dynamics likely shaped the perpetrators' responses to perceived disrespect and loss of power. The tribal affiliations mentioned by the participants may have created an environment where aggression was normalized or even expected in situations where masculinity or family honor was at stake.

Additionally, the pressure to uphold patriarchal norms in these communities likely reinforced these aggressive behaviors. Men are often expected to be the primary decision-makers in their households, and any perceived threat to this power dynamic can trigger violent responses. The societal framework in which these men operate tends to favor male dominance, further embedding the cycle of violence and aggression.

Legal and Institutional Support Systems.

The lack of adequate legal support and expertise in handling IPV cases reflects

broader societal and institutional failures to address the issue effectively. These narratives expose the failure of the legal system to offer protection or even to take these women's complaints seriously. The dismissive and insensitive responses from officers, like telling the victims to "discuss it among yourselves," highlight a systemic lack of understanding and gender insensitivity in addressing IPV. Consider the annoying experience Grandma shared: *"The officer in charge was rude, and they said, 'You discuss that both since you are a couple.' That is it. That is all they said: we should discuss this among ourselves since we are just a couple."* Mama's experience also shows how legal authorities often fail to take women's rights seriously, making it more likely that victims will feel disempowered and unable to access the legal recourse needed to escape their abusers. She recalled, *"I asked for help from the barangay captain, telling him that I was beaten with a sort of stick by my partner, and he responded, 'Go back home! Get beaten first before coming back here. Because of that, I prefer to keep it to myself since I have no one to ask for help.'"* This was also the same frustration experienced by Apo as she shared: *"We filed a case of rape, but this was disregarded for the filing of the case should be in the place where the incident happened according to the officer we talked to. The case was also not pushed because it must get to the barangay level before forwarding it to the police station."*

Apo's frustration with the bureaucratic processes — being told to file cases at the appropriate local level — reflects the lack

of proper legal education on IPV and the challenges women face when navigating a system not designed with their needs in mind. The complexity of these processes and the insufficient resources available to support victims of IPV lead many women to abandon their pursuit of justice, trapping them in ongoing abusive relationships.

The narratives shared by Grandma, Mama, and Apo reflect the severe gaps in the legal and institutional support systems for victims of intimate partner violence (IPV) in the Philippines. These stories highlight institutional negligence and systemic barriers that hinder victims from obtaining justice and protection, leaving them feeling unsupported and vulnerable.

One of the primary issues raised is officers' lack of professionalism and incompetence when victims attempt to report IPV. Grandma's account of encountering a dismissive officer illustrates a lack of understanding and empathy towards IPV victims. Instead of providing help, the officer trivialized the abuse by suggesting the couple should simply "discuss it" among themselves, dismissing it as a private issue rather than a matter of public concern or legal violation. This aligns with findings from the Immigration & Refugee Board of Canada (IRBC, 2024), which reported that some police officers in the Philippines display gender insensitivity when handling IPV cases, advising victims to reconcile with their abusers rather than pursuing legal protection.

Mama's experience further illustrates the inadequacy of local governance in responding to IPV cases. She sought

help from the barangay captain, yet was shamed and told to "get beaten first" before returning for assistance. This reflects a deeply ingrained cultural perception that domestic violence is a personal issue to be dealt with privately rather than a crime that demands institutional intervention. This is supported by the Philippines: Sweeping Violence Under the Carpet report, which suggests that domestic violence is often seen as a personal problem rather than a criminal one, causing law enforcement to downplay or dismiss these cases.

Apo's story highlights another significant barrier: the bureaucratic complexity of the legal system. Despite attempting to file a rape complaint, she was unable to move forward due to procedural hurdles, with officers telling her that the case could not proceed unless it was first processed at the barangay level. This lack of knowledge about the laws on domestic violence was further exacerbated by the absence of adequate legal support to help navigate the complex system. This situation aligns with the Asian Development Report on Gender and Development, which reveals that police often lack training on laws related to gender-based violence and fail to implement regulations properly, such as ensuring separate interviews for women victims of IPV.

Furthermore, this issue is compounded by the cultural and institutional resistance to laws like RA 9262, which aims to protect women from violence, as well as the broader legal context in the Philippines, where the absence of divorce laws continues to trap

many women in abusive relationships. As the Philippines: Sweeping Violence Under the Carpet report highlights, the religious and cultural stigma against divorce and the prevailing belief that marriage is sacred and indissoluble often causes IPV victims to feel trapped within their abusive relationships. This cultural perspective, along with the lack of accessible legal resources, results in many women feeling like they have no legal recourse or support to escape violence.

This systemic neglect of IPV victims is not only a failure of law enforcement but also a failure of the entire legal infrastructure to prioritize the safety and well-being of women. The fact that the Police National Police (PNP) has been unable or unwilling to properly implement laws such as RA 9262 speaks volumes about the gaps in the legal protection afforded to victims of IPV. Male officers often being assigned to Women and Children Protection Desks (WCPDs), combined with their gender insensitivity, exacerbates the difficulties women face in trying to report or seek justice for the abuse they suffer. This reflects findings from the IRBC (2024), which points to a lack of training among officers to handle gender-based violence cases.

Patterns of IPV

The Abuse Cycle and Predictable Patterns of Violence

The abuse cycle, a critical concept in the study of intimate partner violence (IPV), refers to the predictable sequence of events that often characterize abusive relationships. These cycles, coined by Walker (2016) as

the Battered Women Syndrome, consist of phases of tension building, abusive incidents, and a honeymoon phase where the abuser expresses remorse. These cycles trap victims in abusive relationships by creating a sense of instability and unpredictability. The tension phase starts with minor triggers, such as actions or words from the victim that unintentionally provoke the abuser, leading to escalated aggression. This cyclical process reinforces the victim's feelings of helplessness and entrapment, a phenomenon closely linked to learned helplessness, where victims come to believe they cannot escape their situation (Miller & Seligman, 1975). This is reflected in the narratives of the victims, such as Mama shared: *"If I did something wrong or if one of my children did something wrong, it always ends up with us getting beaten. Like my son, he would even bleed from the beatings he got from his father."* Mama, whose family faced regular beatings, emphasized that minor infractions led to severe consequences.

Victims often internalize their abuser's actions, believing they must endure the violence to avoid triggering further aggression. Rakovec-Felser (2014) explains that victims of IPV experience symptoms like hypervigilance and emotional withdrawal, which are part of the cycle of learned helplessness. They may repeatedly try to avoid situations that would escalate the abuse, but this avoidance only increases the control and power of the perpetrator, making it harder for the victim to seek help.

The abuse cycle often manifests as a predictable and recurrent pattern of violence within intimate partner relationships.

However, for women who belong to minority groups, such as indigenous communities, this cycle is compounded by additional layers of vulnerability due to their social status. As minority women, they face marginalization and discrimination both within their communities and from external systems, which exacerbates their exposure to violence. The experience of minority stress, as discussed by Meyer (2003), posits that individuals from marginalized groups experience chronic social stress that makes them more vulnerable to IPV.

In the case of Mama and Apo, both of whom are Indigenous women, their marginalized status within their communities often meant their experiences were minimized or overlooked. The abuse cycle, in their case, is not just a personal or relational issue but also an issue deeply rooted in systemic factors such as colonialism, patriarchy, and cultural marginalization. As part of the minority, the victims' lived experiences are also shaped by systemic oppression, where the legal and institutional systems that are supposed to protect them may be ineffective, biased, or discriminatory. The marginalization of Indigenous people within the broader legal and social framework often prevents them from accessing support or justice. Walker's abuse cycle becomes particularly insidious in this context, as the social, legal, and cultural structures that should support victims of violence are often absent, leaving Indigenous women more vulnerable to cycles of abuse.

Sexual Violence and Coercion as Turning Points in Abuse

Sexual violence experienced by Indigenous women like Mama and Apo represents a turning point in their abuse. Sexual violence becomes a breaking point where victims feel that their autonomy has been stripped away, and they are subjected to physical and emotional harm. Mama shared a painful moment: "Would you even like to be intimate with your partner when you are already sleeping well, when suddenly he would hurt you physically if you did not give him what he wanted?" This represents a form of sexual coercion where the perpetrator uses violence and threats to manipulate the victim into compliance.

Apo's experience was similarly harrowing: "He went inside the room, then he covered me with a blanket and pointed a gun at me, threatening me to keep quiet or not to tell anyone about this." This use of threats and sexual coercion left Apo in a vulnerable position, where her identity as a woman, compounded by her Indigenous status, made it difficult for her to seek justice or even feel that her trauma would be validated. Sexual violence in these cases is not just a violation of their bodies but a cultural assault, with perpetrators exploiting their victims' vulnerability as women in marginalized Indigenous communities.

For Mama, the situation was further complicated by cultural pressures: "I was forced to marry my rapist because our elders, including my parents, insisted." In Indigenous communities, there can be intense cultural pressure to conform to

traditional norms, even at the expense of the woman's safety and well-being. The cultural expectation to maintain family cohesion and avoid disgracing the family often keeps victims like Mama trapped in abusive relationships.

Both of these narratives speak to the compounded vulnerability of Indigenous women in abusive relationships. They face not only physical and emotional harm but also the trauma of being silenced by cultural expectations, societal stigma, and a lack of legal or institutional support. The intersectionality of being both female and indigenous contributes to a cycle of abuse that becomes harder to break.

Children as Witnesses to IPV and Intergenerational Violence

The impact of Intimate Partner Violence (IPV) extends beyond the victims themselves and significantly affects children, especially when they witness violence inflicted upon their mothers. These children experience a unique form of trauma, and for some, witnessing abuse becomes a catalyst for intergenerational violence. In the narratives provided by Mama and Apo, we see how their children were not only exposed to the violence inflicted upon their mothers but also directly victimized by the same perpetrators.

Mama shared her painful experience: *"He would beat my child here! It got so swollen that it almost got fractured from the beating. I just hugged my child in this sweet potato field. Then my eldest would tell me, 'Ma, let's go away from here.'"* This

narrative reflects the direct impact of IPV on children, where Mama's child was subjected to physical violence. Despite the child's innocence, they found themselves caught in the cycle of abuse. This example speaks to the direct victimization of children in IPV situations, which is increasingly recognized as an important factor in understanding the full scope of IPV's damage. Children who witness or are involved in the abuse experience a range of physical and emotional consequences, many of which may persist into adulthood.

Apo provided another example of the emotional toll on children: *"I felt sorry for my father because he longed for a family. But despite giving him chances to change, he kept repeating the same mistakes."* Here, Apo's child was not physically abused but witnessed the cycle of violence, experiencing emotional distress and confusion. These experiences can contribute to psychological difficulties in children, who may struggle with understanding their role in the violence or develop complex feelings of loyalty to their abusive parent.

Research indicates that children who witness IPV often experience severe psychological and emotional difficulties. Callaghan et al. (2018) argue that children exposed to IPV are direct victims of violence and abuse, not just passive witnesses. This highlights the need to shift the perspective on IPV, recognizing that children who witness violence experience significant trauma and require intervention and support. It is important to note that, as Harper et al. (2018) pointed out, young children who

witness abuse face particular difficulties in their psychosocial development. Toddlers exposed to IPV may experience emotional difficulties such as separation anxiety from the non-abusive parent, particularly the mother, which can further hinder their emotional growth.

Moreover, children of IPV victims are at risk of intergenerational violence, as they may come to internalize the abuse they witnessed or experienced. Studies have shown that children who grow up in violent households are more likely to either become perpetrators of violence themselves or suffer from violent relationships later in life (Baker & Cunningham, 2009). The intergenerational transmission of violence is a concerning aspect of IPV, as children raised in these environments often perpetuate similar cycles of abuse when they become adults.

In the case of Mama and her child, the trauma and violence they experienced together might influence how the child understands relationships in the future. Children who grow up in violent households may develop maladaptive coping mechanisms or struggle with developing healthy relationships as adults. This perpetuates a cycle of violence and dysfunction that can last across generations. Apo's child, similarly, might carry emotional scars from witnessing the violence, contributing to a potential pattern of relationship dysfunction or emotional instability in their future.

Baker and Cunningham (2009) emphasize that preschool children exposed to IPV often develop coping strategies that

may include behavioral disengagement, sleep issues, or emotional withdrawal. These children may have difficulty forming secure attachments to caregivers, which can affect their future emotional and social development. The behaviors exhibited by Mama's child, who asked, "Ma, let's go away from here," show a form of emotional distress in response to the violence, which is characteristic of children affected by IPV.

Additionally, as Lloyd (2018) notes, children who are exposed to domestic violence often experience a range of psychological issues, from anxiety to depression, and their responses to IPV can manifest in different ways, such as through withdrawal, aggression, or regressive behavior. These issues can worsen if children are left unsupported, as they may not have the resources or emotional tools to process the trauma of witnessing or experiencing violence.

The experiences shared by Mama and Apo reflect the intergenerational cycle of abuse that is common among children raised in households affected by IPV. This cycle continues as children grow up, often replicating the behaviors and relationships they witnessed as children. Indigenous children, specifically, may face additional barriers in breaking this cycle due to cultural stigmas around seeking help and a lack of support within their communities. Their exposure to IPV becomes compounded by their marginalized status as Indigenous peoples, who may have limited access to support services or legal protections.

Effects of IPV on Women Victims

Emotional Effects. The emotional toll of Intimate Partner Violence (IPV) on victims is profound, often manifesting as long-term psychological distress. Both Grandma and Mama highlighted feelings of fear, anxiety, and self-blame that stemmed from their experiences with their perpetrators. Grandma shared, *"I'm mostly scared of what my child will do to him. But yes! I would feel nervous. Until now, I still feel nervous."* This reflects the pervasive fear that women victims of IPV experience, which can remain even after the abusive relationship ends. Fear of retribution or harm to loved ones often keeps these women in a constant state of nervousness and hypervigilance, unable to heal from the trauma.

Similarly, Mama's comment, *"I can never speak about it. I would keep it to myself, I would never speak up against him for he would only get mad even if it was my right,"* reflects emotional repression. Victims often feel powerless to speak out or seek support because of the potential for further anger or violence from their abusers. This silence can result in self-isolation and suppressed emotions, further contributing to mental health challenges like depression and anxiety.

Research supports that women who endure IPV are more likely to experience mental health difficulties. Clements and Sawhney (2000) found that women experiencing IPV often suffer from dysphoria (a state of dissatisfaction and discomfort) rather than complete hopelessness. This state is associated with feelings of self-blame and

a lack of problem-focused coping, leading to further psychological distress. The absence of control over their circumstances exacerbates feelings of dysphoria, creating a mental health burden that persists over time. Additionally, the WHO (2020) reports that IPV victims often face depression, anxiety, and stress disorders, which are compounded by emotional withdrawal and alienation from support networks.

For women like Mama, who eventually chose to live as a single mother rather than stay in an abusive relationship, this decision stems from the realization that the stress and difficulties of staying with an abusive spouse far outweigh the hardships of living independently. It underscores the immense psychological burden of remaining in a violent relationship and the emotional toll it has on the individual, influencing decisions to leave.

The emotional impact of IPV is both immediate and enduring. Women victims often carry with them fear, anxiety, self-blame, and depression. They often suppress their emotions out of fear of further retribution, and this emotional repression exacerbates their mental health struggles, contributing to long-term psychological distress. Addressing these emotional effects is crucial to supporting recovery for women victims of IPV.

Physical Effects. Physical abuse in IPV has immediate and long-lasting effects on the victims' bodies. In the narratives shared by Grandma, Mama, and Apo, the perpetrators of violence inflicted physical

harm, resulting in a variety of injuries and health consequences. Grandma described being slapped in the ear, which caused hearing loss: "Sometimes I would get slapped. Maybe that's the reason why I can't hear properly; he slapped my ear, and then after he did that, he would go away." Similarly, Mama shared how she was punched and kicked, even while pregnant: "I will not get punched right in the face, but instead I would get punched in my shoulders, or some parts of my body. Yes, it was two years, then three years. Because I get pregnant from time to time, at the same time, I get beaten." This illustrates the chronic nature of physical violence and its toll on the victims' physical health, even during pregnancy, when women are already more vulnerable.

Apo recounted how she was assaulted while pregnant, leading to injuries on her back. She also reflected on the long-term consequences of abuse: "I regretted and resented everything that happened to me, but eventually I accepted it since my mother told me that it was biblically immoral to kill a child." The violence resulted in physical injuries, including back injuries, which may have long-term effects on her physical health.

The physical consequences of IPV are well-documented in the literature. According to the WHO (2024), the physical abuse of women can lead to severe and lasting health issues, including bone fractures, bruises, hearing loss, miscarriage, and sexually transmitted diseases. Long-term consequences of physical violence include

gastrointestinal disorders, headaches, back pain, sleep disturbances, and post-traumatic stress disorder (PTSD). Women who experience IPV also have a higher likelihood of developing substance abuse problems, such as turning to alcohol or drugs to cope with the physical and emotional pain they endure.

For Mama, the combination of physical abuse and pregnancy created a complicated and dangerous situation. She was subjected to repeated beatings while carrying children, which not only harmed her physically but also put her children at risk. The physical violence these women suffered became a source of chronic pain and health issues that persisted long after the immediate violence had ended.

The physical effects of IPV can have long-lasting and debilitating consequences for women. From hearing loss and physical injuries to the psychological toll of repeated abuse, the physical harm inflicted by perpetrators can significantly affect victims' health and well-being. It is crucial to recognize the severe and wide-reaching consequences of physical violence in IPV and to provide appropriate medical and psychological support for victims.

Theoretical Contribution

This study advances theoretical understanding of intimate partner violence (IPV) through three key contributions. First, it extends Crenshaw's (1989) intersectionality framework by illustrating how IPV is shaped by the convergence of Indigenous identity, gender-based oppression, and

socioeconomic marginalization in the Philippine context. The findings reveal how colonial histories and tribal kinship systems create distinct pathways for violence transmission that differ from urban, non-Indigenous contexts (Sokoloff & Dupont, 2005; Yllo, 2005). By centering Indigenous women's narratives, the research empirically validates Harding's (1991) Standpoint Theory while contributing new insights about culturally specific expressions of hegemonic masculinity (Connell & Messerschmidt, 2005), particularly how machismo culture interacts with structural constraints to perpetuate abuse cycles, and the validation of intersectional oppression mechanisms as theorized by Hill Collins (2000).

Second, the study expands Family Systems Theory (Bowen, 1978) by documenting how multigenerational trauma operates within Indigenous family structures. The analysis shows how fatherlessness and disrupted attachments facilitate violence transmission across generations (Alexander, 2015; Johnson & Ray, 2016) while also revealing the protective role of elder authority and community expectations in some contexts. These findings support but culturally specify Umberson et al.'s (2016) arguments about historical trauma's impact on relationship stability, offering a better understanding of family violence in postcolonial settings.

Finally, the study enhances the IPV ecological models of Heise (1998) by systematically incorporating colonial structural factors and institutional betrayal dynamics. The empirical documentation

of systemic failures in legal and community protections for Indigenous women substantiates Smith and Freyd's (2014) institutional betrayal framework while extending Deer's (2015) analysis of colonial continuities in gendered violence. These findings challenge the limitations of Eurocentric victimological approaches (Cunneen & Rowe, 2015), demonstrating how conventional frameworks often fail to account for the historical and cultural specificities of Indigenous experiences. By integrating micro-level narratives with macro-structural analysis, the research advances a more comprehensive model for understanding IPV's persistence in marginalized communities - one that acknowledges both contemporary systemic barriers and their historical roots (Nancarrow, 2019). This approach moves beyond universalizing theories to develop contextually grounded frameworks that center Indigenous perspectives on violence and justice.

CONCLUSION

This study advances IPV theory by demonstrating how intergenerational violence in Indigenous communities emerges from the intersection of structural oppression, cultural norms, and institutional failures—extending intersectional, family systems, and ecological frameworks through culturally grounded analysis. By centering Indigenous women's lived experiences, the research not only validates but expands theories of institutional betrayal (Smith & Freyd, 2014) and colonial continuities in

violence (Deer, 2015), while challenging the limitations of Eurocentric models (Cunneen & Rowe, 2015). The resulting structural-cyclical model bridges micro-level trauma and macro-level systems, offering a transformative lens for IPV research that prioritizes Indigenous epistemologies and structural interventions over individual pathology narratives.

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Education and Artificial Intelligence: An Analysis Based on Teachers' Opinions

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ABSTRACT

Artificial intelligence has become increasingly present in people's lives, significantly impacting various fields, including education. The impact of artificial intelligence brings the opportunity to transform and adapt how the teaching-learning process is carried out. In this context, the research aimed to determine teachers' opinions regarding using artificial intelligence in education. The phenomenological pattern, one of the qualitative research methods, was used in the study. Criterion sampling, one of the purposeful sampling methods, was used. Research data was collected from 40 teachers working in different branches using a semi-structured interview form. The data obtained was analyzed using content analysis. The research findings underscore the potential benefits of integrating artificial intelligence into education, offering various opportunities for enhancing the teaching and learning experience. While acknowledging the efficiency and benefits highlighted by some educators, it is imperative to exercise caution and implement artificial intelligence within ethical boundaries. Within the school environment, artificial intelligence is poised to revolutionize physical, managerial, and technological aspects, alleviating administrative burdens and facilitating smoother operations. In the teaching process, artificial intelligence holds promise for creating enriched learning environments, promoting active student engagement, and optimizing time utilization for educators.

Moreover, in evaluation, artificial intelligence stands to enhance objectivity in assessments. Artificial intelligence presents opportunities for students to save time, foster individual growth, and streamline learning experiences, ultimately facilitating their academic journey and professional development.

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INTRODUCTION

The integration of Artificial Intelligence (AI) in education signifies a major shift, empowering educators rather than replacing them. Artificial intelligence offers tools for personalized instruction, better communication, and informed decision-making (Annuš, 2024; Gocen & Aydemir, 2020). It has the potential to transform the education sector by enhancing learning experiences, supporting teachers, and providing personalized learning opportunities for students. Therefore, it's crucial to equip teachers with the knowledge and strategies to effectively use this technology to improve daily processes and classroom implementation. Artificial intelligence can address significant challenges in education, innovate teaching and learning practices, and provide students with access to high-quality educational resources, regardless of their economic status or location. Therefore, this study aims to uncover teachers' perspectives on artificial intelligence. These insights can particularly facilitate a smoother transition for integrating Artificial Intelligence into learning environments.

The theoretical foundation of this research paper, framed within qualitative research, is rooted in phenomenology, which seeks to explore and understand the lived experiences and perceptions of individuals. This study adopts a phenomenological approach to delve into teachers' perspectives on the integration of artificial intelligence in education. The framework behind this qualitative research is that educators'

experiences and interpretations of AI's role in their professional practices are central to understanding its potential impact on teaching and learning. By focusing on the meanings that teachers ascribe to AI, this study aims to uncover the nuances of how these technologies are perceived, applied, and evaluated in educational settings. This approach aligns with the qualitative research paradigm, emphasizing depth of understanding, the subjective experiences of participants, and the context within which these experiences occur, thereby providing rich insights into the intersection of AI and education from the teachers' viewpoint.

LITERATURE REVIEW

The origin of the term Artificial Intelligence dates to the "Dartmouth Artificial Intelligence Summer Research Project" in 1956, where three scientists gathered under the leadership of John McCarthy in the state of New Hampshire the USA, to discuss artificial intelligence (Burgard, 2022). According to the father of Artificial Intelligence, John McCarthy, artificial intelligence is the science and engineering of making intelligent machines and brilliant computer programs. Artificial intelligence makes a computer, a computer-controlled robot, or software think intelligently. It is accomplished by studying how the human brain thinks and how humans learn, decide, and work while trying to solve a problem (McCarthy, 2007). Artificial Intelligence is a science and technology based on Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering disciplines.

As a comprehensive and interdisciplinary subject, its short-term goal is to build intelligent applications at the machine level and hopes to realize artificial intelligence at the human level (Lufeng, 2018). A major thrust is developing computer functions associated with human intelligence, such as reasoning, learning, analytical thinking, and problem-solving.

Artificial intelligence is the capacity for computers to perform tasks traditionally thought to involve human intelligence or, more recently, tasks beyond the ability of human intelligence. Stemming from relatively simple, general-purpose systems in the 1960s, artificial intelligence today generally involves more specific-purpose systems that complete a specific task involving reasoning about data or the world and then interaction with the world (more commonly through a phone or a computer interface than actual physical interaction). Machine learning (increasingly called data science, also called data mining and analytics) is a sub-area of artificial intelligence that has been present at a low level since the beginning of the field, but has become a particular emphasis in the 1990s through to today. Machine learning is when a system discovers patterns from data – becoming more effective when more data is available (and even more so when more comprehensive or representative data is available). A broad range of machine-learning methods is classified mainly into supervised learning (attempting to predict or infer a specific known variable) and unsupervised learning (trying to discover

the structure or relationships in a set of variables). There have roughly been two generations of machine learning: a first generation of relatively simple, interpretable methods and a second generation of much more complex, sophisticated, and hard-to-interpret methods (Baker, 2021). Today, we can say that artificial intelligence is an excellent example of the second one.

Artificial Intelligence “in education” was an interdisciplinary sub-field in the early 1980s with a bi-annual (now annual) conference and a peer-reviewed journal. Much of the early work in artificial intelligence in education involved intelligent tutoring systems. However, the field has broadened over the years to include all types of educational systems/interactions and has expanded to include several independent conferences and journals. The revolution in machine learning and data mining also impacted artificial intelligence in education, with a significant shift around 2010. However, it has a long history; it has become increasingly present in people’s lives, significantly impacting various fields, especially education. Today, artificial intelligence in education systems incorporates a range of functionalities for identifying aspects of the learner and ways they can interact with and respond to learners (Baker, 2021). The integration of artificial intelligence in education can not only allow a computer system to act as an intelligent teacher, but it can also facilitate decision-making in educational settings significantly improve the quality of teaching and learning, assist in assessment

and data collection, develop new strategies for learning processes, enable students to benefit from intelligent teachers and real-time learning (Hwang et al., 2020), improve lesson topics, adapt classrooms to students' profiles, and create various content related to students' interests (Fahimirad & Kotamjani, 2018).

Education has undergone a series of changes, and the impact of artificial intelligence brings with it the opportunity to transform and adapt how the teaching-learning process is carried out. There is a need to research the impact of artificial intelligence on education as we know it and how people can use this discovery to improve the experiences of students and teachers (Mureşan, 2023). Additionally, with the advent of ChatGPT, Google Bard, Midjourney, and Canva's magic features, artificial intelligence is quickly becoming an integral part of people's everyday lives. They transform industries and reshape the way people work, learn, and communicate. This rapid technological advancement highlights the importance of incorporating artificial intelligence education into the curriculum to ensure all students are well-equipped for their academic futures and workforce development (Bojorquez & Vega, 2023).

Artificial intelligence has led to a generation of technologies in education – for use in classrooms and by school systems more broadly – with considerable potential to bring education forward (Baker, 2021). Educators and researchers have looked to computers as having the potential to revolutionize e-education for decades. Today, much of the use of computers in

education still falls short of revolutionary – much learning still involves one instructor teaching many students simultaneously, and considerable computer-based learning takes place using curricula and technologies replicating traditional practices such as drill and practice. However, the best practices of computers in education appear to go considerably beyond that. Millions of learners now use intelligent tutoring systems as part of their classes – systems that recognize student knowledge, implement mastery learning where students do not advance until they can demonstrate understanding of a topic, and have hints available on demand (VanLehn, 2011).

Artificial intelligence has the potential to revolutionize the education sector by enhancing learning experiences, supporting teachers, and offering more personalized learning opportunities for students. We must equip teachers with the knowledge and strategies to use this new technology to improve and streamline everyday processes and classroom implementation. Some areas in which artificial intelligence can transform the classroom include personalized learning, ideation, adaptive learning, special needs education, bilingual education, gamification, and immersive learning (Bojorquez & Vega, 2023). One major trend within learning driven by these technologies is the move towards personalizing learning to a greater degree. Personalization of learning did not start with computerized technology – in a sense, it has been available since the first use of one-on-one tutoring thousands of years ago (if not earlier). However, with the

increase in systematized and standardized schooling and teaching over a hundred years ago, awareness increased that a one-size-fits-all curriculum was poorly meeting many students' learning needs. Classroom approaches such as mastery learning (each student works on material until mastery and only then moves on to the next topic) were developed but proved difficult to scale due to the demands on the teacher. Educational technologies provided a ready solution to this problem – the computer could manage some of the demands of personalizing learning, identifying each student's degree of mastery, and providing them with learning activities relevant to their current position within the curriculum (Baker, 2021). Personalized learning involves artificial intelligence-powered systems that analyze students' learning styles, strengths, and weaknesses to create tailored lesson plans and suggest resources to serve their needs (Bojorquez & Vega, 2023).

When considering the development of artificial intelligence and its contribution to education, it becomes evident that institutions and organizations responsible for implementing education, along with teachers and education stakeholders, must accelerate their efforts towards integrating artificial intelligence into education. This is because the key to staying caught up in a rapidly changing world is known to be adapting to change (Afrianto, 2018). Teaching students about artificial intelligence can help them develop the knowledge and skills to pursue careers in technology, data science, and other in-demand industries. Artificial

intelligence learning can inspire students to generate ideas and solutions, fostering creativity and innovation – essential skills in today's competitive and evolving job market. Providing students with access to artificial intelligence education can help close opportunity gaps, ensure they have the skills and knowledge to compete in the global workforce, and create a more diverse pool of talent in artificial intelligence and related fields. This diversity can lead to better problem-solving, creativity, and innovation in developing artificial intelligence technologies and solutions (Bojorquez & Vega, 2023). However, instead of just automating the teaching of students sitting at computers, artificial intelligence might help open up teaching and learning possibilities that are otherwise difficult to achieve, challenge existing pedagogies, or help teachers be more effective (Holmes et al., 2019). Research has also shown that teacher attitudes toward AI vary based on familiarity with the technology, suggesting that teachers' experiences and knowledge levels play a critical role in shaping their views on AI's applicability in education (Abuhassna et al., 2024).

In this context, the study by Edwards et al. (2024) discusses how AI and machine learning can support transformative educational spaces by addressing both the challenges and opportunities AI brings. Additionally, Abuhassna et al. (2024) highlight the need for deeper integration of AI in education through a structured and evidence-based approach to the information age. Meanwhile, Samsul et al. (2023) provide a bibliometric analysis on

the role of big data and learning analytics in education, underscoring the importance of data-driven decision-making for enhancing educational outcomes.

Artificial intelligence can lead to several negative consequences, both for individuals and society at large. Excluding students from learning about artificial intelligence can contribute to the digital divide, as they may need to gain the knowledge and skills needed to navigate artificial intelligence-driven technologies in their daily lives (Bojorquez & Vega, 2023). Shortly, “Artificial Intelligence” aims to mimic human intelligence by studying how the brain functions and incorporating disciplines like Computer Science, Biology, Psychology, and Engineering. This field has evolved, particularly in Machine Learning, which focuses on systems learning from data patterns. Artificial Intelligence has significantly impacted education, introducing intelligent tutoring systems and transforming classroom practices. It offers personalized learning experiences, aids teachers, and opens new educational strategies. Integrating artificial intelligence education into curricula is crucial to prepare students for evolving career landscapes. However, while artificial intelligence brings transformative potential, there are concerns about the digital divide and negative societal impacts if individuals need more artificial intelligence literacy. Therefore, adapting to artificial intelligence’s integration in education is imperative for staying abreast of technological changes and nurturing diverse talents for the future.

The study is paramount in educational advancements and technological integration in learning environments. This research delves into the invaluable perspectives of educators who play a central role in shaping students’ learning experiences. By exploring teachers’ opinions on the intersection of education and artificial intelligence, this study offers a crucial understanding of how artificial intelligence impacts teaching methodologies, classroom dynamics, and student engagement. Teachers’ insights serve as a guiding light in identifying the challenges, potentials, and ethical considerations associated with artificial intelligence in education. Their opinions contribute significantly to crafting effective strategies for integrating artificial intelligence tools into the curriculum, enhancing personalized learning experiences, and addressing the evolving needs of a technologically-driven educational landscape. Ultimately, this study facilitates informed decision-making for policymakers, educators, and educational institutions seeking to harness the potential of artificial intelligence while ensuring it aligns with the goals of fostering holistic and impactful learning experiences for students.

The contribution of this study to the existing literature is its in-depth exploration of teachers’ perspectives on artificial intelligence technologies, aiming to provide a more comprehensive understanding of artificial intelligence’s impact on education. While previous studies have generally focused on the overall effects of artificial intelligence in education,

its applications, or teaching tools, there are limited studies examining teachers' attitudes, experiences, and ethical concerns regarding artificial intelligence. This study aims to examine teachers' perceptions of artificial intelligence usage, the potential applications of it in teaching processes, and the challenges they face in greater detail. Another contribution is understanding the interactions between artificial intelligence technologies, teachers, and students, and offering practical suggestions on how these technologies can be integrated into classroom settings. Our study presents a more in-depth, teacher-centered perspective by investigating how teachers' attitudes toward artificial intelligence change according to their experience and knowledge levels, and how these differences reflect on educational practices compared to previous studies. Additionally, this research takes into account teachers' concerns regarding the ethical and practical aspects of artificial intelligence, drawing significant conclusions on how it can be used more effectively and responsibly in education. Specifically, it sheds light on critical issues that have often been overlooked in the existing literature, such as data privacy and the digital divide, which are important ethical matters teachers encounter regarding the role of artificial intelligence in education.

While the existing literature provides a broad overview of AI's potential in education, it often lacks a critical, teacher-centered perspective. There is a significant gap in understanding the attitudes, experiences, and ethical concerns

of teachers regarding the use of AI. This study aims to address this gap by focusing on teachers' perspectives, which have been underexplored in the current body of work. Moreover, the research seeks to provide deeper insights into how AI can be integrated into educational practices, the challenges faced by teachers, and the ethical issues surrounding AI usage in classrooms.

This research will make a substantial contribution to the literature by providing a comprehensive understanding of teachers' perceptions of AI in education, which is essential for shaping effective AI integration strategies. The study's findings will inform policy development, curriculum design, and teacher training programs aimed at harnessing the full potential of AI in educational settings. By exploring how AI tools impact classroom practices, teaching methodologies, and student engagement, this study will offer valuable insights into the effective and responsible use of AI in education.

In the ever-evolving educational environment, the integration of artificial intelligence has emerged as an essential factor in reshaping teaching methodologies and learning environments. Despite the increasing presence of artificial intelligence-powered tools in educational environments, there remains a significant gap in understanding educators' nuanced perspectives. Exploring teachers' views on artificial intelligence in education is imperative to gain the comprehensive insights needed to design informed strategies that effectively leverage artificial intelligence's potential while pursuing

educational goals to promote enhanced student learning experiences. Therefore, in this research, by examining the multifaceted perspectives of educators, the pedagogical practices are used to focus on revealing perceptions, ethical issues, and possibilities regarding the use of artificial intelligence technologies. This qualitative study explores and analyzes teachers' opinions, attitudes, and perceptions regarding including artificial intelligence in education. Within the framework of this general purpose, the following answers were sought:

1. What are the meanings that teachers attribute to artificial intelligence?
2. What are teachers' opinions about the usability or applicability of artificial intelligence technologies in education?
3. How does using artificial intelligence technologies in education affect the school, teacher, student, teaching process, and evaluation positively or negatively?
4. How can artificial intelligence technologies be used in education? What should be taken into consideration when using artificial intelligence in education?

So the hypotheses of the research are listed below:

1. Teachers who are familiar with artificial intelligence (AI) tools perceive them as beneficial for enhancing personalized learning experiences in the classroom.
2. The integration of AI technologies in education is positively correlated

with improved decision-making processes in teaching and learning activities.

3. Teachers believe that AI can support their instructional practices by automating routine tasks, allowing them to focus more on student engagement and interaction.
4. There is a significant variation in teachers' attitudes towards the applicability of AI in education based on their level of experience and familiarity with AI tools.
5. Teachers express concerns about potential ethical and practical challenges associated with the use of AI in educational settings, such as data privacy and the digital divide.
6. The successful integration of AI in education requires comprehensive professional development and support for teachers to effectively implement these technologies in their classrooms.

MATERIALS AND METHODS

Model

In this study, the phenomenology design, one of the qualitative research designs, was used. The phenomenology design aims to better understand the nature or meaning of daily experiences (Patton, 2002). In other words, this pattern focuses on phenomena that we are aware of in daily life but do not have in-depth and sufficient knowledge of (Yıldırım & Şimşek, 2018). In this context, this design was preferred because it aimed

to examine in-depth teachers' opinions about artificial intelligence, which has become popular in education and many areas of daily life in recent years.

Study Group

The research study group consisted of 40 teachers working in various branches of public schools affiliated with the Ministry of Education in Afyonkarahisar. The decision to include 40 participants was based on the principle of saturation, a common approach in qualitative research. According to Patton (2002), saturation occurs when no new information or themes emerge from further data collection. In qualitative research, a sample size of 40 is considered sufficient for obtaining rich, diverse perspectives on a topic like AI in education, especially given the specialized knowledge required from the participants. Additionally, the study's focus on depth rather than breadth meant that 40 participants, selected from various educational branches and backgrounds, allowed for a comprehensive exploration of the research questions.

Criterion sampling, one of the purposeful sampling methods, was used. Criterion sampling was chosen because the study aims to explore teachers' experiences and knowledge specifically related to artificial intelligence in education. By selecting participants based on these criteria, the study aimed to collect in-depth perspectives from teachers who have direct experience with the phenomenon under investigation. This targeted approach enables a detailed exploration of the meanings teachers

attribute to AI in education, which would not be possible through random sampling or other general sampling methods. At this point, "having sufficient knowledge about artificial intelligence tools, using at least one of the artificial intelligence tools, and being a volunteer" were determined as criteria for determining the sample. In order to comply with these criteria, since "artificial intelligence in education" is still new, participants working in various branches with knowledge of this subject were included in the working group. The teachers who participated in this study were selected based on criteria such as having sufficient knowledge about AI tools, having used at least one AI tool, and being volunteers. This method ensures that the selected participants are not only knowledgeable but also have practical experience with AI tools in the educational context, making their insights more relevant and valuable for the research question. In determining these criteria, the ways teachers learned about AI tools (e.g., professional development training, self-directed learning, in-school seminars) were taken into account.

While the sample is specific to teachers in Afyonkarahisar, the insights gained can provide valuable information about teachers' perceptions of AI in education within a similar socio-cultural context. The goal of qualitative research is not to generalize to the broader population but to understand the complexities of a phenomenon, which in this case is the integration of AI in education. The study's findings can serve as a foundation for further research or inform local educational policy.

In addition, information was provided about the voluntary participation process; teachers were informed that participation in the study was completely voluntary, and participants participated in the process by signing an informed consent form. Information about some characteristics of the participants is presented in Table 1.

As seen in Table 1, 26 participants are women, and 14 are men. One of the participants is between the ages of 20-25, 9 of them are between the ages of 26-30, 20 of them are between the ages of 31-35, 9 of them are between the ages of 36-40, and 1 of them is 41 and over. The participants are from the fields of primary education (11), preschool education (5), Turkish language teaching (2), mathematics teaching (2), science teaching (3), social studies teaching (2), English language teaching (5), information technologies teaching (3), and psychological counseling and guidance (4). Five participants hold master’s degrees, and 35 hold bachelor’s degrees. Lastly, two participants have 1-5 years of experience, 21 have 6-10 years, 13 have 11-15 years, 1 has 16-20 years, and 3 have over 21 years of work experience. Ten work in provincial centers, 23 in district centers, and 7 in town/village centers.

Data Collection Tools

The ‘Semi-Structured Teacher Interview Form’ prepared by the researchers was used as the data collection instrument in the study—the preparation process for the form involved scanning the literature related to artificial intelligence. Alongside

Table 1
Personal information about the study group

Personal Characteristics		N	%
Gender	Female	26	65
	Male	14	35
Age	20-25	1	2,5
	26-30	9	22,5
	31-35	20	50
	36-40	9	22,5
	41-above	1	2,5
	Class	11	27,5
Branch	Preschool	5	12,5
	Turkish	2	5
	Mathematics	2	5
	Science	3	7,5
	Social Sciences	2	5
	Religion	3	7,5
	English	5	12,5
	Information and Communication Technologies	3	7,5
	Psychological Counseling and Guidance	4	10
Education	Bachelor degree	35	87,5
	Master's degree	5	12,5
Professional Seniority	1-5 years	2	5
	6-10 years	21	52,5
	11-15 years	13	32,5
	16-20 years	1	2,5
	21 years-above	3	7,5
Type of School	Preschool	5	12,5
	Elementary	12	30
	Secondary	17	42,5
	High School	6	15
School District	City	10	25
	Town	23	57,5
	Village	7	17,5

establishing the theoretical framework of the subject, recent developments, innovations, and needs, artificial intelligence in education were identified. Subsequently, questions

tailored to the purpose of the research were formulated. Afterward, input was sought from two experts in education programs and teaching, and two specialists with expertise in artificial intelligence. Necessary adjustments were made based on their feedback. Furthermore, the form was subjected to a pilot application with three teachers to test its clarity and comprehensibility. The form was revised to ensure clarity and readiness for implementation by refining any unclear terms. The form primarily consists of the following questions:

1. What is your understanding of artificial intelligence? What comes to mind when considering artificial intelligence in education? What are your thoughts on artificial intelligence?
2. When considering the future impact of artificial intelligence technologies, what are your thoughts on their usability or applicability in education?
3. As a teacher, how do you think the effective use of artificial intelligence technologies in education would impact you positively or negatively? For instance, does it cause concern, inspire hope, instill confidence, simplify your work, or complicate it? Please explain the reasons.
4. How do you believe using artificial intelligence technologies in education would impact the school, teachers, students, the teaching process, and assessment positively or negatively? Please explain.
5. In your opinion, at which stages of education can artificial intelligence technologies be applied, and how? Could you provide examples?

The interviews were conducted face-to-face with the participants on the specified dates and times. Each interview was audio-recorded after the participant's consent was obtained, and written notes were taken during the interview. Empty classrooms in schools or appropriate teacher rooms were used as the interview environment. The interviews were conducted between January and March 2024, and the participants were selected from various districts in Afyonkarahisar (center, district, and village schools). This diversity is important to cover the experiences of teachers in various educational environments. The participants were informed about the research, and their participation in the research was ensured by signing a consent form. The participants were also informed that their statements during the interview would be kept confidential and would be used only for research purposes.

Data Collection and Analysis

Thematic analysis is not a separate research approach/method like grounded theory or ethnography, but rather a process used to assist the researcher in their quest for insights and is often part of many qualitative methods. Thematic analysis is a process for coding qualitative data. The coding process can either be open coding, or a code list may be used, or both can be utilized within the same study. A theme can be

defined either at the manifest level, directly observable, or at the latent level, underlying the phenomenon. Themes can initially be developed inductively from raw data or deductively from theory and previous research (Boyatzis, 1998). However, the researcher needs to understand and explain why they have chosen a particular analytical approach. Thus, inductive thematic analysis is typically experiential, assumes a knowable world (reality), and “gives voice” to the experiences and meanings of this world. Deductive thematic analysis, on the other hand, typically takes a critical and constructivist approach within its theoretical framework by examining how the world is put together (i.e., constructed) and ideas and assumptions about the collected data (Braun & Clarke, 2013). In this study, both inductive and deductive thematic analyses were used to construct the nature of the research.

The inductive analysis allowed us to derive themes directly from the raw data, without imposing preconceived theories or expectations. This approach helped identify themes that reflect teachers’ lived experiences with AI in education, such as *teachers’ initial fears and excitement about AI technologies* or *teachers’ perceptions of AI as a tool to reduce administrative workload*. For instance, one inductively derived theme was “*AI as a time-saver*”, which emerged from several teachers discussing how AI tools assist in automating routine tasks like grading. The deductive thematic analysis, on the other hand, was guided by theoretical frameworks and previous research on the potential impacts

of AI in education. For example, existing literature on AI in education often mentions challenges related to accessibility and inequality. Hence, themes related to “*equity in access to AI technologies*” were explored through the data, ensuring that existing theories informed the interpretation of teachers’ experiences and thoughts.

In the study, the participating teachers were initially provided with information about the research topic and how the research would be conducted. Participants who met the specified criteria (having sufficient knowledge about artificial intelligence tools, using at least one artificial intelligence tool, and volunteering) were identified and selected to participate in the research. Before the interviews, the participants were informed about the meeting time and the subject. The interviews were held face-to-face with each participant at the specified hours and lasted an average of 15-20 minutes for each participant. After the interviews, the participants checked the notes and were allowed to make corrections if they had any missing or different opinions. Then the data was transcribed and made ready for analysis.

Content analysis was used to analyze the data. Content analysis is a systematic and repeatable technique in which some words in a text are summarised with smaller “categories” using “codes” to reach concepts and relationships that can explain the data obtained. In other words, content analysis combines similar data within the framework of certain concepts and themes and understandably organizes them. This process consists of the stages

of “coding the data, creating themes, arranging the codes and themes, defining and interpreting the findings” (Büyüköztürk et al., 2010; Yıldırım & Şimşek, 2018). In this context, the data were examined by two researchers, and codes were determined. Then, themes and sub-themes related to these codes were created. In line with the codes obtained, the themes of “the meanings that teachers attribute to artificial intelligence, the usability and applicability of artificial intelligence in education, the positive/negative effects of artificial intelligence in education, the stages and recommendations at which stage of the education process it can be used, and how it can be used” were determined. In order to ensure consistency and harmony between codes and themes, the codes and themes created separately by two researchers were compared. The consistency reliability was calculated with the formula “Consensus/Consensus+Disagreement” (Miles & Huberman, 1994), and the value was found to be 0.91. Afterward, tables containing codes, sub-themes, and themes were created, and the findings were presented with direct quotes from the participant opinions coded as T1, T2, T3...

After the interview, participants were sent transcripts and asked to provide feedback on any omissions or misunderstandings. Participants had the opportunity to review and correct their statements. This process was considered an important step in ensuring data accuracy. In addition, ethical permission was obtained from Afyon Kocatepe University Social and

Human Sciences Scientific Research and Publication Ethics Board with the decision number 2023/145 and dated 12.04.2023 in order to carry out the study.

FINDINGS

The findings obtained from the analyses were presented by creating tables in line with the sub-problems.

1. The codes obtained from teachers' views on the meanings they attribute to artificial intelligence and the themes created are given in Table 2 below.

Table 2 shows that teachers' opinions about the meanings they attribute to artificial intelligence are collected in two themes: “advanced technology” and “education model”. In this context, teachers have attributed meanings such as “interactive machine technology (f=12), technological systems or a mechanism that can imitate human intelligence (f=10), advanced technology supported by intelligent machines or devices (f=7), equipped with advanced software technology (f=5), and performing tasks with computers or robots (f=3)” to artificial intelligence within the theme of “advanced technology.” Some of the opinions regarding the meanings attributed to artificial intelligence by teachers in this context are as follows:

“It is the mechanization of human abilities such as thinking, decision-making, and problem-solving. The best response to artificial intelligence in education is the machines' takeover of the

Table 2
Teachers' opinions on artificial intelligence

Theme	Codes	f
Advanced Technology	Interactive machine technology	12
	The technological system or a mechanism that can imitate human intelligence	10
	Advanced technology supported by intelligent machines and devices	10
	Equipped with advanced software technology	5
	Performing tasks with computers or robots	3
	Bringing new suggestions to events or some situations	2
	Robots and systems that surpass human intelligence	2
	Adapting digital systems to the human brain	1
	An interdisciplinary, systematic, and intelligent system	1
Education Model	An innovation that makes life easier and more practical	1
	A contemporary teaching model supported by innovative technologies	5
	Practical teaching tools and technological educational material	3
	A system with the potential to replace teachers in education	2
	Robot teachers and programs	2
	Technological software that supports self-learning	1

instructional part. In other words, I can say that teaching is provided not by humans but by robots and machines.”(T7)

“Artificial intelligence is creating an idea or suggestion in a computer environment, responding to an existing situation. In education, artificial intelligence involves generating suggestions with the help of computers in response to situations encountered in the teaching-learning environment.”(T8)

“It is a technology that mimics human intelligence to perform tasks determined by machines, continuously updating knowledge to improve itself. For example, it can develop personalized knowledge

and study programs tailored to a student’s desired or difficult-to-learn subject.”(T9)

“It is a system that enables non-naturally occurring entities (such as computers and robots) to utilize skills like reasoning. In short, we can call it machine learning.” (T18)

“Artificial intelligence is characterized by the ability of the created software to self-renew and update without external influence. Artificial intelligence can be utilized in various fields within education.” (T21)

In the theme of “Education model,” teachers have attributed meanings such as “a contemporary teaching model supported

by innovative technologies (f=5), practical teaching tools, technological educational material (f=3), a system with the potential to replace teachers in education (f=2), and robot teachers and programs (f=2)” to artificial intelligence. Some of the opinions regarding the meanings attributed to artificial intelligence by teachers in this context are as follows:

“Artificial intelligence is a collection of software designed for specific purposes, aiming to facilitate the lives of individuals, including students and teachers, in education. The purpose of artificial intelligence in education is to facilitate educational activities, create technology-supported learning environments, and simplify learning and teaching processes. (T5)

“I believe artificial intelligence is a technological mechanism that can mimic human intelligence and allow decisions to be made autonomously when necessary. Additionally, when I think of artificial intelligence in education, mechanisms that could

potentially replace teachers or even render them obsolete come to mind.” (T13)

“It is a type of intelligence displayed by machines, as opposed to natural intelligence exhibited by humans. When we look at artificial intelligence research in education today, we see various applications based on rich teaching models with intelligent technological tools, including knowledge-based and data- and logic-based artificial intelligence applications in almost every field.” (T25)

2. The codes obtained from teachers’ views on the usability and applicability of artificial intelligence technologies in education and the themes created are presented in Table 3 below.

As seen in Table 3, teachers’ views on the usability or applicability of artificial intelligence in education are grouped into “positive views” and “negative views.” In this context, more than half of the teachers have indicated that artificial intelligence will benefit education and provide different

Table 3
The usability and applicability of artificial intelligence in education

Theme	Codes	f
Positive Views	It will be beneficial; it will offer various opportunities.	23
	Applicable	22
	Available	22
	It will be efficient if it is controlled and limited.	16
	An inevitable necessity, it should be utilized in education.	10
Negative Views	Alarming, it could replace the teacher.	10
	It could make both teachers and students lazy.	3

opportunities (f=23). Additionally, they have stated that it will be applicable (f=22) and available (f=22). Furthermore, ten teachers have emphasized that artificial intelligence is an inevitable necessity in education and highlighted its importance in the evolving world of the 21st century. However, sixteen teachers have also stated that it will be efficient and beneficial at the desired level if used in a controlled and limited manner (f=16). Some of the positive views of teachers regarding the usability and applicability of artificial intelligence technologies in education are as follows:

“Education cannot be independent of technology. This should not be overlooked. Artificial intelligence is now an inevitable necessity. Because technology is a major factor in changing and evolving societies in the 21st century, it would be very wrong to separate this factor from education. Artificial intelligence emerges as an inseparable aspect of technology. Technology is evolving in this field. We can resort to artificial intelligence programs related to education, both in classrooms, work environments, and homes.” (T4)

“It will be beneficial in the field of education. However, I am concerned about its attempt to replace teachers. Therefore, it should be controlled with necessary precautions.” (T5)

“We must keep up with this age of technology because we are

living in the age of technology. Artificial intelligence should be used in education, but not with full authority; it should be used in a limited manner.” (T6)

“Considering the success of artificial intelligence technologies not only in collecting and analyzing data but also in obtaining and presenting information, I believe it will help us move beyond traditional classroom-bound teaching and enable us to control students’ learning at their desired time and place.” (T17)

“It should be used. The effective learning of students, which method they learn better with, or in which areas they are lacking and need to improve, can be determined objectively without the human factor, and appropriate education can be provided with artificial intelligence tools or robots tailored to the student’s situation.” (T18)

In the theme of “negative views,” ten teachers have expressed concerns that artificial intelligence in education is alarming and could replace the teacher. Therefore, they have stated that artificial intelligence can be used in education with necessary precautions taken. Some of the opposing views of teachers regarding the usability and applicability of artificial intelligence technologies in education are as follows:

"I am worried about this. Neither we nor our students are robots. We can think, feel, reason, analyze, and evaluate. More than just loading information with artificial intelligence will be required. If we use technology/artificial intelligence in a limited and controlled manner, future generations can accomplish creative tasks." (T15)

"I am even thinking maybe there will not be a need for teachers. This is also worrying me. Smart boards have taken their place in the corner of the classroom. Many teachers also benefit from this during much of the lesson. Of course, artificial intelligence should be utilized in a controlled and limited manner." (T29)

"Artificial intelligence is currently being used in education, depending on school resources, and it should continue to be used. However, if all tasks are left to artificial intelligence in the future, it may make teaching unnecessary and even end the teaching profession." (T35)

"Artificial intelligence is currently being used in education, depending on school resources, and it should continue to be used. However, in the future, artificial intelligence could bring an end to the teaching profession. This should be noted." (T35)

3. The codes obtained from teachers' opinions on the effects of artificial intelligence in education and the themes and sub-themes created are given in Table 4 below.

As seen in Table 4, the codes obtained regarding teachers' opinions on the positive or negative effects of using artificial intelligence in education were collected in two main themes: "positive" and "negative effects". Within these two themes, five sub-themes were created: "school, teaching process, evaluation process, student, and teacher".

In this context, when the positive effects of artificial intelligence in education are examined, under the "school" sub-theme, it is stated that artificial intelligence contributes to the physical, administrative, and technological development of the school (f=14), makes school (administrative) work more accessible and reduces administrative workload (f=10), it provides control in school management (f=5), and reduces the differences between schools and provides equal opportunities (f=2). In the "teaching process" sub-theme, it is stated that artificial intelligence enriches the teaching environment and ensures effective and efficient teaching (f=30), ensures active participation in the teaching process (f=12), facilitates teaching processes (f=10), enables efficient use of time (f=10), and increases interaction within the group (f=8). In the "evaluation process" sub-theme, it is emphasized that artificial intelligence allows objective evaluation (f=24). Additionally, it is stated that it enables accurate analysis during the evaluation (f=15) and rapid

Table 4
The effects of using artificial intelligence in education

Theme	Sub-theme	Codes	f
Positive Effects	School	It contributes to the physical, administrative, and technological development of the school.	14
		It makes school (administrative) work more accessible and reduces administrative workload.	10
		It provides control in school management.	5
		It reduces the differences between schools and provides equal opportunities.	2
	Teaching Process	It enriches the teaching environment and ensures that teaching is effective and efficient.	30
		It ensures effective/active participation in the teaching process.	12
		It facilitates teaching processes.	10
		It allows you to use time efficiently.	10
		It increases interaction within the group.	8
		It contributes to transferring information effectively in education.	5
		It reduces the risk of error.	4
		It increases communication between the teacher and student.	2
		It provides the opportunity to develop skills such as creative thinking.	2
	Evaluation Process	It allows objective evaluation.	24
		It enables accurate analysis in evaluation.	15
		It enables rapid analysis of evaluation.	8
		It contributes to a valid and reliable evaluation.	5
	Students	It provides time for learning.	20
		It contributes to individual development.	17
		It makes learning easier.	15
		It provides practical and permanent learning.	15
		It increases interest and curiosity in learning.	13
		It simplifies tasks and assignments.	10
		It attracts attention and motivates learning.	5
		It contributes to the determination of learning needs.	3
	Teachers	It facilitates teachers' tasks and duties.	21
		It provides them with the opportunity to save time and engage in more activities.	18
		It contributes to professional development.	8
Negative Effects	School	It may reduce the need for school.	5
		Problems may arise because there will be no humane management approach.	2
		It cannot solve discipline problems.	1
	Teaching Process	It may reduce the opportunity for experiential learning.	4
		It cannot provide a learning environment close to real life.	3
		There may be communication problems during the teaching process.	3

Table 4 (continue)

Theme	Sub-theme	Codes	f
	Evaluation Process	It may be inadequate in fostering affective characteristics.	5
		It will be insufficient to gain emotional behaviors.	11
		It gets people used to being ready and pushes them towards laziness.	6
		It needs to improve its ability to research and obtain information.	5
		You may need the correct information.	5
	Students	It cannot gain values such as conscience and tolerance; it can destroy them.	5
		It negatively affects socialization.	5
		It leads to soullessness in education.	1
		It does not improve reasoning skills.	1
		It may reduce the need for teachers.	5
	Teachers	It dulls the ability to research and develop oneself.	4
		Artificial intelligence cannot be a role model like a teacher.	4
		It can diminish the value of the teacher.	3
		It may make them get used to being ready and cause them to disrupt their duties.	3

analysis of evaluation data (f=8). In the “Student” sub-theme, it is mentioned that artificial intelligence provides time for learning (f=20), contributes to individual development (f=17), makes learning easier(f=15), provides practical and permanent learning (f=15), increases interest and curiosity in learning (f=13), and simplifies tasks and assignments (f=10). In the “Teacher” sub-theme, it is stated that artificial intelligence facilitates teachers’ tasks and duties (f=21), provides them with the opportunity to save time and engage in more activities (f=18), and contributes to their professional development (f=8). In this context, some of the positive opinions of teachers are as follows:

“It makes my job, the teacher’s job, easier, because we cannot take all

foreign language students to the country of the spoken language, but with this method, it will be much simpler and easier.” (T3)

“The positive aspect of artificial intelligence is that when used effectively, both students and teachers actively participate in the process, thereby creating the richest environment for teaching and learning. Active involvement of students throughout the process leads to lasting learning outcomes. At the end of the process, the objective evaluation process is also completed. ...” (T12)

“It will have a positive impact because it will ease the teacher’s workload, allowing the teacher to

dedicate themselves to education fully. It will enable more activities to be conducted. The student will be able to participate more actively, leading to more lasting learning outcomes, facilitating the teaching process, and enabling fairer assessments. To stay ahead of the curve, we must adapt to innovations and keep ourselves open to development.” (T39)

“It could positively impact schools and reduce disparities among them. However, it could also have positive and negative effects on students and teachers. Teachers and students who cannot adapt to artificial intelligence may face difficulties. There may be a positive impact due to the efficient use of time in the teaching process. Artificial intelligence can potentially negatively affect the communication between students and teachers, emotional processes, and students’ socialization. In terms of assessment, artificial intelligence can offer more valid and reliable results, which has a positive impact.” (T27)

Indeed, alongside their positive views, teachers have also expressed concerns about the potential negative impacts of artificial intelligence in education. At this point, within the theme of “negative impacts,” under the “school” sub-theme, teachers have mentioned that artificial intelligence

may reduce the need for schools (f=5) and could lead to problems due to the absence of a humane management approach (f=2). Under the sub-theme of “instructional process,” teachers have expressed concerns that artificial intelligence may reduce opportunities for experiential learning (f=3), fail to provide learning environments close to real-life situations (f=3), and lead to communication problems during the instructional process (f=3). In the sub-theme of “assessment process,” it is noted that artificial intelligence may be inadequate in measuring affective characteristics (f=5). Under the sub-theme of “student,” concerns are raised regarding artificial intelligence’s inadequacy in fostering affective behaviours in students (f=11), potentially fostering a reliance on ready-made solutions leading to laziness (f=6), dulling research and information-gathering skills (f=5), leading to the acquisition of incorrect information (f=5), being unable to instil values like conscience and tolerance, or even destroying them (f=5), and negatively affecting socialisation (f=5). Under the sub-theme of “teacher,” concerns are expressed regarding artificial intelligence potentially reducing the need for teachers (f=5), dulling the ability to research and develop oneself (f=4), and being unable to serve as role models like teachers (f=4). In this context, some of the teachers’ opinions are as follows:

“If artificial intelligence is used correctly, adequately, and for a supportive purpose, it will positively affect the school, teacher, student, teaching process, and evaluation.

However, when we become addicted to this artificial intelligence and hand over complete control, negative effects may be seen in the factors I mentioned. Artificial intelligence cannot be a model like a teacher. It cannot address the affective aspect of education at the desired level. It is wrong to consider the individual only cognitively. Students may experience emotional breakdowns, detachment from values, discipline issues, and communication problems. These problems also impact the family, school, and society. Therefore, the benefit derived from artificial intelligence should be maintained at a certain level, and the teacher's guidance should not be disregarded.” (T4)

“I believe there can be a significantly positive contribution in terms of efficiency in all education processes, which would benefit the economy. It contributes to the development of the school, the student, the teacher, the teaching process, and evaluation. It saves time and provides convenience. Of course, when it comes to human situations, relying solely on logic may eliminate the conscience factor in students, which could lead to negative outcomes.” (T8)

“I think artificial intelligence varies depending on how it is implemented

in education. The teacher who serves as a guide in the educational process should oversee the use of artificial intelligence. I believe artificial intelligence should be supportive. If it stays within this scope, it will not cause concern, but if a program is implemented that completely replaces the teacher with artificial intelligence, that would be a mistake, and it concerns me.” (T14)

“...The negative aspects of artificial intelligence include its function of presenting information readily available, which may lead students to be lazy. Students may skip processes like research, observation, and data collection, and attempt to use the first information they find online without filtering it through their minds, leading to misinformation.” (T12)

4. Teachers' views on how artificial intelligence technologies can be used in education and what should be considered when using them are provided in Table 4.

In Table 5, as seen, the codes reached regarding teachers' views on how artificial intelligence technologies can be used in education and what should be considered when using them are grouped into four themes: “teaching process,” “evaluation process,” “other educational processes,” and “recommendations.” Within the theme of “teaching process,” it is stated that artificial intelligence can be used to enrich the

learning environment in teaching practices (f=12), to support individual learning pace and teaching tailored to students' learning needs (f=9), to facilitate information acquisition, access to resources, and conducting research (f=5), and to determine

Table 5
Recommendations about using artificial intelligence in education

Sub-theme	Codes	f
Teaching Process	To enrich the learning environment in teaching practices.	12
	To support individual learning pace and teaching tailored to students' learning needs.	9
	To facilitate information acquisition, access to resources, and conducting research.	5
	To determine the learning needs of the student and provide the necessary instruction and content.	4
	As an assistant teacher.	2
	To develop problem-solving and decision-making skills.	2
	In simulations like pilot training.	2
	The skill of using information technologies consciously.	1
	Concretizing abstract concepts.	1
	Conducting risky experiments.	1
	In language education, vocational training, medical education, and so on.	1
	To enhance cognitive processes.	1
Evaluation Process	During the assessment phase (Objective, prevention of copying).	10
	Identifying learning gaps and providing feedback.	6
	Monitoring and tracking learning progress.	4
	In career selection and acquiring vocational skills.	2
	In tracking student development and checking assignments.	2
Other educational processes	Artificial intelligence can be utilized in all stages of education.	11
	Individualized artificial intelligence support can be provided to each student.	5
	In administrative tasks and responsibilities for teachers and administrators.	3
	In enhancing teachers' professional development.	1
Recommendations	Artificial intelligence in education should not be implemented independently of teachers. Necessary precautions should be taken and used under the supervision of teachers.	13
	Artificial intelligence should be used cautiously within ethical boundaries and without surpassing security limits.	11
	It cannot replace teachers; therefore, the role or mission of a teacher should not be assigned to artificial intelligence.	5
	It can be implemented as a complementary educational tool from preschool to higher education.	5
	Those who need help to adapt to artificial intelligence may face difficulties. Therefore, preparation is essential, and artificial intelligence literacy should be developed.	3
	Artificial intelligence should not be used at an early age. Instead, values such as ethics, conscience, and respect should be instilled early, and artificial intelligence should be used in secondary or higher education.	3

the learning needs of the student and provide the necessary instruction and content (f=4). In the “evaluation process” theme, it is indicated that artificial intelligence can be used during the assessment phase (objective and prevention of copying) (f=10), identifying learning gaps and providing feedback (f=6), and monitoring and tracking learning progress (f=4). In the theme of “other educational processes,” it is stated that artificial intelligence can be utilized in all stages of education (f=11), and individualized artificial intelligence support can be provided to each student (f=5). It can fulfill administrative tasks and responsibilities for teachers and administrators (f=3). In this context, here are some opinions from teachers:

“Artificial intelligence can enrich teaching practices in the educational process. Indeed, for instance, if we consider the use of 3D glasses in science classes, students can virtually travel back to ancient times to explore the formation of the Earth and study the flora and fauna of those eras. Similarly, Turkish language classes can witness historical events like reading the national anthem in parliament on the day of its adoption. This immersive experience can significantly enhance students’ understanding and engagement with the subject matter. Teachers must oversee these activities to ensure they align with reality and

contemporary perceptions while exploring historical or fictional scenarios.” (T4)

“Artificial intelligence should be in a position like an intern next to the teacher. In other words, it should act as an assistant rather than a full instructor.” (T6)

“...It could be more effective in the assessment stage. For example, a question is asked, an answer is received, and feedback is quickly provided to the student. This allows the student to identify their shortcomings in the learning process and address them.” (T11)

“Artificial intelligence can be used in teaching activities. For example, in an art class where a student is asked to paint a natural landscape, they could first be shown real videos with artificial intelligence-supported augmented reality materials from natural beauties worldwide to help them visualize and create a draft in their mind. A student aspiring to become a pilot could be given a pilot simulation experience.” (T13)

“...Artificial intelligence will be used in many stages of the education process. For example, it can be applied in the cafeteria, canteen, attendance tracking, cleaning, and document preparation.” (T14)

“...It can support, monitor, and assess students’ learning. For example, the learned subject can be repeated or applied through child-robot interaction, personalized assignments or questions can be created, and so on.” (T22)

“Artificial intelligence technologies can be used with different methods and techniques at every stage of education. It can serve as a guide in the teaching process for any subject. Homework tracking situations can be done online. It can be used in assessments and exam applications.” (T37)

Teachers have also provided some suggestions for using artificial intelligence in education and their views on how it can be utilized. At this point, teachers’ recommendations for using artificial intelligence are as follows: Artificial intelligence in education should not be implemented independently from teachers. Necessary precautions should be taken and used under the supervision of teachers (f=13). It should be used carefully within ethical boundaries and without surpassing security limits (f=11). It cannot replace teachers; therefore, the role or mission of a teacher should not be assigned to artificial intelligence (f=5). While some suggest that artificial intelligence could be used as a complementary educational tool from preschool to higher education (f=5), others advise against using it at an early age. They propose that ethical values like conscience

and respect should be instilled early, and artificial intelligence should be introduced at the secondary or tertiary education level (f=3). Additionally, some suggest that those who cannot adapt to artificial intelligence may encounter difficulties, emphasizing the importance of being prepared and developing artificial intelligence literacy (f=3). In this context, here are some recommendations from teachers:

“If artificial intelligence is used correctly (with a supportive purpose), it positively impacts the school, teacher, student, teaching process, and evaluation. However, if we become overly reliant on artificial intelligence and completely relinquish control, we may experience negative effects in the factors I mentioned earlier. Artificial intelligence cannot take the initiative or serve as a role model like a teacher. It may not address the emotional aspect of education to the desired extent. Focusing solely on the cognitive aspect of an individual is misguided. Students may experience emotional breakdowns, detachment from values, disciplinary issues, and communication problems. These issues affect the individual and their family, school, and community. Therefore, the extent of benefiting from artificial intelligence should be at a certain level, and the teacher’s guidance should not be overlooked. Security should be taken into consideration.” (T4)

“Certainly, adapting to the age of technology is essential, and incorporating artificial intelligence into education is a step in the right direction. However, using it in a controlled and limited manner is crucial, rather than giving it full authority.” (T6)

“In education, artificial intelligence should be applied under the control and knowledge of the teacher. Necessary precautions should be taken, paying attention to ethical rules, and artificial intelligence should be utilized to a certain extent.” (T13)

“Artificial intelligence should be used in a limited and controlled manner under the teacher’s supervision. Otherwise, if it exceeds its purpose, it can negatively affect both the teacher and the student.” (T22)

RESULTS AND DISCUSSION

In the study where teachers’ opinions about artificial intelligence in education were determined, the opinions of 40 teachers from different branches were consulted, and the data obtained were analyzed using the content analysis method. The analysis revealed four main themes as “teachers’ perceptions regarding artificial intelligence, the usability and applicability of artificial intelligence in education, the positive/negative effects in education, and how artificial intelligence can be utilized at

different stages of the educational process”. Based on these themes, the following conclusions were drawn.

1. Teachers’ Perceptions of Artificial Intelligence

Research Question 1: What are teachers’ perceptions of artificial intelligence in education?

When examining the meanings attributed to artificial intelligence by teachers, it was found that teachers perceive it as “advanced technology” encompassing concepts such as “interactive machine technology, technological systems capable of mimicking human intelligence, mechanisms, advanced technology supported by intelligent machines or devices.” In the “Educational Model” theme, teachers attributed meanings such as “a contemporary teaching model supported by smart Technologies, and an effective teaching tool, technology material.” In their research conducted by Köse et al. (2023) investigated teachers’ perspectives on integrating artificial intelligence into education. They found that while artificial intelligence is predominantly associated with military technologies, it also extends to various other fields, including electronic mobile phone technology, information technology, robotics, industrial-automotive, and engineering sectors. Our findings regarding teachers’ perceptions of artificial intelligence (AI) in education align with those of Köse et al. (2023), who also found that teachers viewed AI as a useful tool that could streamline educational processes and make learning more personalized. However, our study expands on this by

also highlighting the concerns about the potential dehumanization of the educational environment, an issue that was less emphasized in their research.

In Aktaş's study (2021), which examined the metaphorical perceptions of school administrators and teachers regarding artificial intelligence, the metaphors reached were analyzed based on conceptual themes. It was concluded that both participant groups mostly perceive artificial intelligence as a "mechanical structure," such as a robot, computer, or artificial human. While similar studies, such as Aktaş (2021), found that teachers primarily perceive AI in terms of mechanical structures (e.g., robots or computers), our study adds a nuanced understanding by revealing that teachers attribute broader meanings to AI, including 'interactive machine technology' and 'systems mimicking human intelligence.' This difference suggests that the understanding of AI is evolving among educators, potentially indicating increased awareness of its broader implications in education.

Wollowski et al. (2016) carried out research with both artificial intelligence instructors and artificial intelligence practitioners to evaluate the concordance of current practice and teaching of artificial intelligence in tertiary education. However, this survey does not focus on the instructors' individual knowledge but rather examines their course concepts. They found that the instructed topics and the needs of artificial intelligence practitioners largely match. Both instructors and practitioners

emphasize the importance of topics like search, knowledge representation, reasoning, and machine learning. Another research conducted by Lindner and Romeike (2019), for teachers, the subject of artificial intelligence seems to be linked with aspects of machine learning and typical application areas of artificial intelligence, such as language processing and data analysis. As seen in the studies, it is understood that artificial intelligence is associated with advanced technology and attributed with meanings related to mechanics or technology. This might show that teachers are often not aware of the full scope of the topic and the aspects forming the basic principles of artificial intelligence.

The analysis of teachers' perceptions of AI revealed that they predominantly view it as "advanced technology," encompassing interactive machine technology and systems that mimic human intelligence. Teachers also linked AI to an "educational model" that involves smart technologies, emphasizing its potential as an effective teaching tool. These findings resonate with previous studies (Köse et al., 2023) but also highlight the growing awareness of AI's broader implications in education, extending beyond mechanical or robotic associations.

2. Usability and Applicability of AI in Education

Research Question 2: How do teachers view the usability and applicability of AI in education?

When examining teachers' views on the usability or applicability of artificial

intelligence in education, within the theme of “positive views,” it is found that more than half of the teachers stated that artificial intelligence would be beneficial in education, providing various opportunities and being feasible and usable. In addition, some teachers emphasized that artificial intelligence is an inevitable necessity in education and expressed that it should be used in the evolving world of the 21st century. However, some teachers also mentioned that artificial intelligence would be productive and beneficial if used in a controlled and limited manner. However, under the theme of “negative views,” some teachers expressed concerns that artificial intelligence in education could be anxiety-inducing and might potentially replace teachers. Therefore, they emphasized that artificial intelligence could be used in education with necessary precautions taken. Similar to these findings, in a study on the use of artificial intelligence in education conducted by Demir et al. (2023), it was found that school principals and teachers regarded the use of artificial intelligence in education as an opportunity and believed that it would provide benefits in various fields. Köse et al. (2023) found that teachers had a positive attitude towards using artificial intelligence in education. They shared the view that artificial intelligence would facilitate teachers’ work in educational processes and provide students with a more enjoyable environment for learning, leading to increased motivation and more lasting learning opportunities. Özer et al. (2023) stated that artificial intelligence

has the potential to facilitate classroom management and student assessments for teachers, enabling them to process data more systematically and provide objective feedback. However, the study by Aktaş (2021) found that school administrators and teachers believe that artificial intelligence should be used carefully and attention should be paid to prevent it from acquiring features that could lead to the end of humanity. According to Rajest et al (2023), educators search for technological enhancements for teaching that would be safe, effective, and scalable. They rapidly search for artificial intelligence tools that are newly released in the market. Grammar checkers, sentence finishers, essay writers, voice assistants, ChatGPT, and chatbots are some of the most widely used technological aids in the classroom. Artificial intelligence’s data analysis capabilities mean assisting teachers in tailoring lessons and assignments to each student’s specific needs. Artificial intelligence can automate administrative duties like grading, allowing teachers more time to focus on student learning.

Teachers expressed both positive and negative views regarding AI’s usability in education. More than half of the participants acknowledged AI as a valuable tool that can make education more personalized and effective. However, some cautioned that AI should be used with care to avoid potential issues such as teacher displacement or over-reliance on technology. These mixed opinions reflect the complex nature of AI integration into education and echo findings from Demir et al. (2023) and Özer et al. (2023).

3. Positive and Negative Effects of AI in Education

Research Question 3: What are the positive and negative effects of AI in education?

When examining teachers' views on the effects of artificial intelligence in education, it was stated that artificial intelligence would contribute to the physical, managerial, and technological development of the school, facilitate administrative tasks, reduce managerial workload, and contribute to the smooth running of programs in the school. It was indicated that artificial intelligence would enrich the instructional environment and ensure effective and efficient teaching, enable active participation in the instructional process, facilitate teaching processes, and enable efficient use of time. Additionally, it was stated that artificial intelligence would mainly enable objective assessment and also facilitate accurate and rapid analysis during the evaluation process. Artificial intelligence would save time for students to learn, contribute to their individual development, facilitate learning, ensure effective and lasting learning, increase interest and curiosity in learning, and make tasks and assignments easier. It would facilitate teachers' tasks and duties, save time, provide opportunities for more activities, and contribute to their professional development. However, teachers have also expressed that artificial intelligence could negatively affect education. In this context, some teachers have mentioned that artificial intelligence could reduce the need for human involvement in schools, which

might lead to issues due to the lack of a human management approach. Moreover, some teachers have expressed concerns that artificial intelligence may reduce opportunities for hands-on learning, fail to provide a realistic learning environment, and potentially lead to communication problems in the teaching process. They indicated that it may be insufficient to measure affective characteristics.

Under the theme of "student," some teachers have expressed concerns that artificial intelligence may inadequately develop students' affective behaviors, lead to dependency and laziness, diminish research and information acquisition skills, result in misinformation, fail to instill values like conscience and tolerance, and even have a detrimental effect on socialization. Artificial intelligence may reduce the need for teachers and undermine research and self-improvement skills. Similar findings were reported in the study conducted by Özer et al. (2023), where the positive aspects of artificial intelligence-based education were highlighted, such as providing learning experiences tailored to students' learning styles and needs, recommending learning materials based on students' interests, and offering opportunities for students to identify and practice their weak areas. Additionally, it has been determined that artificial intelligence provides advantages such as creating a powerful and efficient learning environment, ensuring the correct and efficient use of technology, stimulating children's visual and sensory perceptions, enhancing visual perception, motivating

students with gamification and interactive learning features, continuously evolving and expanding in scope, enhancing students' advanced thinking skills, providing ideas and guidance related to researched topics, and enabling faster problem-solving. In another study conducted by Pekmez et al. (2024), participants emphasized the potential of artificial intelligence to enhance learning experiences, provide personalized learning opportunities for students, and ensure equality. However, some concerns have also been raised, such as the potential to foster laziness in students or hinder equal access due to socio-economic reasons. In the study conducted by Köse et al. (2023), some teachers approach using artificial intelligence in education with skepticism. They expressed concerns about the possibility of creating inequality among students due to the expensive nature of the technology, the inability to ensure the privacy of student and teacher data, and the risk of students becoming lazy due to excessive use of technology. It is understood by looking at the results of this study and other studies in the literature that artificial intelligence in education will have many positive effects. However, there may also be some adverse situations, and measures need to be taken for this.

The teachers identified both beneficial and harmful effects of AI. Positive effects include streamlining administrative tasks, enhancing teaching efficiency, and offering personalized learning experiences for students. On the negative side, concerns were raised about AI potentially diminishing

human interaction in education, creating dependency among students, and limiting hands-on learning opportunities. These findings align with similar concerns expressed in the literature (Özer et al., 2023), suggesting a need for careful integration of AI to balance benefits with potential risks.

4. Application of AI at Different Stages of the Educational Process

Research Question 4: How can AI be utilized at different stages of the educational process?

Finally, when examining teachers' views on how artificial intelligence technologies can be used in education and what needs to be considered when using them, under the theme of "teaching process," it was stated that artificial intelligence could enrich the learning environment in instructional practices, support students' learning pace, facilitate information acquisition, access to resources, and research, and determine the student's learning needs to provide the necessary instruction and content. Under the "evaluation process" theme, it was also indicated that artificial intelligence could be used to conduct objective assessments, prevent copying (ensuring validity and reliability), identify learning deficiencies, and provide feedback. Similarly, Özer et al. (2023) found that the use of artificial intelligence can provide advantages such as creating personalised programs, speed and efficiency, ease of determining students' individual learning needs, reducing human errors, reducing risks, enhancing visual and auditory intelligence, facilitating understanding of the subject matter,

facilitating the tracking and evaluation of student's learning processes, and improving efficiency.

Pekmez et al. (2024) determined that there are impacts such as interactive learning opportunities, real-time feedback during the learning process, more opportunities for students to practice their weaknesses, making learning more enjoyable, enabling students to manage their learning process, and adding a new dimension to the assessment and evaluation process under the theme of the reflections of artificial intelligence on the learning process. Additionally, in the studies conducted by Holmes et al. (2019), Jones and McCoy (2018), Smith and Anderson (2019), and Özer et al. (2023), it has been emphasized that ethical and security issues are crucial in the use of AI-supported learning tools in education. It has been highlighted that attention should be paid to these issues, and teachers should be informed about them. A study by Xie and Reider (2020) stated that teachers need sufficient training and support to utilize artificial intelligence tools effectively. In the study conducted by Köse et al. (2023), it was determined that in the processes of utilising artificial intelligence in education, attention should be paid by educational planners to ensure equal opportunities in education, ensuring data privacy, providing regular training for teachers on this technology, ensuring fairness in the nationwide use of artificial intelligence, and preventing the overuse of artificial intelligence. While similar studies, such as Aktaş (2021), found that teachers primarily perceive AI

in terms of mechanical structures (e.g., robots or computers), our study adds a nuanced understanding by revealing that teachers attribute broader meanings to AI, including 'interactive machine technology' and 'systems mimicking human intelligence.' This difference suggests that the understanding of AI is evolving among educators, potentially indicating increased awareness of its broader implications in education. The concerns about AI potentially reducing human involvement and fostering dependency among students, as reported in our study, mirror similar findings by Özer et al. (2023), who highlighted the potential risks to student autonomy and social development. These concerns resonate with broader debates in the literature about AI's ethical implications in education (Holmes et al., 2019; Jones & McCoy, 2018), which emphasize the need for careful, ethical considerations in AI integration. While our study contributes valuable insights into teachers' views on AI, it is important to acknowledge that the sample was limited to teachers from a specific region (Afyonkarahisar) and may not fully represent the diversity of perspectives found in other parts of Turkey or globally. Future studies should aim to incorporate a more diverse sample to better understand how geographical, cultural, and institutional contexts might influence teachers' perceptions of AI, as noted in the studies of Xie and Reider (2020) and Köse et al. (2023).

Teachers highlighted that AI could enhance the teaching and evaluation

processes by offering personalized learning experiences, supporting student assessments, and providing real-time feedback. AI could also help identify students' individual needs, tailor lesson plans accordingly, and improve the overall effectiveness of the learning process. However, it is essential to ensure data privacy, security, and ethical considerations when implementing AI tools, as emphasized by Holmes et al. (2019) and Xie and Reider (2020).

Our study contributes novel insights into teachers' perceptions of AI by revealing their concerns about the dehumanization of education, which has not been emphasized in much of the existing literature. This finding suggests that while AI is seen as a useful tool, educators are cautious about its broader implications for the teacher-student relationship. Additionally, our study underscores the importance of addressing the digital divide and teacher readiness in discussions of AI in education, ensuring that the technology benefits all students and teachers, not just those with privileged access.

Ethical and Practical Challenges

The Digital Divide

One of the major ethical challenges raised by our findings is the digital divide. Similar to the concerns expressed by Köse et al. (2023), teachers in our study were worried about the unequal access to AI technologies in different schools. AI has the potential to improve personalized learning, but if some students lack access to these tools, it could worsen educational inequalities.

Policymakers and educational leaders must address these disparities to ensure equal access to AI-driven educational resources.

Teacher Readiness

Another challenge identified in both our study and previous research (Xie & Reider, 2020) is teacher readiness. While many teachers in our study saw the potential of AI, they expressed concern about their lack of training and the challenge of implementing AI effectively in classrooms. As AI becomes a more prominent part of education, teachers must receive professional development to ensure they can utilize AI tools competently and ethically.

Data Privacy and AI Bias

Ethical concerns regarding AI in education are also highlighted by the need to protect student data and ensure the fairness of AI systems. Teachers in our study expressed concern about the security of student data collected by AI tools and the potential for bias in AI algorithms. These issues align with the concerns raised by Holmes et al. (2019) and emphasize the importance of transparency, data protection, and algorithmic fairness in the development and deployment of AI in education.

CONCLUSION

In conclusion, teachers perceive artificial intelligence as an advanced technology capable of mimicking human intelligence and as a contemporary teaching model supported by smart technologies. While many view AI as beneficial and necessary in the 21st

century, some express concerns about its potential to induce anxiety and replace teachers, suggesting that its implementation should be approached with caution. There are several positive effects of AI, such as enhancing school operations, enriching instructional environments, enabling objective assessments, and facilitating tasks for both students and teachers. However, some potential drawbacks include reduced human involvement in schools, limited hands-on learning opportunities, and challenges in assessing affective characteristics. Overall, teachers believe that artificial intelligence technologies can enhance the teaching process by enriching the learning environment, supporting personalized instruction, aiding in objective assessments, and providing valuable feedback in the evaluation process.

This study offers a valuable contribution to the theoretical understanding of AI in education, particularly in relation to the Technology Acceptance Model and Constructivist Learning Theory. Teachers' perceptions provide insights into how technology is adopted in educational settings. That teachers' belief in AI's usefulness and ease of use directly influences their willingness to integrate it into their teaching practices aligns with the technology acceptance model (Marikyan & Papagiannidis, 2024). Additionally, the potential of AI to personalize learning and enrich instructional environments corresponds with the principles of constructivist learning theory, which emphasizes active, student-centered learning.

The recommendations made by participating teachers regarding the use of artificial intelligence in education emphasize that AI should not be implemented independently from teachers but should instead be used under teacher supervision, with necessary precautions, in a limited and controlled manner. Careful usage within ethical boundaries and without exceeding security limits must be observed. Teachers also believe that artificial intelligence cannot replace the role of the teacher, and as such, the mission of teaching should not be assigned to AI. Additionally, they recommend that AI should not be used in education at an early age, as values such as ethics, conscience, and respect should be instilled before introducing AI, which should be reserved for secondary or higher education. Furthermore, it is crucial to design professional development programs that not only introduce the basic concepts of artificial intelligence but also focus on its practical applications in the classroom, with these programs tailored to the specific needs of different subject areas and grade levels to ensure teachers can integrate AI effectively.

This study explored teachers' perceptions of artificial intelligence (AI) in education, revealing key insights that contribute to the ongoing discourse in the field. Teachers generally view AI as a powerful tool for enhancing education, but express concerns about its potential to replace human teachers or reduce hands-on learning. The findings highlight AI's positive effects, such as enriching the learning environment, facilitating personalized

instruction, and streamlining assessment processes. However, there are concerns about the over-reliance on technology and its impact on students' affective development. The unique contribution of this study lies in its identification of the dual role of AI in education: as both a supportive tool and a potential source of anxiety for educators. The teachers' suggestions emphasize the importance of AI integration under teacher supervision and within ethical boundaries.

Implications

In line with the study's findings and the teachers' recommendations, artificial intelligence is now indispensable in many fields. Therefore, necessary efforts should be made to move in this direction. Furthermore, it is recommended to emphasize the importance of producing suitable educational tools for artificial intelligence in education, raising awareness among teachers and all education stakeholders to enable effective utilization of these tools in the educational process, taking precautions for their careful use, adhering to ethical principles, and instilling these principles in students. Additionally, it is recommended to include research that examines the effects of artificial intelligence tools on success, attitudes, and motivation in education, as well as applied research that reveals how these tools can be used more effectively and efficiently. Educators should be actively involved in the selection and implementation of AI tools in the classroom. Teachers' feedback should guide the adoption of AI tools to ensure that the chosen technologies align with their

teaching methods and the specific learning needs of their students. This collaboration between educators and AI developers can ensure that AI tools are user-friendly and pedagogically sound.

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Competing Interests

Authors have no financial or non-financial interest directly or indirectly related to the work submitted for publication. Authors agree to pay the publishing fee once the paper is accepted for publication in the journal.

Compliance with Ethical Standards

Ethical permission was obtained for the study from the Afyon Kocatepe University Social and Human Sciences Ethics Committee on 12.04.2023. (No:2023/145)

Disclosure of Potential Conflicts of Interest

The authors do not have any conflicts of interest to declare.

Research Involving Human Participants and/or Animals

There are people at work. Voluntary consent forms obtained from the participants are submitted to the relevant ethics committee while obtaining permission.

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Effectiveness of Indigenous Knowledge-Oriented Instructional Modules to Promote Biodiversity Literacy

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ABSTRACT

Biodiversity literacy (BL), which includes biodiversity knowledge (BK) and biodiversity awareness (BA), is essential to address the problem of biodiversity loss. There has been no precedent for teaching biodiversity topics by combining Western science with indigenous knowledge through a contextual Indigenous Knowledge-oriented Instructional Module (IKIM). This study highlights the significant role of the IKIM module in improving biodiversity literacy, demonstrating its effectiveness in integrating Western science and indigenous knowledge. A quasi-experimental design with a non-equivalent group design was employed, comprising a pre-test and a post-test. The IKIM is based on contextual theory and constructivism, which includes a series of instructional steps, such as stimulation, discussion of Western science, exploration of indigenous knowledge, and reflection. The findings indicated that the experimental group exhibited a more pronounced enhancement in biodiversity literacy scores than the control group. The experimental group showed a 6.72-point increase in biodiversity knowledge (BK) and a 10.92-point increase in biodiversity awareness (BA), while the control group showed a 1.40-point BK increase and a -0.12-point BA decrease. Hypothesis testing confirmed a significant difference in gain scores for both biodiversity knowledge and awareness between groups. The significance value is as follows: The p-values for the two tests were 0.000 and 0.001, respectively, with a significance level of $\alpha \leq 0.05$. The findings

indicate that IKIM, based on contextual theory, was an effective intervention for enhancing BL. The results suggest that IKIM enhances biodiversity literacy and aids contextual efforts to mitigate its loss.

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INTRODUCTION

There has been a significant decline in biodiversity recently (Cipullo, 2016), resulting in biodiversity loss (Kaşot & Özbaş, 2015). Biodiversity literacy (BL) must be promoted as a primary strategy to prevent biodiversity loss. Biodiversity literacy (BL) is comprised of two key elements: biodiversity knowledge (BK) and biodiversity awareness (BA) (Moss et al., 2014a; World Wildlife Fund (WWF) & World Council for Environmental Education (WCEE), 1996). The definitions of BK and BA were analyzed from the following documents: the Convention on Biological Diversity (CBD, 2013), Next Generation Science Standards (NGSS, 2013), the United Nations (UN, 2018), and the Indonesian curriculum. Based on this analysis, biodiversity knowledge (BK) can be defined as the ability to know about the diversity of organisms on Earth, including different levels of biodiversity (genetic, species, and ecosystem diversity), the value of biodiversity, factors that affect biodiversity, the role of ecosystems for biodiversity, threats and preservation of biodiversity, and environmental conservation. Meanwhile, BA can be defined as attitudes and actions towards the diversity of organisms, including threats and preservation of biodiversity.

The lack of understanding, knowledge, and awareness of biodiversity evidences the continued low status of BL in society (Barrutia et al., 2022; Moss et al., 2014a; Pedrera et al., 2021). The general public remains limited in its comprehension

of biodiversity (Hooykaas et al., 2020), including among younger demographics (Barrutia et al., 2022; Pedrera et al., 2021). Younger generations also often fail to recognize the intrinsic value of plants (Pedrera et al., 2021). Furthermore, there is a lack of understanding about the extent of biodiversity (Schneiderhan-Opel & Bogner, 2020a), as well as a dearth of knowledge about animal species native to specific areas (Hooykaas et al., 2019; Randler & Heil, 2021). Moss et al. (2014a) also found that some respondents initially demonstrated a lack of pro-biodiversity actions.

A study on BL was conducted with 1,065 high school students from March to June 2023. BL was measured using validated instruments, both test and non-test, demonstrating content and criterion validity. A multiple-choice test comprising 23 items assessed biodiversity knowledge (BK). In addition, a 30-item Likert-scale questionnaire assessed biodiversity awareness (BA). The results demonstrated that the average biodiversity knowledge (BK) was 48.39, indicating that the students were in the low criteria range. Most students (78.59%) were classified within the low criteria. Low BK was evident in the distribution of scores across the various indicators, including ecological principles and processes (47.97-low), problems and issues associated with biodiversity (50.34-low), and the investigation of biodiversity problems and action strategies (43.29-low).

The average biodiversity awareness (BA) was 72.09, within the sufficient criteria. Many students (44.13%) were

classified within the low criteria. The overall average of this BA is sufficient, as evidenced by the percentage of each indicator, including sensitivity and positive values towards biodiversity (74.51-sufficient) and personal and community efficacy related to biodiversity (behavior predictors) (70.23-sufficient). Students' knowledge can foster positive perceptions of biodiversity (Paradise & Bartkovich, 2021). Positive perceptions promote successful, long-term biodiversity conservation (Bennett, 2016). Improved understanding of biodiversity can also foster a sense of responsibility and commitment to biodiversity awareness (Adinugraha et al., 2024).

Low levels of biodiversity knowledge are influenced by several factors, including the lack of individual participation in biodiversity-related activities (Hooykaas et al., 2020), curriculum changes that have occurred over recent decades (Gerl et al., 2021), and a lack of skills to identify species (Paradise & Bartkovich, 2021). Promoting biodiversity literacy (BL) represents a crucial first step in preserving and conserving biodiversity (Hooykaas et al., 2019; Oliveira et al., 2019; Schneiderhan-Opel & Bogner, 2020a). Promoting BL can be achieved by incorporating biodiversity-related topics into the educational curriculum (Koulouri et al., 2022; Schneiderhan-Opel & Bogner, 2020a; UN, 1992).

Contextual learning theory and social constructivism are relevant approaches to fostering biodiversity literacy (BL) through real-world exploration of the surrounding environment. Contextual learning prioritizes

a student-centered approach by connecting abstract concepts to real-world experiences (Suryawati, 2018), making learning more meaningful and engaging (Westera, 2011), thereby enabling students to construct new knowledge (Hudson & Whisler, 2007) in a meaningful and engaging manner (Johnny, 2008). Similarly, social constructivism supports learning through flexible, collaborative experiences, allowing students to engage in active peer-to-peer interactions (Palit, 2018; Shah, 2019) and enhancing knowledge comprehension (Akpan et al., 2020).

Improving low BL can be done by implementing contextual learning theory, which encompasses a specific form of learning centered on biodiversity exploration. Students may engage in exploratory learning by visiting biodiversity-rich locations (Kamudu et al., 2022; Moss et al., 2014a; Schneiderhan-Opel & Bogner, 2020a). Such site-based exploratory learning has enhanced biodiversity literacy (Kamudu et al., 2022; Moss et al., 2014b, 2014a). Areas rich in biodiversity often have inhabitants who adhere to Indigenous knowledge (Adam et al., 2019; Gonçalves et al., 2021; Ishtiaq et al., 2013; Malekani, 2020; Selemanni, 2020). However, previous research has predominantly focused on either biodiversity literacy through site-based exploration or the separate role of Indigenous knowledge in environmental education. Limited research has explored how contextual learning theory can bridge these two dimensions by integrating Indigenous knowledge into biodiversity literacy programs. This

study addresses this theoretical gap by implementing the Indigenous Knowledge-oriented Instructional Module (IKIM), which systematically integrates Indigenous knowledge within a contextual learning framework to enhance biodiversity literacy.

Indigenous knowledge (IK) is also called local wisdom in some academic studies. IK comprises principles, skills, practices, rituals, and customs developed by a specific race or tribe and transmitted from generation to generation (Adam et al., 2019; Ksenofontov et al., 2019). IK is often found in biodiversity-rich regions inhabited by these groups (Adam et al., 2019; Gonçalves et al., 2021; Ishtiaq et al., 2013; Malekani, 2020; Selemani, 2020). One community that has retained IK is the Somongari Javanese community, residing in Somongari Village, Kaligesing District, Purworejo Regency, Central Java Province. During the observation period from January to August 2022, several instances of IK were identified that are still preserved by the Somongari Javanese community. These include traditional rituals, traditional coconut sugar production, and the utilization of animals in the community yard. To enhance learning experiences, IK and biodiversity can be integrated into instructional modules through multimedia content, interactive case studies, and hands-on activities, fostering deeper engagement with indigenous knowledge and biodiversity.

Instructional modules are teaching materials designed to foster student autonomy. They comprise objectives, sequences of learning activities, provisions,

and evaluation (Robinson & Crittenden, 1972; Utomo et al., 2020). Instructional modules about biodiversity have been developed by Schneiderhan-Opel & Bogner (2020b) to promote biodiversity conservation, with forest ecosystems as one example. Mumpuni et al. (2022) have developed instructional modules based on local wisdom regarding using plants for local communities. Existing instructional modules often separate Indigenous Knowledge (IK) and Western science instead of integrating them. Western science relies on empirical research, while IK encompasses traditional knowledge. Bridging these perspectives enhances biodiversity understanding. However, many modules lack a structured framework for integration, missing opportunities to make biodiversity education rigorous and culturally relevant. Students may struggle to connect scientific concepts with practical Indigenous wisdom without a clear strategy. Closing this gap is essential for fostering holistic biodiversity literacy.

Integrating these two knowledge systems means creating a complementary framework where scientific methodologies enhance the validation of IK while IK provides context-specific insights that Western science may overlook (Chakrabarty et al., 2022; Wilder et al., 2016). In the case of the Somongari Javanese community, ensuring that IK is incorporated into instructional modules will help contextualize biodiversity education, making it more relevant and applicable to students' lived experiences. Therefore, developing Indigenous Knowledge-Oriented

Instructional Modules (IKIM) is crucial for enhancing biodiversity literacy (BL).

This study aims to investigate the implementation of the learning process using indigenous knowledge-oriented instructional modules (IKIM) and to evaluate the effectiveness of this learning approach on BL. Biodiversity education is crucial, as it is designed to support BL effectively. Mumpuni et al. (2022) found that using instructional modules enhances knowledge about biodiversity. Moreover, instructional modules are crucial for cultivating pro-environmental conduct and biodiversity awareness (Schneiderhan-Opel & Bogner, 2020b). Instructional modules facilitate responsive, interactive, and effective learning in science (Bockholt et al., 2003; Haris & Osman, 2015; Verleger et al., 2005). As demonstrated by the studies of Moss et al. (2014a, 2014b) and Kamudu et al. (2022), inviting students to visit biodiversity sites can also enhance their biodiversity literacy. Therefore, this study hypothesizes that IKIM can positively impact biodiversity literacy, which includes biodiversity knowledge (BK) and biodiversity awareness (BA). The module allows students to learn about biodiversity and IK simultaneously. Learning using IKIM will enhance biodiversity knowledge and awareness, thus contributing to efforts to prevent biodiversity loss.

METHODS

Participants and Procedures

This study employed a quasi-experimental design utilizing the pre-test-post-test

non-equivalent group design. A quasi-experimental approach was chosen because it allows for investigating the effects of the instructional intervention in a natural classroom setting while maintaining a degree of control. Randomized controlled trials were not feasible due to ethical and practical constraints in school environments. The study employed a two-group design, comprising an experimental group (A) and a control group (B), with 25 high school students in each group. Participants were selected based on comparable academic performance, demographic characteristics, and school availability to ensure validity and minimize selection bias.

The gender distribution in Group A was 70% male and 30% female, while in Group B, it was 60% male and 40% female. The regional distribution in Group A included 40% of students from Purworejo and 60% from other areas, while Group B included 50% of students from Purworejo and 50% from other areas. The student population in both groups included individuals from diverse ethnic backgrounds, including Javanese, Papuan, Nusa Tenggara, Batak, and Chinese. The respondents were adolescents aged 14 to 18. Group A received instruction using the IKIM media, while Group B received instruction using textbooks without the IKIM media. Both groups were given a pre-test before Learning Meeting 1 and a post-test after Learning Meeting 8.

Data Collection

The data on the implementation of learning using IKIM was analyzed qualitatively,

covering the structure of IKIM, its distinctive characteristics, and how it integrates Western science with local knowledge. The development of IKIM involved integrating indigenous knowledge (IK) with Western biodiversity science. Examples of this integration include the use of plants and animals in traditional ceremonies, the utilization of local plants and animals for food production, and the role of backyard animals in supporting agroecosystems. These practices were aligned with Western scientific theories on biodiversity, such as ecosystem dynamics and species interdependence, to create a comprehensive instructional module. The validated instruments used included a 23-item multiple-choice test for evaluating BK and a non-test questionnaire comprising 30 items for evaluating BA. The BL instrument was adapted from the original WWF and WCEE (1996) versions and was validated for content and criterion. Content validation was conducted by three experts, each of whom is an expert in biology, botany, and environmental learning. Criterion analysis was performed using corrected item correlation with the IBM SPSS Statistics 20 application.

Data Analysis

The data analysis was conducted in two stages: descriptive and inferential. Descriptive analysis focused on implementing learning via the IKIM media and biodiversity literacy (BL) scores. Furthermore, a descriptive analysis was conducted on the BL scores, including BK and BA. Descriptive analysis

was performed by summing the BK and BA scores and transforming them into percentages. Furthermore, the scores were transformed into percentages and classified into three categories: high (excellent and above average), sufficient (average), and low (below average and failure). According to the criteria established by Briggs et al. (2023), the criteria above are calculated based on the percentage score as follows: “excellent” (90%-100%), “above average” (80%-89%), “average” (70%-79%), “below average” (60%-69%), and “failure” (0%-59%).

Inferential analysis was conducted to determine the appropriate statistical test for comparing the gain scores between the experimental group (Group A) and the control group (Group B). The gain scores were calculated as the difference between each group’s post-test and pre-test scores. An independent samples t-test and the Mann-Whitney U test were used to compare the gain scores between the two groups, as the focus was on examining differences between groups rather than within groups. The statistical hypotheses were formulated as follows: the alternative hypothesis (H_1) stated a significant difference in BK gain scores between Group A, which was treated with IKIM, and Group B, which did not receive IKIM treatment. Similarly, for BA gain scores, the alternative hypothesis (H_1) proposed a significant difference between Group A and Group B. Before conducting the t-test, the data analysis requirements were tested. Normality was assessed using the Shapiro-Wilk test, and homogeneity of variances was tested using Levene’s test. All

statistical analyses were performed using the IBM SPSS Statistics 20 application.

The Shapiro-Wilk test shows that the Sig. Value of the experimental BK gain scores (BK-A) is 0.004, while the Sig. Value of the control BK gain scores (BK-B) is 0.040. The Sig. value is <0.05 , so the BK-A and BK-B gain scores data are not normally distributed. The Sig. value of the experimental BA gain scores (BA-A) is 0.493, while the Sig. Value of the control BA gain scores (BA-B) is 0.913. The Sig. value is > 0.05 , so BA-A and BA-B gain scores are normally distributed. The Levene Test shows that the Sig. The value of gain scores, BK, is 0.387, and BA is 0.449. The Sig. value is > 0.05 , so the data of the BK and BA gain scores are homogeneous. BK-A and BK-B gain scores data were tested using the Mann-Whitney U test, while BA-A and BA-B gain scores data were tested using the independent-sample T test.

RESULTS AND DISCUSSION

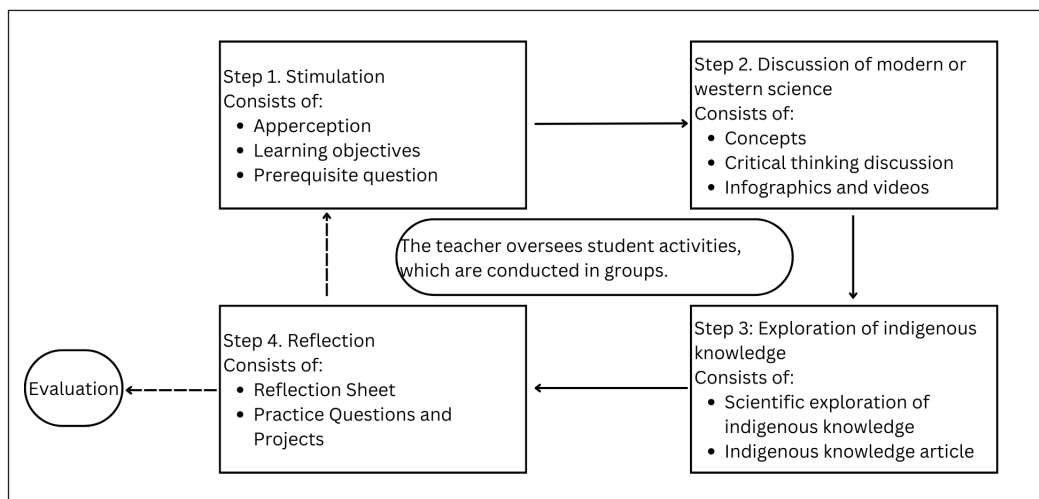
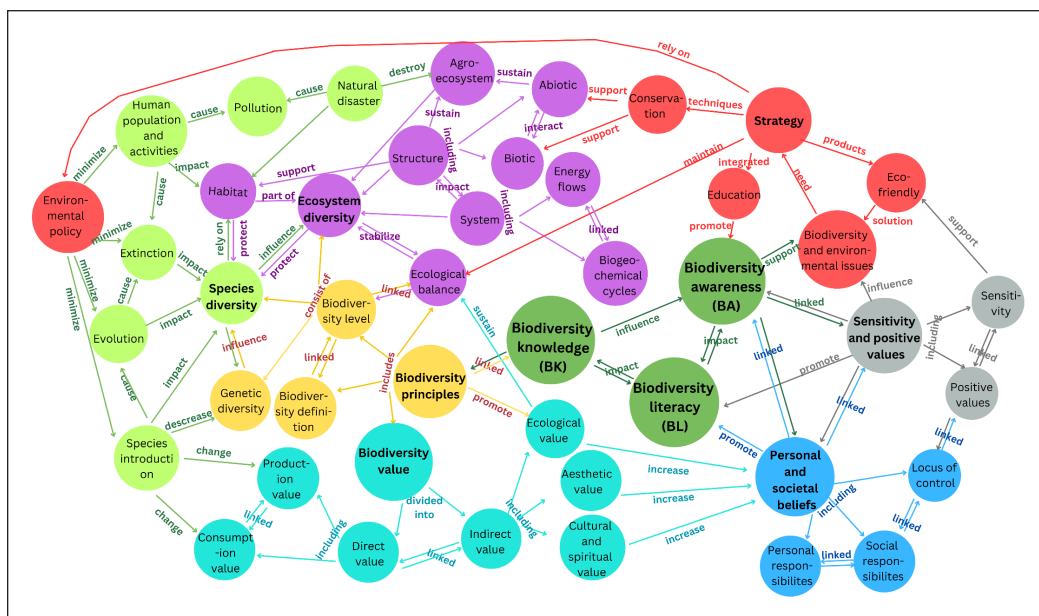
Implementation of IKIM in Learning

The IKIM, developed in this study, can be accessed via the link: <https://bit.ly/3REpiUn> or <https://bit.ly/biodiversityindigenous> (Adinugraha et al., 2023). IKIM offers a synthesis of contemporary Western scientific knowledge and traditional indigenous knowledge. IKIM is designed to support BL according to the development of local and global biodiversity and environmental issues. BL in IKIM encompasses several interconnected concepts, specifically BA and BK. BK covers concepts such as the principles of biodiversity, ecosystems,

biodiversity value, species diversity, and conservation strategies. BA includes concepts related to personal and social awareness, sensitivity, and positive values. These concepts are interconnected, as depicted in the concept map of BL presented in Figure 1.

Each learning activity in IKIM is based on contextual theory and consists of four sequential steps: stimulation, discussion of modern or Western science, exploration of Indigenous knowledge (IK), and reflection. The discussion step reflects the Western science approach, while the exploration step highlights the role of Indigenous knowledge in complementing biodiversity insights derived from Western science. Through IKIM media, students engage in collaborative learning within heterogeneous groups. In this context, 'heterogeneous' refers to group members with diverse attributes, including academic performance, competencies, and regional backgrounds. Teachers play a crucial role in facilitating these groups' formation while guiding students' learning processes. The instructional activity steps in IKIM are illustrated in Figure 2.

The stimulation provided in IKIM is initially presented as visual and textual representations at the outset of learning activities. The teacher performs apperception activities to create an atmosphere conducive to mental preparation, attracting the students' attention and focusing on the forthcoming lesson (Howard, 2002; Puteri, 2018). The images in the module are contextualized, focusing specifically on biodiversity and



Indigenous Knowledge in Somongari Village. Contextualizing concepts and examples in the book is essential, as it motivates students to pursue knowledge as something relevant and applicable to their lives (An & Chua, 2023). Contextualized

learning connects academic content to real-life contexts, thus facilitating long-term memory retention (Davtyan, 2014) based on experience (Muti, 2021).

Discussing modern or Western science is evident in students engaged in critical

thinking through the lens of biodiversity presented in IKIM. The Western scientific content under discussion is knowledge about nature that emerged in Europe around the 16th century (Cohen, 2010). The content of modern science discussed is derived from the Convention on Biological Diversity (CBD, 2013), Next Generation Science Standards (NGSS, 2013), the United Nations (UN, 2018), Indonesian curriculum, and references to both books and journals. Integrating Western science and IK is necessary to enhance biodiversity knowledge (Chakrabarty et al., 2022; Wilder et al., 2016).

The exploration of indigenous knowledge (IK) in IKIM is conducted through student activities aimed at collecting data about using plants and animals in traditional rituals, traditional coconut sugar production, and the exploitation of yard animals to benefit the ecosystem. IK provides knowledge of local practices on local biodiversity (Baul & McDonald, 2014; Malekani, 2020), which is transferred through communication between generations (Ksenofontov et al., 2019). IK also contains noble values that support positive characteristics such as non-discriminatory actions and mutual respect between students. Positive character possessed by students can promote ethical behavior among students (Singh, 2019). Students must foster cultural values through contextual knowledge based on surrounding cultural experiences (Triyanto & Handayani, 2020). The instructional design of IKIM is flexible, allowing adaptation to different

Indigenous Knowledge systems, making it a viable approach for diverse cultural contexts, including non-Indigenous students.

Reflection on IKIM is carried out at the end of the learning activity or as a closing. Students reflect by filling in the self-reflection sheet on IKIM. Although there is no precise consensus, reflection is constructing personal and internal knowledge through voluntary and repeated consideration and interpretation of one's experiences or beliefs (Tracey et al., 2014). Reflection is necessary for students to revisit what they have learned for improvement and deep learning (Chang, 2019). The findings of Ravana et al. (2023) said that sometimes activities in books focus too much on discussion but neglect feedback and reflection. Reflection at the end of learning activities in IKIM aims to determine the achievement of learning objectives before continuing with the following learning activity.

The student activities conducted within the framework of IKIM are founded upon the tenets of social constructivism. Vygotsky first proposed the social constructivist learning theory in 1968 (Akpan et al., 2020). This theory posits that all meaningful learning generates personal meaning through the individual's cultural knowledge and understanding (Palit, 2018). Constructivist activities have been demonstrated to enhance literacy (Ardiansyah & Ujihanti, 2018) by fostering active creation, interpretation, and reorganization of student knowledge (Shah, 2019). The social constructivist approach facilitates student interaction through

collaboration with guidance from the facilitator (Akpan et al., 2020; Palit, 2018).

Collaborative activities in IKIM are designed to develop cognitive knowledge in and outside the classroom. The development of cognitive knowledge is not an automatic process; instead, it is actively constructed within the learning environment (Liu & Matthews, 2005). A flexible and responsive learning environment is essential for effective constructivist teaching (Shah, 2019). If the activities mentioned above cannot be conducted outside the classroom, students may opt to engage in virtual visits via video links embedded within the IKIM platform. The images and video links are also related to the IK content, which results from research on the Somongari Javanese community using the principles of ethnobiology. As a field of study that examines the relationship between humans and organisms within the domains of biology, ecology, and culture (Albuquerque et al., 2014; Pierotti, 2020), ethnobiology is particularly relevant for understanding the indigenous knowledge of the Somongari Javanese community.

The IKIM media was implemented to promote BL by enhancing students' BK and BA. The IKIM media was developed based on eight key characteristics, including 1) an attractive appearance; 2) a communicative approach; 3) the inclusion of modern or Western science content; 4) the presentation of indigenous knowledge content; 5) a constructivist foundation; 6) literacy activities; 7) 21st-century skills; and 8) character education. Figure 3 provides an overview of the learning activities conducted using IKIM in the experimental group.

Effect of IKIM on Biodiversity Literacy (BL)

Description of Biodiversity Literacy (BL) Data

The mean BL post-test score (a combination of BK and BA scores) in Group A was higher than in Group B. The difference between the mean pre-test and post-test scores in Group A was also greater than in Group B. However, Group B also showed an increase in BL scores. BL can be promoted through learning activities (Koulouri et al., 2022;



Figure 3. Implementation of the use of IKIM: (a) Student learning activities in class; (b) Student learning activities in Somongari Village

**Note:* Photos have received permission from the school and students to be published

Schneiderhan-Opel & Bogner, 2020a; UN, 1992). During the pre-test, the mean BL-A score was lower than that of BL-B. However, in the post-test, the mean BL-A score exceeded that of BL-B. The increase in BL scores between the pre-test and post-test was more significant in Group A (17.64 points) compared to Group B (1.28 points). BK-A scores increased more than BK-B scores. The BA-A score increased more than the BA-B score, which decreased by only 0.12 points. The data is presented in Figure 4.

When group A was given the pre-test, the average percentage score of BK-A and BA-A per indicator was lower than BK-B and BA-B. After being treated, the average post-test percentage score of BK-A and BA-A per indicator (4 out of 5) surpassed BK-B and BA-B. In addition to the increase in post-test scores, the difference in the scores for each indicator

between the post-test and pre-test of group A was higher than that of group B. This increase in the percentage score indicates that IKIM can contribute to the increase in BL scores from pre-test to post-test in group A. Comparative data on the average increase in each indicator before and after the implementation of learning is presented in Table 1.

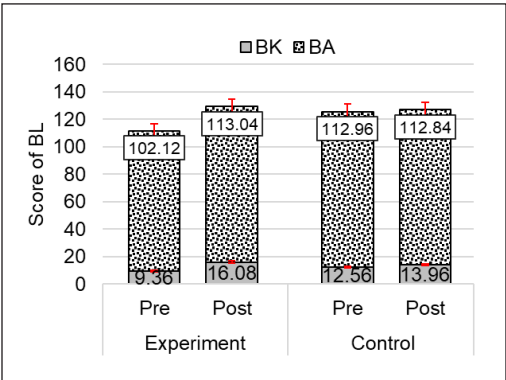


Figure 4. Mean BL score of control and experimental groups

Table 1
Comparison of average improvement per BL indicator before and after learning implementation

Variable	Indicators	Experiment (A) (%)		The difference (%)	Control (B) (%)		The difference (%)
		Pre-test	Post-test		Pre-test	Post-test	
Biodiversity knowledge	1 Ecological principles and processes related to biodiversity	38.00	74.80	96.84	48.00	60.00	25.00
	2 Problems and issues related to biodiversity	42.40	69.60	64.15	60.00	64.80	8.00
	3 Biodiversity problem investigation and action strategies	44.00	54.67	24.24	58.67	49.33	-15.91
Biodiversity awareness	4 Sensitivity and positive values of biodiversity issues	70.34	78.15	11.11	78.77	77.05	-2.19
	5 Have beliefs about the personal and societal efficacy of biodiversity	66.35	73.22	10.35	72.66	73.84	1.68

In the BK variable, the sub-indicator that experienced a high increase in group A was sub-indicator 1.3, while the lowest was sub-indicator 3.2. The sub-indicator that experienced a high increase in group B was sub-indicator 1.3, while the lowest was sub-indicator 3.1. In the BA variable, the sub-indicator that experienced a high increase in group A was sub-indicator 4.1,

while the lowest was 5.3. The sub-indicator that experienced a high increase in group B was sub-indicator 5.3, while the lowest was sub-indicator 4.2. A comparison of the differences in improvement of each sub-indicator is presented in Table 2.

Learning biology using IKIM could increase the number of high-criterion students on the BK and BA scores. In the BK

Table 2
Comparison of improvements in each sub-indicator between experimental and control groups

Variable	Indicator	Subindicator	Experiment (%)	Control (%)
Biodiversity knowledge	1 Ecological principles and processes related to biodiversity	1.1 Explain the diversity at the genetic, species, and ecosystem levels.	80.00	29.55
		1.2 Identify ecological factors that affect biodiversity.	45.83	0.00
		1.3 Analyze the indirect biodiversity values, including cultural, recreational, and ecological values.	158.06	42.50
	2 Problems and issues related to biodiversity	2.1 Analyze the human activity factors and political, economic, and social issues that lead to biodiversity loss.	79.59	12.00
		2.2 Explain the direct value of biodiversity in terms of consumption and production.	60.00	-11.11
		2.3 Explain the role of science and technology in biodiversity.	43.75	17.95
	3 Biodiversity problem investigation and action strategies	3.1 Analyze environmental and biodiversity issues.	33.33	-26.67
		3.2 Predict strategies to address environmental and biodiversity issues.	-7.14	-10.53
		3.3 Relate sustainable development goals to environmental and biodiversity issues.	71.43	-10.00
Biodiversity awareness	4 Sensitivity and positive values of biodiversity issues	4.1 Have sensitivity to biodiversity.	11.71	-1.84
		4.2 Have positive values towards biodiversity.	10.14	-2.70
	5 Have beliefs about the personal and societal efficacy of biodiversity	5.1 Have a locus of control.	12.20	1.90
		5.2 Have an assumption or personal responsibility for biodiversity.	8.50	0.27
		5.3 Have social responsibility for biodiversity.	7.25	2.51

variable, there was an increase in the number of high-criterion students in groups A and B. The number of high-criteria BK-A students was higher than BK-B. In the BA variable, there was an increase in the number of students meeting high criteria in group A but a decrease in group B. The increase in group A proves the statement that the module can present interactive instructions (Haris & Osman, 2015; Verleger et al., 2005) so that

it can increase student learning motivation and help teachers facilitate the teaching and learning process (Syafii & Yasin, 2013). Learning the topic of biodiversity in both experimental and control groups reduced the number of BK and BA students. The data is presented in Figure 5.

BL promotion can improve understanding of biodiversity value knowledge (Moss et al., 2014a) and student

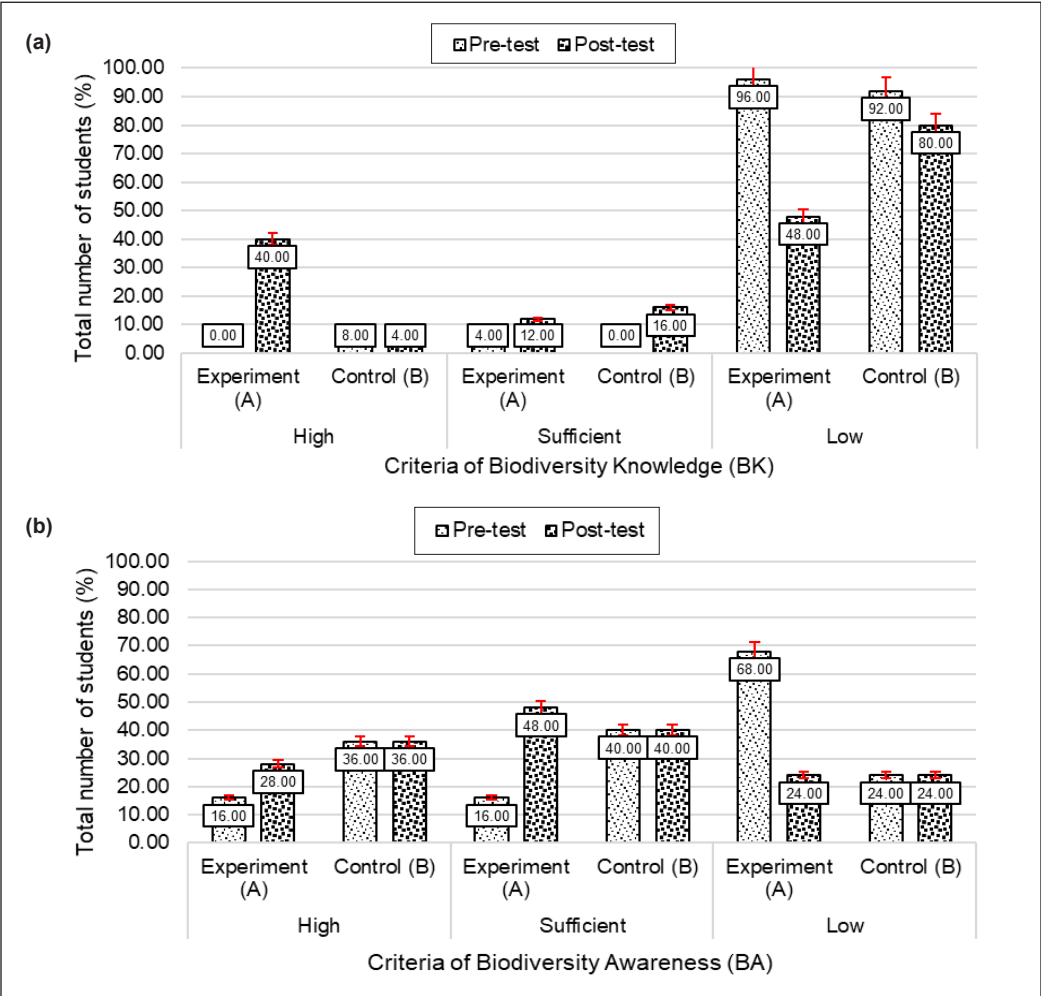


Figure 5. Biodiversity literacy criteria of students in groups A and B: (a) Biodiversity Knowledge (BK); and (b) Biodiversity Awareness (BA)

Source: Authors' work

knowledge of species diversity (Barrutia et al., 2022). This statement is supported by the data on the average BK and BA scores, which increased more in group A than B. The increase in BL score and percentage in group A needs to be tested against the increase in BK and BA scores in the two groups to determine significance. The difference test was conducted to compare the pre-and post-test gain scores of BK and BA between groups A and B. The increase in biodiversity knowledge (BK) helped shape students' positive perceptions of biodiversity (Paradise & Bartkovich, 2021) because knowledge is the most significant influence in creating biodiversity awareness (BA).

Hypothesis Testing of the Effect of IKIM on BL

Effect of IKIM on Biodiversity Knowledge (BK)

The Mann-Whitney U test was used to compare the final BK scores of groups A and B because the data were not normally distributed. Based on the output table of the Mann-Whitney U Test results, the Sig. = 0.000 value is obtained, which means that the Sig. Value is smaller than the Sig. Value. $\leq \alpha$ 0.05. Thus, H_0 is rejected, and H_1 is accepted, so there is a difference in BK gain scores between group A treated with IKIM and group B without IKIM treatment. The Mann-Whitney U Test statistic is presented in Table 3.

The difference in BK gain scores needs to be seen based on descriptive analysis to determine whether there is a significant

effect. Based on the results of descriptive analysis, the mean rank value of Group A is 34.94, and the mean rank of Group B is 16.06. This mean rank data shows an increase in the gain scores of Group A after getting the IKIM treatment, which is higher than Group B. Therefore, IKIM treatment has a significant effect on BK. The description of the data on BK gain scores is presented in Table 4.

Table 3
Statistic test Mann-Whitney U Test gain scores BK at pre-test–post-test non-equivalent group design

Biodiversity knowledge (BK)	
Mann-Whitney U	76.500
Wilcoxon W	401.500
Z	-4.598
Asymp. Sig. (2-tailed)	0.000

Table 4
Data description of gain scores BK at pre-test–post-test non-equivalent group design using Mann-Whitney U Test

Group	N	Mean rank	Sum of Ranks
A	25	34.94	873.50
B	25	16.06	401.50

Effect of IKIM on Biodiversity Awareness (BA)

An independent-sample T-test was used to compare the increase in BA scores of groups A and B because the data were normally distributed. Based on the output table of the independent-sample test results, the Sig. = 0.001 value is obtained, which means that the Sig. The value is smaller than the Sig. Value. $\leq \alpha$ 0.05. Thus, H_0 is

rejected, and H1 is accepted, so the gain scores BA between group A treated with IKIM and group B without IKIM treatment. The independent-sample T-test statistic is presented in Table 5.

The difference in BA gain scores should be analyzed using descriptive analysis to determine its significance. Descriptive analysis shows that the mean gain score of group A (10.92) increased after treatment, whereas group B (-0.12) decreased. This indicates that IKIM treatment has a significant effect on BA. The description of the BA gain score data is presented in Table 6.

The analysis showed a significant increase in the experimental group’s BK and BA gain scores after receiving IKIM treatment, which was higher than in the control group. The significant increase in

BK and BA scores means that learning using IKIM can be used to support BL. Activities in IKIM that invite students to visit biodiversity-rich sites and learn about indigenous knowledge have been proven effective in teaching BL. The results of Moss et al.’s (2014a) research on activities to visit places related to biodiversity successfully improve the understanding of biodiversity knowledge. Research by Kamudu et al. (2022) also said that students who visit biodiversity-rich areas will experience an increased understanding of the importance of biodiversity, conservation measures, and endemic species.

Incorporating IKIM activities involving students learning Indigenous knowledge has also been demonstrated to be an effective pedagogical approach to teaching BL. IKIM

Table 5
Statistic test independent-sample T Test gain scores BA pre-test–post-test non-equivalent group design

Equal variances	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Assumed	0.582	0.449	3.532	48	0.001	11.040	3.125	4.756	17.323
Not assumed			3.532	45.895	0.001	11.040	3.125	4.748	17.331

Table 6
Data description of gain scores BA at pre-test–post-test non-equivalent group design using independent-sample t-test

Group	N	Mean	Std. Deviation	Std. Error Mean
A	25	10.9200	12.17552	2.43510
B	25	-0.1200	9.79507	1.95901

provides knowledge about local practices related to local biodiversity (Baul & McDonald, 2014; Malekani, 2020), which is transferred through communication between generations (Ksenofontov et al., 2019). The ecological approach introduced by IK provides a distinctive and comprehensive understanding of biological systems (Adam et al., 2019), contributing to expanding biodiversity inventories, monitoring, and species recovery initiatives (Wilder et al., 2016). The effectiveness of IK in conserving biodiversity has been demonstrated in numerous studies (Kosoe et al., 2020; Ogar et al., 2020). In particular, IK is an invaluable tool in biodiversity conservation (Ali, 2021; Kosoe, 2020). The instructional design of IKIM can be adapted to various educational contexts by integrating region-specific Indigenous knowledge, ensuring its applicability across different cultural and ecological settings, particularly through modifications in instructional steps and learning activities that align with local traditions and ecological practices

One limitation of this study is that the IKIM effectiveness test was conducted with only two classes: one experimental group (A) and one control group (B). Future studies could expand the sample size and include a broader range of participants to enhance generalizability. Indigenous knowledge-oriented learning should be further mainstreamed in biodiversity education. Future research could explore approaches to integrating Indigenous knowledge or local wisdom in biodiversity education at a broader scope (Adinugraha, 2022) at a

broader scope such as incorporating diverse cultural perspectives, integrating Indigenous knowledge into multiple subjects, applying it across different education levels, utilizing digital technology, or expanding its implementation to global contexts.

Indonesia is rich in culture and biodiversity that can be used as a means of science learning (Zubaidah & Arsih, 2021), such as *Randai* (Arsih et al., 2019), medicinal plants (Azis et al., 2020; Lestari et al., 2020), and animals for medicine (Supiandi et al., 2023). Learning using IKIM is expected to be our contribution as a global community to support the SDGs document, namely goal number 15 on living on land or terrestrial ecosystems, and the Aichi Biodiversity Targets document. In addition, IKIM is the first step in preventing biodiversity loss through education, incorporating virtual field trip videos and interactive links to support online and hybrid learning, ensuring wider accessibility and engagement with Indigenous knowledge.

CONCLUSION

The Loss of biodiversity represents a significant challenge that can be addressed by incorporating biodiversity-related learning into educational curricula. Biodiversity-related knowledge is acquired through visits to sites that exemplify biodiversity and exposure to indigenous knowledge. Such learning must be supported by instructional modules, such as the Indigenous Knowledge-Oriented Instructional Modules (IKIM), which have been successfully implemented. Implementing IKIM in biology learning

can enhance students' biodiversity literacy (BL). The analysis demonstrated that the mean post-test score for BL, a composite of biodiversity knowledge (BK) and biodiversity awareness (BA) scores in Group A, was higher than in Group B. This increase was substantiated by hypothesis testing. This increase was confirmed by hypothesis testing on the gain scores for BK and BA. The results of the analysis indicate that the IKIM treatment exerts a significant influence on both BK and BA. The significant effect on BK and BA indicates that IKIM can support the promotion of biodiversity literacy (BL). IKIM presents a combination of modern or Western science content and indigenous knowledge delivered through a four-step process: stimulation, discussion of Western scientific concepts, exploration of indigenous knowledge, and reflection. This research recommends that the learning should incorporate IKIM-based learning modules, which blend Indigenous knowledge and modern science, into biology curricula to enhance students' biodiversity literacy (BL).

Additionally, teachers may consider exploring local indigenous knowledge and integrating it with learning topic theories from Western science relevant to the biology curriculum. This combined approach can help contextualize learning. IKIM, based on contextual theory, can be a novel pedagogical tool for teaching science, particularly biology. Promoting BL through IKIM based on contextual theory is expected to contribute to addressing and resolving biodiversity loss and other environmental

issues. This study fills a theoretical gap by demonstrating how contextual learning theory can integrate Indigenous knowledge and Western science in biodiversity education. IKIM bridges these aspects within a structured contextual learning framework, enhancing biodiversity literacy through a culturally relevant approach. These findings highlight the importance of contextual learning in making science education more inclusive and meaningful.

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Factors Influencing Online Impulsive Buying Intentions on Weibo: The Mediating Role of Arousal

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ABSTRACT

Impulse buying on social media platforms has become a defining feature of the digital commerce landscape, particularly in visually immersive and socially interactive environments like Weibo. With over 600 million active users, Weibo merges entertainment, peer influence, and algorithmic recommendations, creating conditions ripe for unplanned consumer purchases. Despite its growing importance, the psychological mechanisms behind impulse buying intention in such contexts remain underexplored. This study investigates how five key marketing stimuli—promotion, visual appeal, positive user reviews, product features, and price—influence consumers' impulse buying intention on Weibo, with emotional arousal examined as a mediating factor. Drawing on responses from 400 Chinese Weibo users, the study finds that visual appeal and price have a direct and significant influence on impulse buying intention, while promotion, user reviews, and product features affect behavior indirectly through emotional arousal. Arousal emerged as the strongest overall predictor of unplanned purchase intentions. These findings carry important implications for practitioners. Marketers should prioritize emotionally resonant content, especially visually engaging formats and value-driven messaging, to effectively stimulate impulse buying. Rather than relying solely on discounts or product descriptions, strategies that evoke excitement, urgency, and visual impact are more likely to influence consumer behavior on fast-moving platforms like Weibo. The results offer actionable insights for content creators, brand managers, and digital strategists seeking to optimize social commerce engagement by aligning marketing stimuli with consumers' emotional triggers.

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INTRODUCTION

The phenomenon of impulse buying, traditionally associated with physical retail spaces, has undergone a significant transformation with the emergence and rapid expansion of digital commerce. Defined as a spontaneous and emotionally driven purchase made without pre-shopping intentions, impulse buying has been well-examined in offline contexts (Kabamba & Smith, 2022). However, the evolution of online shopping platforms has introduced novel triggers-such as real-time interactivity, algorithmic personalization, and peer-generated content-that have intensified the emotional dimensions of consumer decision-making (Mahpour et al., 2024). In this digital milieu, social media platforms like Weibo stand out for their ability to blend social interaction with commerce, thereby cultivating an environment ripe for impulsive consumption.

Weibo, one of China's most prominent social networking platforms, exemplifies the fusion of entertainment, communication, and online shopping. With its algorithmically curated feeds, influencer promotions, short-form videos, and live-streamed product showcases, Weibo presents users with a multisensory shopping experience that is immediate and emotionally charged (Teng et al., 2023). The platform's design reduces cognitive deliberation and amplifies affective engagement, encouraging quick, emotionally influenced purchase decisions. Consequently, Weibo is not just a marketplace-it is a persuasive environment where marketing cues and social influence

converge to lower users' resistance to spontaneous spending. Despite this, the underlying psychological mechanisms that drive impulsive purchases in such emotionally immersive platforms remain underexplored.

To better understand these mechanisms, the present study adopts Hawkins Stern's Impulse Buying Theory (1962), which posits that impulse purchases are often the result of external stimuli rather than deliberate planning (Hong et al., 2022). Stern's (1962) framework identifies key situational drivers-such as promotional intensity, sensory appeal, and product accessibility primary factors that can trigger unplanned buying intention. Applying this theory to a contemporary platform like Weibo provides a unique opportunity to investigate how these digital stimuli, particularly visual design, user reviews, and flash promotions, impact consumer buying intention (Wang et al., 2024). More critically, this study introduces the concept of emotional arousal as a mediating mechanism, suggesting that arousal bridges the relationship between external stimuli and impulsive buying intentions. This emotional lens provides a nuanced extension to Stern's (1962) model, aligning it with the affective dynamics of today's social commerce landscape.

Despite the widespread integration of social networking and online shopping, academic inquiry has yet to fully explore how impulse buying manifests within these hybrid environments. Most existing research focuses on traditional e-commerce

platforms like Amazon or Taobao, often overlooking the socially interactive and emotionally stimulating nature of platforms like Weibo. Furthermore, Li (2025) in his study conceptualizes impulse buying as a cognitive process, marginalizing the emotional and situational triggers that are pivotal in social media contexts. In addition, he argued that there is also a lack of comprehensive models that incorporate emotional constructs such as arousal, even though arousal has been shown to significantly influence attention, interest, and behavioral intention outcomes in digital settings. Hence, this theoretical oversight leaves a critical gap in understanding how various stimuli interact with emotional states to influence spontaneous purchases.

Weibo's unique ecosystem—marked by entertainment, personalization, and peer engagement—complicates the simplistic application of rational-choice theories to online consumer buying intention. Features such as visual saturation, promotional bombardment, and influencer endorsements create emotionally charged environments where consumers are more susceptible to arousal-induced decisions (Brussee, 2022). Kursan Milaković & Ahmad (2023), in their study, acknowledge the emotional underpinnings of online impulse buying, but few have empirically examined the mediating role of arousal, particularly in social commerce settings. As such, this study seeks to bridge the theoretical and empirical gaps by exploring how external stimuli on Weibo—namely promotions, visuals, reviews, and pricing—induce arousal, and how this

emotional state, in turn, predicts impulsive buying intentions. Framed within Stern's (1962) theoretical model and expanded through the lens of emotional mediation, this study proposes a more integrative and emotionally sensitive understanding of impulse buying in social media environments. By focusing on Weibo, the research not only contextualizes the findings within an increasingly relevant digital platform but also contributes to broader conversations about the psychological impact of digital consumer culture (Bashar et al., 2023).

This study offers both theoretical and practical contributions. Theoretically, it expands Stern's Impulse Buying Theory (1962) by integrating emotional arousal as a mediating construct within the context of social commerce. This conceptual enhancement reflects the evolving dynamics of consumer buying intention in digital ecosystems, where emotional and situational cues frequently override rational planning. Practically, the study offers actionable insights for digital marketers, platform designers, and e-commerce strategists. By identifying which platform-specific stimuli most strongly influence impulsive purchases and clarifying the role of arousal, businesses can optimize content layout, promotional timing, and influencer strategies to better engage users and stimulate buying intention (Arruda Filho & Oliveira, 2023). In sum, this study enhances the theoretical sophistication and practical applicability of impulse buying research in the era of social media-driven commerce.

LITERATURE REVIEW

Impulse Buying Intention in the Digital Age

Impulse buying intention refers to a consumer's conscious or subconscious readiness to make an unplanned purchase triggered by external or internal stimuli. While early foundational studies by Clover (1950) and Stern (1962) conceptualized impulse buying primarily as a spontaneous behavior, more recent research shifts focus to the intention phase, emphasizing the psychological inclination that precedes the actual purchase (Mishra et al., 2023). This shift is particularly relevant in the digital age, where the pathway from impulse trigger to intention is increasingly shaped by emotionally charged, real-time interactions within social media and e-commerce ecosystems.

Platforms like Weibo exemplify this transformation by integrating peer-generated content, influencer marketing, and entertainment, creating fertile grounds for cultivating impulse buying intentions (Li, Wang, & Cao, 2022). These platforms leverage algorithmic personalization to tailor product recommendations, social proof through user interactions and reviews, and emotional arousal via engaging multimedia content, all of which dynamically influence consumers' psychological readiness to buy impulsively.

This evolution necessitates a conceptual expansion beyond traditional behavioral models to include these novel antecedents specific to digital shopping contexts. Understanding how such stimuli influence

impulse buying intention is crucial because intention often precedes actual behavior and serves as a reliable predictor in online environments, where the immediacy and emotional intensity of stimuli are heightened (Chaurasia et al., 2024). Consequently, research that integrates these digital-era factors provides a more comprehensive framework for explaining and predicting impulse buying in contemporary social commerce settings.

Impulse Buying Theory

Stern's (1962) Impulse Buying Theory offers a foundational framework to understand unplanned purchasing triggered by situational and environmental cues, emphasizing that impulse buying often bypasses rational decision-making processes. Stern (1962) classified impulse buying into four types: pure impulse buying (spontaneous purchases of novel items), reminder impulse buying (triggered by seeing an item that reminds the consumer of a need), suggestion impulse buying (prompted by a new product suggestion), and planned impulse buying (where some planning precedes the impulse; (Hong et al., 2022)). This classification highlights how external cues can provoke immediate purchase responses without extensive cognitive deliberation.

Though originally developed in the context of physical retail, Stern's (1962) theory has been extended to online commerce, where digital stimuli such as visual content, time-limited deals, influencer endorsements, and social engagement serve

as situational cues analogous to those in brick-and-mortar settings. The convenience and accessibility of online shopping further increase the propensity for impulse buying, as Stern anticipated, by reducing barriers to purchase and enhancing stimulus exposure.

In addition, Chen et al. (2023) in their research integrate emotional arousal as a mediating mechanism within Stern's (1962) framework, recognizing that digital stimuli do not merely trigger behavior but also influence consumers' psychological readiness or intention to act impulsively. Hence, platforms like Weibo, promotions, visual appeal, user reviews, product features, and price cues function as stimuli that elevate emotional arousal, which in turn fosters impulse buying intentions. This emotional dimension enriches Stern's (1962) stimulus-response model by incorporating the internal affective processes that precede impulsive purchases in digital environments.

Moreover, the evolving consumer landscape-with increased social influence susceptibility, experience-based consumption, and digital engagement-necessitates expanding Stern's (1962) original model to include website quality, virtual atmosphere, browsing behavior, and online reviews as contemporary stimuli (Feng et al., 2024). These additions reflect the complex interplay of cognitive and emotional factors in online impulse buying, confirming the continued relevance and adaptability of Stern's (1962) theory in explaining impulse buying intention in the digital age.

Promotions

Promotions such as flash sales, limited-time offers, and exclusive discounts serve as powerful triggers of impulse buying intention by creating urgency and perceived scarcity, which elevate the consumer's perceived value and prompt spontaneous purchase intentions (Suguna & Nivedha, 2025). On platforms like Weibo, these promotions are often embedded within influencer content and user interactions, enhancing their legitimacy and social proof. However, the frequent and excessive exposure to promotional stimuli can lead to consumer fatigue and skepticism, potentially diminishing their effectiveness over time. Emotional arousal has been identified as a key mediator that sustains the impact of promotions by converting initial attention into genuine purchase intention. The immersive and interactive nature of social commerce platforms further intensifies this emotional engagement, facilitating impulsive buying behavior.

Visual Appeal

Visual stimuli-including high-quality images, immersive videos, and aesthetically pleasing layouts-play a critical role in suggestion-type impulse buying by capturing attention and eliciting affective responses that bypass rational deliberation. On Weibo, where users scroll rapidly through content-rich feeds, visually rich storytelling determines which products attract interest (Shrestha, 2025). However, visual saturation can cause fatigue, reducing emotional engagement and thus the effectiveness of visual cues. Studies

suggest that visual appeal influences impulse buying intention indirectly by elevating emotional arousal, which sustains consumer engagement despite high content volume.

User Reviews

User-generated reviews (UGRs) function as digital word-of-mouth and serve as potent social validation cues. Positive reviews from peers or influencers on Weibo enhance product credibility and emotional resonance, both of which are crucial antecedents of impulse buying intention (Shrestha, 2025). Nevertheless, concerns about authenticity, such as fake or biased reviews, can undermine trust. Research indicates that the emotional connection consumers form with authentic reviews mediates their influence on impulse buying intention more strongly than purely cognitive assessments of factual content (Anindito & Handarkho, 2022). This underscores the importance of emotional arousal as a bridge between exposure to reviews and impulsive purchase decisions.

Product Features

In the absence of tactile evaluation in online shopping, consumers rely heavily on product descriptions, videos, and influencer demonstrations to assess product features. Features that signal novelty, exclusivity, or high functionality can trigger impulse buying intentions by satisfying latent desires or needs. On Weibo, short-form content and influencer endorsements highlight these features effectively. However, given users' limited attention spans, emotional reactions to simplified or visually appealing product

features may play a more significant role than detailed rational analysis in driving impulse buying intentions (Zeng et al., 2024). Emotional arousal elicited by such features is thus a critical psychological pathway converting attention into intent.

Price

Price remains a central stimulus influencing impulse buying intention. Discounts, perceived bargains, and value framing can override cognitive restraints and encourage immediate purchase decisions. On Weibo, price cues are frequently integrated with promotional messages and social proof, creating a compelling emotional value proposition. However, transparency and comparative pricing can also induce rational scrutiny, which may suppress impulsive tendencies. Recent findings suggest that the emotional interpretation of price-how consumers feel about the deal or value-better explains variations in impulse buying intention than the objective price itself (Rahman et al., 2022).

Arousal

Arousal, defined as an elevated emotional state characterized by excitement or stimulation, plays a pivotal role in shaping impulse buying intention. It acts as a psychological mechanism that transforms cognitive and environmental stimuli into affect-driven motivation, effectively bridging the gap between external triggers and internal decision-making processes (Hatta, Miesvontoko, & Hidayat, 2025). In emotionally rich digital environments

like Weibo—where entertainment, social interaction, and marketing converge—arousal is often heightened unconsciously, intensifying consumers' readiness to act on impulse.

Similarly, Al-Abbadi et al. (2022) empirically demonstrated that heightened arousal enhances decision readiness and attentional focus, thereby increasing consumers' susceptibility to impulsive purchase intentions. This finding aligns with the broader affective neuroscience literature, which posits that arousal amplifies motivational states and reduces cognitive control, facilitating spontaneous behaviors. By mediating the relationship between digital stimuli (such as promotions, visual appeal, and social proof) and impulse buying intention, arousal provides a critical emotional pathway that explains why certain online marketing tactics succeed in provoking unplanned purchases.

Integrating arousal as a mediating variable enriches Stern's (1962) stimulus-response model by adding an emotional dimension, thereby offering a more comprehensive framework for understanding impulse buying in the digital age. This theoretical advancement not only deepens academic insight into consumer behavior but also offers practical implications for marketers. Designing emotionally resonant digital campaigns that effectively elevate arousal can enhance the conversion of consumer attention into impulse buying intentions, optimizing marketing effectiveness on platforms like Weibo (Feng et al., 2024).

METHODOLOGY

Sampling and Participants

The study employed purposive sampling to identify and recruit respondents who were deemed information-rich and relevant to the research objectives. Participants were required to be between 18 and 45 years old and have prior experience purchasing through Weibo. This purposive criterion ensured that data were collected from individuals who were both familiar with the platform's commercial features and actively engaged in digital shopping behaviors. Although the non-probability sampling method may limit the generalizability of the findings beyond the sampled population, it was deemed appropriate for the exploratory and model-testing nature of the study, which necessitates a sample that reflects the specific behavioral and contextual attributes of the phenomenon under investigation (Manan et al., 2023).

A total of 400 valid responses were obtained for the main analysis. The sample size was determined based on recommendations in the Raosoft Sample Size Calculator. Given the complexity of the model and the number of constructs involved, the sample size was sufficient to perform Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS software (Hair et al., 2022).

Survey Method and Instrumentation

To operationalize this design, data were collected using a structured, self-administered online questionnaire. The

online survey method was selected due to its efficiency, cost- cost-effectiveness, and alignment with the digital behavior of the target population. Given that the focus of the study is on consumer behavior within a digital platform, administering the questionnaire online ensures ecological validity by reaching respondents in their natural online environment. This approach also aligns with best practices in digital consumer research, where online surveys facilitate timely and contextually relevant data collection (Manan et al., 2022).

The survey was disseminated through various digital channels, including Weibo, direct messages, and related online communities, to ensure respondents were active users of the platform. Before participating, respondents were informed about the nature and purpose of the study, and their informed consent was obtained digitally, adhering to ethical standards in online research.

The survey has two (2) sections: Section A consists of the indicators that examine the effects of promotion, visual appeal, positive user comments, product features, and price on impulse buying intention and arousal. Section B focuses on respondents’ demographic information.

Specifically, each statement in Section A was rated using a 5-point Likert scale, with respondents evaluating their level of agreement for each question: 1 representing “strongly disagree,” 2 representing “disagree,” 3 representing “neutral,” 4 representing “agree,” and 5 representing “strongly agree.”. This study designed a total of seven variables, each comprising seven items, all developed based on the characteristics of the Weibo platform.

In addition, Table 1 explains the items Operational Definition, and it was constructed using previously validated scales, adapted to the Weibo context to ensure relevance and clarity. The statements were developed, tailored to the characteristics of the Weibo platform to evaluate promotion, visual appeal, positive user reviews, product features, price, and impulse buying intention, aiming to better align with the research context of consumer impulse buying intention. Each construct was measured using multiple items rated on a five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5).

Section B primarily collects demographic information about the respondents, including gender, age, educational level,

Table 1
Operationalisation definition of the constructs

Constructs	Operational Definition	Citations
Promotion	Promotion is defined as a tool seller use to persuade their target consumers to purchase products within a short period of time, such as coupons, discounts, buy- buy-one-get-one-free, special prices, and other strategies.	Akram et al. (2018)
Visual appeal	Visual appeal refers to the visual elements of products on the Weibo platform that attract consumer attention and evoke emotional responses, including fonts, texts, colors, images, animations, and videos.	Rahman et al. (2022)

Table 1 (continue)

Constructs	Operational Definition	Citations
Positive user reviews	Positive user reviews refer to affirmative or advantageous reviews about products or services on the Weibo platform, which can generate social pressure to influence other users' impulse buying intentions, especially endorsements, recommendations, or trends from friends, family, and influential individuals.	Singh et al. (2023)
Product features	Product features refer to the information generated by the product's own construction, typically manifested in consumers' emphasis on the design, functionality, quality, composition, and other unique innovative features that help satisfy consumers' preferences and needs.	Hatta, Miesvontoko, & Hidayat, (2025)
Price	Price is defined as the amount of money that consumers are willing to pay when they perceive that the price of a product on the Weibo platform is advantageous compared to similar products or is consistent with its quality.	Shrestha (2025)
Arousal	Arousal refers to the degree to which individuals feel stimulated, excited, or alert when exposed to various stimuli on the Weibo social networking platform.	Feng et al., (2024)
Impulse buying intention	Impulse buying intention refers to a person's plan to buy products immediately and spontaneously. This feeling occurs due to the temptation to buy a product. Impulse buying intention will occur when a person manages to convince himself that he needs to buy the product.	Chen, Chen, & Lin (2023)

monthly income, employment status, frequency of online shopping, types of products purchased, monthly spending, and annual total spending. Data from this section provides contextual support for the study and allows for an analysis of the consumption intention characteristics of different groups.

Pre-Test and Pilot Study

Before full deployment, the questionnaire underwent a pre-test involving 15 Weibo users to assess the clarity and comprehensibility of the items. Feedback from the pre-test informed minor linguistic revisions to ensure cultural and contextual appropriateness. Subsequently, a pilot study with 50 participants was conducted to evaluate the internal consistency and

reliability of the instrument. All constructs demonstrated satisfactory reliability, with Cronbach's alpha values exceeding the accepted threshold of 0.70, confirming the instrument's suitability for the main study.

Data Analysis Technique

Data were analyzed using PLS-SEM to assess both the measurement and structural models. The measurement model was evaluated based on indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Indicator reliability was confirmed through outer loadings exceeding 0.70, while internal consistency was assessed using Cronbach's alpha and composite reliability coefficients, both of which met the minimum benchmark of 0.70. Convergent validity was verified

through Average Variance Extracted (AVE) values above 0.50. Discriminant validity was examined using the Fornell–Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio (Henseler et al., 2015). These assessments confirmed the dimensionality and construct distinctiveness of the measurement items.

The structural model was then evaluated by examining path coefficients, statistical significance (via bootstrapping with 5,000 subsamples), coefficient of determination (R^2), and predictive relevance (Q^2) (Sarstedt et al., 2021). The significance of the direct and indirect effects, particularly the mediating role of arousal, was tested using the bootstrapping procedure to generate confidence intervals and assess mediation. Model fit was assessed using the Standardized Root Mean Square Residual (SRMR), where values below 0.08 indicated an acceptable fit between the data and the proposed theoretical model (Sarstedt et al., 2021).

Ethical Considerations

This study adhered to established ethical standards in the design, distribution, and analysis of the online survey. All participants were provided with clear information regarding the purpose of the research, the voluntary nature of their participation, and their right to withdraw at any stage without penalty. Consent was obtained electronically before survey participation, and participants proceeded only after confirming their agreement (Indriastuti et al., 2024). To protect privacy, the survey did not collect any personally identifiable information.

All responses were anonymous and treated with strict confidentiality. Data were stored securely and used solely for academic analysis. No incentives were offered that might unduly influence participation, thereby minimizing the risk of coercion or bias.

Given the nature of the study, which involved self-reported data on consumer preferences and behaviors, the research posed minimal risk to participants. Ethical principles concerning autonomy, beneficence, and non-maleficence were observed throughout, in accordance with guidelines from institutional research ethics committees and general best practices for online survey research (Singh & Sagar, 2022). Furthermore, by employing validated measurement scales, ensuring sample relevance, and applying appropriate statistical methods, the study maintains methodological transparency and integrity. These practices support the ethical goal of producing research that is credible, replicable, and valuable to the broader scholarly community.

RESULTS

Demographic Profile

A total of 400 respondents participated in this study, all active Weibo users aged 18–45 with prior experience in online shopping via the platform. The demographic insights are crucial not only for understanding user profiles but also for interpreting how specific traits influence impulse buying intention within a digital social commerce environment. The sample was

predominantly female (74.8%, $n = 299$), a demographic known for higher engagement with visually rich, socially interactive content, which is characteristic of Weibo's shopping environment. Prior research indicates that female users often exhibit stronger emotional responses and are more influenced by promotional stimuli-factors that positively correlate with the formation of impulse buying intention. This aligns with recent findings showing that women tend to be more susceptible to affective triggers in social commerce, such as limited-time offers and influencer endorsements, which enhance impulsive purchase likelihood (Karahan, 2025). Consequently, the gender distribution suggests that female Weibo users are likely to experience greater susceptibility to intention formation triggered by the platform's emotionally immersive features.

A majority (70%, $n = 280$) of respondents were aged between 18 and 25 years- representing a digitally native, high-engagement group. Younger consumers are more responsive to algorithmic content, peer influence, and mobile interface design, all of which stimulate purchase intentions more rapidly than older demographics. Empirical studies confirm that Generation Z and young Millennials exhibit heightened impulsive buying tendencies due to their familiarity with real-time content and openness to trend-driven consumption (Moghddam et al., 2024). Their emotional reactivity and social conformity further amplify impulsive intentions, especially when exposed to emotionally charged stimuli such as flash sales or live-stream promotions on Weibo.

Over half of the respondents (55.8%) held a master's degree, and 28% held a Doctorate. While higher education levels are traditionally associated with more rational and deliberate decision-making, recent research reveals that highly educated consumers may still form strong impulse buying intentions when exposed to persuasive, emotion-laden digital content (Mahpour et al., 2024). This demographic, though discerning, is not immune to intention shifts triggered by well-targeted visual, promotional, or social proof cues on Weibo. Indeed, studies suggest that educated consumers often engage in impulse purchases as a form of experiential consumption or stress relief, particularly in social commerce contexts where emotional arousal is heightened. Thus, education level does not necessarily mitigate impulsive buying intention but may influence the underlying motivations and contexts in which it occurs.

Nearly half of the participants (48.3%) reported monthly incomes under RMB 2,000, reflecting a predominantly student or early-career demographic. Research indicates that lower-income consumers tend to exhibit heightened sensitivity to perceived deals, promotions, and value-based framing stimuli that significantly enhance impulse buying intention, especially when combined with urgency cues such as limited-time offers or flash sales. Despite generally conservative spending habits due to financial constraints, these consumers are prone to impulsive purchases when the perceived benefits or discounts outweigh their usual

financial caution (Teng et al., 2023). These dynamic underscores the importance of promotional strategies tailored to value-conscious segments in social commerce settings like Weibo.

The predominance of students (75%) in the sample aligns with the age and income profiles observed. Students typically spend substantial time on digital platforms and demonstrate high engagement with influencer content and trend-based recommendations, which are key drivers of impulsive buying intentions. Their impulsive purchase decisions are often emotionally and socially motivated rather than grounded in practical necessity, reflecting the psychological mechanisms underlying unplanned buying behavior in younger consumers (Ji et al., 2022). This demographic thus represents an ideal population for studying the formation of impulse buying intentions within social commerce, where peer influence and emotional arousal play pivotal roles.

As shown in Table 2, 40% ($n = 160$) of respondents reported shopping on Weibo several times a week, 19.5% shopped once a week, and 6.3% shopped daily. These high engagement levels reflect not only routine purchasing behavior but also a heightened state of purchase readiness. Frequent exposure to Weibo's algorithm-driven promotions, influencer content, and interactive features creates a shopping environment where users are continually stimulated by marketing cues-factors known to foster impulse buying intention (Wang et al., 2024). Research confirms that

repeated interaction with social commerce platforms increases emotional arousal and spontaneous purchase inclinations, as consumers become more receptive to situational triggers embedded in the content-commerce ecosystem.

The product categories purchased further illuminate users' susceptibility to impulse buying intention. Fashion and apparel were the most purchased items (37.3%), followed by beauty and personal care (21.8%) and food and beverages (21.8%). These categories typically involve low- to medium-involvement products that lend themselves well to impulse-driven purchases, especially when marketed using visually appealing and emotionally engaging content. Weibo's visual-first interface and influencer-driven trends reinforce emotional appeal and social validation, creating favorable conditions for unplanned purchase intentions. Studies show that such product types require minimal cognitive effort, allowing emotional triggers to more easily convert into purchase intentions in social commerce contexts (Li, 2025).

Moreover, Table 2 also reveals that 45.3% of respondents spent less than RMB 500 per month, while 34.5% spent between RMB 501–1,000. Only 5.8% reported spending over RMB 2,000 monthly. These figures suggest that although Weibo users are generally budget-conscious, their regular spending indicates repeated exposure to consumption triggers. Even within modest financial means, users may demonstrate strong impulse buying intentions-particularly when presented

Table 2
Demographic of respondents

Demographic Variable	Frequency	Percentage (%)
Gender		
Female	299	74.8
Male	101	25.3
Age		
18-25	280	70
26-30	72	18
31-35	21	5.3
36-40	19	4.8
41-45	8	2
Education		
Master Degree	223	55.8
Doctoral Degree	112	28
Bachelor's Degree	34	8.5
Professional Certification	20	5
High School and Below	11	2.8
Monthly Income		
< RMB 2,000	193	48.3
RMB 2,001-3,000	80	20
RMB 3,001-4,000	34	8.5
RMB 4,001-5,000	36	9
RMB 5,001-6,000	49	12.3
> RMB 6,001	8	2
Employment Status		
Student	300	75
Full-time Employees	49	12.3
Self-employed	30	7.5
Part-time Employees	10	2.5
Unemployed	7	1.8
Housewife	4	1
Shopping Frequency		
Several times a week	160	40
Once a week	78	19.5
Every 2 weeks	64	16
Once a month	36	9
Rarely	37	9.3
Daily	25	6.3

Table 2 (continue)

Demographic Variable	Frequency	Percentage (%)
Product Purchase Category		
Fashion & Apparel	149	37.3
Beauty & Personal Care	87	21.8
Food & Beverages	87	21.8
Electronics	56	14
Health & Wellness	7	1.8
Others	14	3.5
Monthly online shopping Spending		
< RMB 500	181	45.3
RMB 501-1,000	138	34.5
RMB 1,001-1,500	38	9.5
RMB 1,501-2,000	20	5
> RMB 2,000	23	5.8
Annual online shopping Spending		
< RMB 5,000	173	43.3
RMB 5,001-10,000	103	25.8
RMB 10,001-20,000	81	20.3
RMB 20,001-30,000	23	5.8
> RMB 30,000	20	5

with limited-time deals or peer-endorsed content that creates a sense of urgency. Research highlights that such micro-level purchase intentions accumulate over time and are shaped by persuasive marketing mechanisms inherent in social commerce platforms (Teng et al., 2023).

On an annual scale, 43.3% of respondents spent less than RMB 5,000, and 25.8% spent between RMB 5,001–10,000. Notably, 5.0% of users spent more than RMB 30,000 annually, indicating a segment of high-intention, high-commitment consumers. These consumers are likely influenced by a combination of emotional arousal, lifestyle alignment, and frequent promotional

stimuli-factors which not only increase their shopping behavior but also reflect a strong predisposition toward impulsive purchase intentions. Even among moderate spenders, consistent annual engagement with the platform suggests a regular intention to buy, often triggered by emotional or situational cues embedded within Weibo's ecosystem.

Structural Equation Modeling (SEM) Analysis

This study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS software to test the hypothesized relationships among constructs and the mediating role of arousal. PLS-SEM was selected because it is robust in handling complex, prediction-oriented models involving multiple constructs, especially when data are non-normally distributed. It is suitable for behavioral marketing studies where the aim is to explore theoretical extensions and test latent constructs with multiple indicators.

The SEM analysis proceeded in two stages: (1) assessment of the measurement model to evaluate the validity and reliability of constructs, and (2) assessment of the structural model to test hypothesized relationships and mediation effects.

Measurement Model Evaluation

Convergent Validity

To ensure the robustness of the constructs used in this study, the reliability and validity of the measurement model were evaluated through internal consistency reliability, indicator reliability, and convergent validity.

The results, as summarized in Table 3, demonstrate that all constructs met the recommended thresholds, confirming the appropriateness of the measurement model for further structural equation modeling. In terms of internal consistency reliability, all constructs reported Cronbach's Alpha (CA) values ranging from 0.767 to 0.857, and Composite Reliability (CR) values ranging from 0.843 to 0.891. These results exceed the commonly accepted benchmark of 0.70, indicating that the items within each construct consistently measure their respective latent variables. For instance, impulse buying intention, the dependent variable in this study, exhibited excellent reliability with a CA of 0.832 and a CR of 0.877. The mediating variable, arousal, also demonstrated strong reliability, with a CA of 0.831 and CR of 0.877, reinforcing its conceptual soundness as a central emotional mechanism in the model.

Indicator reliability was assessed using outer loading values, with all items recording loadings above the acceptable threshold of 0.60, and most items surpassing 0.70, as shown in Table 3. For example, the item "If the product captures my interest, I will buy it even if it is not included in my shopping plan" loaded at 0.774 on impulse buying intention, while the item "I feel excited when I browse products that interest me on Weibo" achieved a loading of 0.769 on arousal. These results confirm that each indicator contributed significantly to the measurement of its respective construct.

Convergent validity was evaluated using the Average Variance Extracted (AVE), with all constructs achieving AVE values equal to

Table 3
Internal consistency reliability, convergent validity and indicator reliability

Items	Outer Loading	Cronbach's Alpha (CA)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Promotion				
Promotions on Weibo influence my decision to buy products or services.	0.740	0.819	0.869	0.525
I consider promotions on Weibo to be great bargains.	0.704			
Flash sales on Weibo create a sense of urgency for me to buy products.	0.740			
Buy-one-get-one-free on Weibocaughty at the attention.	0.751			
Coupons offered by Weibo promotions can attract me.	0.737			
Promotions on Weibo lead me to explore new products or brands.	0.671			
Visual appeal				
The layout of product information on Weibo is visually pleasing.	0.705	0.857	0.891	0.538
The color combinations of products displayed on Weibo are attractive and beautiful.	0.763			
The product's images displayed on Weibo are very appealing.	0.724			
The visual effect of the product video on Weibo is very good.	0.766			
The product animations on Weibo are creative and innovative.	0.695			
Product images on Weibo are clear and high-quality.	0.745			
The fonts and text styles of the product display on Weibo catch my eye.	0.734			
Positive user reviews				
Positive user reviews on Weibo influence my decision to buy a product.	0.714	0.801	0.857	0.500
I am more likely to trust a product that has many positive reviews on Weibo.	0.700			
Positive user reviews on Weibo give me confidence in the quality of the product.	0.733			
I often read positive reviews on Weibo before making a purchase decision.	0.640			
Positive recommendations from family make me more likely to buy the product.	0.730			
Positive endorsements from friends make me more likely to buy the product.	0.723			
Product feature				
When I purchase products, I consider their design.	0.726	0.836	0.876	0.504

Table 3 (continue)

Items	Outer Loading	Cronbach's Alpha (CA)	Composite Reliability (CR)	Average Variance Extracted (AVE)
I pay attention to product functions that align with my preferences.	0.744			
I consider the quality of products to meet my needs.	0.707			
I will check the safety of products before purchase.	0.663			
I consider the product's unique innovative features or technology.	0.630			
The materials and composition of products on Weibo are clearly described and trustworthy.	0.736			
The product's features on Weibo are very user-friendly and influence my purchasing decisions.	0.753			
Price				
I feel tempted when the price of a product on Weibo is consistent with the product quality.	0.650	0.767	0.843	0.519
I feel like buying it immediately when the price on Weibo is competitive with similar products.	0.721			
Products' prices on Weibo are generally lower than on other platforms.	0.704			
Products' prices on Weibo are transparent and clear.	0.762			
Products' prices on Weibo are reasonable.	0.757			
Arousal				
I feel excited when I browse products that interest me on Weibo.	0.769	0.831	0.877	0.543
I feel excited when I explore new product categories on Weibo.	0.738			
I feel excited when I see promotions (coupons, discounts, etc.) on Weibo.	0.745			
I feel excited when I see visually appealing product displays.	0.690			
I feel excited when I see products with positive user reviews.	0.726			
I feel excited when I see that the products' prices are advantageous compared to similar products.	0.749			
Impulse buying intention				
I will have the intention to buy items that I didn't originally intend to buy when I browse on Weibo.	0.735	0.832	0.877	0.543
If the product captures my interest, I will buy it even if it is not included in my shopping plan.	0.774			
I am inclined to purchase items outside my specific shopping goal when browsing Weibo.	0.726			
I spontaneously buy things while browsing Weibo.	0.727			
I will not resist the temptation to buy it when I see visually appealing products.	0.766			

or above the minimum threshold of 0.50, as detailed in Table 2. The AVE values ranged from 0.500 to 0.543, indicating that over half of the variance in each construct's indicators was explained by the latent construct itself. The construct visual appeal achieved a CR of 0.891 and an AVE of 0.538, suggesting high consistency and convergent validity. Similarly, promotion recorded a CA of 0.819, a CR of 0.869, and an AVE of 0.525, confirming its measurement adequacy. Constructs such as price (CA = 0.767, CR = 0.843, AVE = 0.519) and product features (CA = 0.836, CR = 0.876, AVE = 0.504) also demonstrated satisfactory measurement properties. Although positive user reviews showed the lowest AVE at 0.500, it still met the minimum threshold and was supported by acceptable reliability (CA = 0.801, CR = 0.857).

Overall, the above data provide evidence that all constructs in the model achieved the necessary benchmarks for indicator reliability, internal consistency, and convergent validity. These results confirm that the measurement model is statistically sound and conceptually well-defined, providing a reliable foundation for the structural model analysis examining the relationships between external stimuli, arousal, and impulse buying intention.

Discriminant Validity – HTMT Criterion

To further assess the validity of the measurement model, discriminant validity was evaluated using the Heterotrait-Monotrait (HTMT) ratio of correlations, as recommended by recent methodological

research (Henseler et al., 2015). Discriminant validity ensures that each construct in the model is empirically distinct from the others, meaning it measures a unique concept not captured by other constructs. An HTMT value below 0.90 is generally accepted as indicative of sufficient discriminant validity in behavioral and social sciences research (Hair et al., 2022).

As shown in Table 4, all HTMT values in the model were below the conservative threshold of 0.90, thereby confirming acceptable levels of discriminant validity across all construct pairs. The HTMT value between arousal and impulse buying intention was 0.830, indicating that although closely related, the two constructs remain conceptually distinct. Likewise, the HTMT value between price and impulse buying intention was 0.756, and between visual appeal and impulse buying intention was 0.708, both of which are well within the acceptable range and demonstrate that consumers' emotional responses, price perceptions, and aesthetic experiences are distinguishable in influencing their purchasing intentions.

Other key comparisons include the HTMT value of 0.844 between arousal and promotion, 0.879 between arousal and price, and 0.831 between arousal and positive user reviews, which, although relatively high, remain below the critical threshold. These values are theoretically justifiable given that arousal serves as a mediating emotional response closely tied to the external stimuli in the model. Importantly, even the highest HTMT value observed—0.879 between

Table 4
Discriminant validity: Heterogeneous Trait-Single Trait (HTMT)

	1	2	3	4	5	6	7
1. Arousal							
2. Impulse buying intention	0.830						
3. Price	0.879	0.756					
4. Product feature	0.769	0.595	0.836				
5. Promotion	0.844	0.671	0.813	0.647			
6. Positive user reviews	0.831	0.616	0.856	0.810	0.698		
7. Visual appeal	0.767	0.708	0.760	0.745	0.651	0.692	

arousal and price—did not exceed the threshold, indicating that the constructs are sufficiently distinct for structural equation modeling.

Furthermore, all HTMT values involving product features (e.g., 0.595 with impulse buying intention, 0.836 with price, and 0.745 with visual appeal) were below the 0.90 cut-off, supporting the distinctiveness of functional product assessments from emotional and visual stimuli. Similarly, positive user reviews exhibited HTMT values such as 0.616 with impulse buying intention and 0.698 with promotion, further supporting discriminant validity (Henseler et al., 2015).

In summary, the results presented above confirm that all constructs satisfy the HTMT criterion for discriminant validity. These findings reinforce the measurement model’s robustness and validate the use of the constructs in subsequent structural path analysis. The clear empirical separation between constructs enhances confidence in the theoretical distinctions made between stimuli, emotional states, and behavioral intentions in the context of impulse buying on Weibo.

***Discriminant Validity – HTMT
Confidence Intervals (Bias-Corrected)***

To further confirm the discriminant validity of the constructs, this study employed the bias-corrected bootstrapping method to generate confidence intervals for the Heterotrait-Monotrait (HTMT) ratios, as recommended by Henseler et al. (2015). This approach provides a more stringent test by examining whether the 95% confidence interval for the HTMT value includes 1.00. In addition, Henseler et al. (2015) argue that if the interval does not include 1.00, discriminant validity between the constructs is established, indicating that the constructs are empirically distinct.

As presented in Table 5, all HTMT confidence intervals fell well below the critical upper threshold of 1.00, thus confirming the presence of discriminant validity among the measured constructs. For example, the HTMT value between arousal and impulse buying intention was 0.431, with a 95% confidence interval ranging from 0.296 to 0.564. Since the interval does not include 1.00, it indicates a clear empirical distinction between the two constructs, despite their strong theoretical relationship.

Table 5

Discriminant validity: HTMT confidence intervals bias corrected

	Original Sample (O)	Sample Mean (M)	Bias	2.50%	97.50%
arousal -> impulse buying	0.431	0.431	0.000	0.296	0.564
price -> arousal	0.182	0.182	-0.001	0.070	0.282
price -> impulse buying	0.179	0.182	0.003	0.059	0.301
product feature -> arousal	0.104	0.105	0.001	0.008	0.201
Product feature -> impulse buying	-0.047	-0.050	-0.003	-0.168	0.073
promotion -> arousal	0.312	0.312	0.000	0.209	0.413
promotion -> impulse buying	0.065	0.068	0.002	-0.056	0.177
review -> arousal	0.211	0.212	0.000	0.114	0.309
review -> impulse buying	-0.044	-0.040	0.003	-0.188	0.094
visual appeal -> arousal	0.176	0.175	0.000	0.068	0.275
visual appeal -> impulse buying	0.229	0.225	-0.003	0.113	0.349

Similarly, the relationship between price and arousal showed an HTMT value of 0.182, with confidence bounds from 0.070 to 0.282, and between price and impulse buying intention, the value was 0.179 with a confidence interval from 0.059 to 0.301. These results affirm that although price is associated with both arousal and buying intention, it remains a statistically distinct construct in the model.

In contrast, non-significant pathways also showed consistency with theoretical expectations. For example, product feature to impulse buying intention yielded a small and non-significant path coefficient of -0.047, with a confidence interval that spanned zero (-0.168 to 0.073), reinforcing the lack of a meaningful relationship. A similar pattern was observed for positive user reviews to impulse buying intention, with a path coefficient of -0.044 and a confidence interval of -0.188 to 0.094, indicating that this variable does not directly influence impulse buying intention

within the current model. Conversely, significant indirect paths—particularly those involving arousal—were supported. The relationship from promotion to arousal was statistically significant with a path coefficient of 0.312 and a confidence interval from 0.209 to 0.413, suggesting that emotionally framed promotions successfully activate arousal. Similarly, visual appeal to arousal (0.176; 95% CI: 0.068 to 0.275) and visual appeal to impulse buying intention (0.229; 95% CI: 0.113 to 0.349) were both significant, supporting the role of aesthetic content in stimulating both emotional response and spontaneous purchase inclinations.

Overall, the HTMT bias-corrected confidence intervals presented offer strong evidence of discriminant validity among all key constructs. Moreover, the significance and direction of the confidence intervals complement the theoretical model, confirming that constructs such as price, promotion, visual appeal, and arousal

maintain their conceptual uniqueness while contributing meaningfully to the prediction of impulse buying intention.

Overall Model Fit

The overall model fit of the structural model was assessed using three key indicators: the coefficient of determination (R^2), predictive relevance (Q^2), and the standardized root mean square residual (SRMR). As shown in Table 6, the R^2 value for arousal was 0.676, indicating a substantial level of explained variance, while the R^2 for impulse buying intention was 0.533, reflecting a moderate level of predictive power according to Hair et al. (2022) classification. These values suggest that the independent variables in the model account for a significant portion of the variance in both arousal and impulse buying intention, demonstrating the model’s robustness and explanatory capability.

In terms of predictive relevance, the Q^2 values for arousal and impulse buying intention were 0.359 and 0.282, respectively. Since both values are greater than zero, the model demonstrates adequate predictive relevance based on the blindfolding procedure, confirming the robustness of the model’s predictive capability. The SRMR value for the model was 0.071, which is below the acceptable threshold of 0.08,

indicating a good model fit between the proposed model and the observed data.

These results collectively confirm that the structural model exhibits satisfactory levels of explanatory power, predictive relevance, and overall model fit, justifying its suitability for further hypothesis testing and theoretical interpretation. Model Path Analysis.

To examine the hypothesized relationships among the constructs, path coefficients were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with a bootstrapping procedure of 5,000 subsamples. The results, as presented in Table 7, reveal which direct relationships in the model are statistically significant in predicting impulse buying intention and arousal, the mediating variable.

Among the direct predictors of impulse buying intention, arousal emerged as the strongest and most statistically significant predictor ($\beta = 0.431, t = 6.339, p = 0.000$), supporting its central mediating role in the model. Visual appeal also showed a significant positive effect ($\beta = 0.229, t = 3.564, p = 0.000$), indicating that aesthetically engaging content directly enhances consumers’ impulsive buying tendencies. Similarly, price had a significant direct effect ($\beta = 0.179, t = 2.812, p = 0.005$), suggesting that perceived affordability contributes to spontaneous purchasing behavior.

In contrast, three independent variables—promotion, positive user reviews, and product features—did not show significant direct effects on impulse buying intention.

Table 6
The overall model fit

Model	R^2	Q^2	SRMR
Arousal	0.676	0.359	
Impulse buying intention	0.533	0.282	0.071

Table 7
Model path analysis

Relationship Testing	Original Sample (O)	Sample Mean (M)	Standard Deviation	T- Statistics	P-Values
Promotion → Impulse Buying Intention	0.065	0.069	0.059	1.102	0.270
Visual Appeal → Impulse Buying Intention	0.229	0.225	0.064	3.564	0.000
Positive User Reviews → Impulse Buying	-0.044	-0.041	0.072	0.609	0.542
Product Features → Impulse Buying	-0.047	-0.050	0.063	0.744	0.457
Price → Impulse Buying Intention	0.179	0.181	0.064	2.812	0.005
Promotion → Arousal	0.312	0.313	0.053	5.901	0.000
Visual Appeal → Arousal	0.176	0.175	0.055	3.225	0.001
Positive User Reviews → Arousal	0.211	0.212	0.050	4.200	0.000
Product Features → Arousal	0.104	0.106	0.049	2.144	0.032
Price → Arousal	0.182	0.181	0.054	3.354	0.001
Arousal → Impulse Buying Intention	0.431	0.428	0.068	6.339	0.000

Promotion ($\beta = 0.065$, $t = 1.102$, $p = 0.270$), user reviews ($\beta = -0.044$, $t = 0.609$, $p = 0.542$), and product features ($\beta = -0.047$, $t = 0.744$, $p = 0.457$) were found to be statistically non-significant. These findings imply that while these variables may influence consumers in other contexts, they do not directly stimulate impulse buying intention without emotional mediation.

However, when examining the predictors of arousal, all five independent variables— promotion, visual appeal, positive user reviews, product features, and price—had significant effects. Promotion significantly influenced arousal ($\beta = 0.312$, $t = 5.901$, $p = 0.000$), suggesting that emotionally framed promotional messages can excite consumers. Visual appeal also positively affected arousal ($\beta = 0.176$, $t = 3.225$, $p = 0.001$), reinforcing the importance of visually stimulating product displays. Positive user reviews ($\beta = 0.211$,

$t = 4.200$, $p = 0.000$), product features ($\beta = 0.104$, $t = 2.144$, $p = 0.032$), and price ($\beta = 0.182$, $t = 3.354$, $p = 0.001$) were all statistically significant predictors of arousal, demonstrating that these stimuli contribute to emotional activation even if they do not directly drive impulse buying intention.

These findings highlight that arousal plays a mediating role, transmitting the emotional influence of external stimuli (especially promotion and price) toward impulse buying intention. The results validate the theoretical model, especially Hawkins Stern’s assertion that emotional and environmental stimuli are crucial in driving spontaneous purchase behavior.

Mediation Analysis

To examine the indirect effects of marketing stimuli on impulse buying intention, this study conducted a mediation analysis using arousal as the mediating variable.

The analysis was based on a bootstrapping procedure with 5,000 subsamples to assess the significance of indirect paths. As shown in Table 8, arousal significantly mediated the relationships between promotion, visual appeal, and price with impulse buying intention. These findings support the theoretical proposition that emotional activation is a necessary psychological mechanism that links external stimuli to spontaneous purchase intentions.

Specifically, the indirect effect of promotion on impulse buying intention through arousal was statistically significant ($\beta = 0.135, t = 4.807, p = 0.000$), despite the non-significance of the direct effect. This highlights that promotions influence buying tendencies only when they successfully stimulate emotional excitement. Likewise, visual appeal exerted a significant indirect effect ($\beta = 0.076, t = 2.874, p = 0.004$), confirming that aesthetic stimuli elicit arousal, which then increases the likelihood of unplanned purchases. Price also showed a significant mediation effect ($\beta = 0.079, t = 3.218, p = 0.001$), reinforcing the idea that perceived affordability works not only cognitively but also emotionally to influence impulse buying intention.

Conversely, the indirect effects of positive user reviews ($\beta = 0.091, t = 1.963, p = 0.050$) and product features ($\beta = 0.045, t = 1.732, p = 0.083$) were weaker. While the mediation path for reviews approached significance, the result for product features was not statistically significant, suggesting a weaker emotional response from functional product descriptions or user testimonials in driving impulsive tendencies.

These results validate the mediating role of arousal and emphasize that emotionally engaging stimuli—especially promotional content, visual aesthetics, and competitive pricing—are more likely to lead to impulse buying intention through elevated emotional arousal.

DISCUSSION

This study critically examined the antecedents of impulse buying intention on Weibo by applying Hawkins Stern’s Impulse Buying Theory (1962), which asserts that consumer impulse behaviors are primarily driven by situational and emotional stimuli rather than planned decision-making. The findings empirically support Stern’s theory and extend its applicability to the social commerce context in China.

Table 8
Mediation analysis

Indirect Relationship	Indirect Effect (β)	T-Statistics	P-Values
Promotion → Arousal → Impulse Buying Intention	0.135	4.807	0.000
Visual Appeal → Arousal → Impulse Buying Intention	0.076	2.874	0.004
Price → Arousal → Impulse Buying Intention	0.079	3.218	0.001
Positive User Reviews → Arousal → Impulse Buying Intention	0.091	1.963	0.050
Product Features → Arousal → Impulse Buying Intention	0.045	1.732	0.083

Notably, arousal—an internal emotional state—was identified as a significant mediator between marketing stimuli and impulsive buying intention, reinforcing Stern’s core proposition that impulsive buying is an emotionally reactive behavior triggered by external cues.

Among the variables tested, arousal emerged as the strongest and most significant predictor of impulse buying intention. This aligns with recent research by X. (Sarstedt et al., 2021), who found that heightened emotional states in digital environments substantially increase the likelihood of impulsive consumer behavior. Platforms like Weibo, characterized by dynamic, visual, and interactive content, amplify emotional stimulation, making it a dominant force in the purchasing process. This supports Stern’s argument that impulse buying is not inherently irrational but emotionally driven in response to contextual triggers (Yang, 2022).

The visual appeal of products exerted both a significant direct effect and an indirect effect via arousal on impulse buying intention. This confirms the role of sensory stimuli central to Stern’s concept of suggestion, impulse buying, which elicits spontaneous purchase behaviors. Mishra et al. (2023) similarly noted that appealing visuals reduce decision time and enhance emotional responses in online settings. Feng et al. (2024) further demonstrated that product imagery and video content are powerful triggers in social commerce, making platforms like Weibo particularly conducive to visually driven impulse buying.

Price was another significant predictor of impulse buying intention, both directly and through arousal. Although price is traditionally linked to rational evaluation, this study reveals that pricing can also function as an emotional cue, especially when signaling perceived value or urgency. This finding corroborates Suguna and Nivedha (2025), who showed that limited-time offers and price-based promotions evoke emotional excitement, leading to unplanned purchases. These results reaffirm Stern’s classification of “reminder impulse buying,” where consumers respond spontaneously to favorable prices without prior purchase intentions.

Interestingly, promotion did not have a direct significant effect but showed a strong indirect effect via arousal. This suggests that promotions must be emotionally engaging—such as flash sales or exclusive offers—to stimulate impulse buying. Shrestha (2025) observed a similar pattern, emphasizing that the effectiveness of online promotions depends on their ability to evoke urgency and excitement rather than merely offering discounts. In addition, this finding extends Stern’s theory into digital contexts, highlighting the importance of emotional framing over promotional content itself.

Conversely, positive user reviews and product features lacked significant direct effects on impulse buying intention but had significant indirect effects through arousal. This challenges prior research emphasizing social proof and product attributes in e-commerce decision-making (Singh et al., 2023). However, much of that

literature focuses on planned purchases, whereas this study centres on impulse buying, characterized by minimal cognitive processing. The results imply that while reviews and product features enhance consumer confidence, they are less likely to initiate impulsive behavior unless they elicit emotional arousal (Rahman et al., 2022).

Overall, these findings provide critical insights into the extension of Hawkins Stern's Impulse Buying Theory (1962) within social commerce. While the original theory emphasized physical retail environments, this study demonstrates that its core principles remain valid in digital settings. Emotional responses continue to mediate the effects of external stimuli, and impulsive behaviors are triggered by situational factors manifested as interactive content, personalized promotions, and visual storytelling on platforms like Weibo.

CONCLUSION

This study examined the factors influencing impulse buying intention on Weibo by drawing on Hawkins Stern's Impulse Buying Theory (1962). The research sought to understand how external marketing stimuli—namely promotion, visual appeal, positive user reviews, product features, and price—influence impulse buying intention, with a particular focus on the mediating role of emotional arousal.

The results provide empirical evidence that arousal functions as a central emotional mechanism linking certain external cues to consumers' impulse buying intention. Specifically, visual appeal and price were

found to have both direct and indirect effects on buying intention, while promotion influenced impulse buying only indirectly through arousal. In contrast, user reviews and product features did not show significant direct effects, suggesting that emotionally driven purchasing decisions may occur independently of detailed evaluative cues.

From a theoretical perspective, this study reaffirms the continued relevance of Stern's framework in explaining unplanned purchasing behavior, even within contemporary digital platforms such as Weibo. The findings demonstrate that while the form of stimuli has evolved—shifting from physical to digital, from shelf displays to visual content—the emotional processes behind impulse buying remain consistent. In this regard, the study offers a reliable extension of an established theory into the context of social commerce, thereby laying a modest but credible foundation for further investigation. As an empirical contribution, the study provides evidence from a specific and under-researched context: Chinese social commerce users on Weibo. While the constructs employed are not novel, their application in this setting offers useful insights for researchers seeking to understand impulse behavior in non-Western, mobile-driven environments. The model and findings may serve as a reference point for future research aimed at exploring how emotional mechanisms interact with emerging digital stimuli in similar or comparative platforms.

Given the limitations in terms of sample scope and cross-sectional design, the study's findings should be interpreted as exploratory

rather than definitive. Nonetheless, by integrating established theory with current digital behavior, this research contributes both conceptually and methodologically to the broader discourse on online consumer psychology.

Implications

This study contributes to a deeper understanding of impulse buying behavior in digitally mediated environments by revealing how emotional arousal functions as a central mechanism linking marketing stimuli to unplanned purchase decisions. Conducted within the context of Weibo, a prominent Chinese social media platform, this research extends established theoretical frameworks into new digital terrains while offering actionable insights for practitioners. The findings confirm that stimuli such as visual appeal and price influence impulse buying either directly or indirectly through arousal, highlighting the importance of emotional responses in shaping consumer behavior online. Moreover, the observation that elements like promotion and user reviews only impact behavior through emotional mediation challenges assumptions about their direct persuasive power, urging both scholars and practitioners to reassess how digital content influences decision-making processes. The following are the theoretical and practical implications drawn from these findings, offering a comprehensive interpretation of how the results advance knowledge and inform practice in consumer psychology, digital marketing, and platform design.

Theoretical Implications

This study offers several noteworthy theoretical contributions to the field of consumer behavior and digital marketing by extending Hawkins Stern's Impulse Buying Theory (1962) into a social media commerce context, specifically, the Weibo platform in China. While the theory has traditionally been applied to physical retail environments, our findings empirically validate its continued relevance in digitally mediated settings. Notably, the study identifies emotional arousal as a crucial psychological bridge between environmental stimuli (e.g., visual appeal, promotion, price) and impulse buying intention, reaffirming Stern's view that unplanned purchases are triggered not merely by external cues but by the emotional states they evoke.

By statistically confirming arousal as a mediating variable, this study advances theoretical clarity on how impulse buying occurs in online settings. It nuances the classic stimulus-response relationship by demonstrating that the consumer's emotional state is not just a by-product but a pivotal mechanism through which stimuli influence buying behavior. This supports prior research (e.g., Lamis et al., 2022; X. Li et al., 2022) but moves a step further by demonstrating these relationships in a Chinese social media context, where algorithm-driven and content-rich interactions dominate the consumer experience.

Moreover, this study offers a refined framework that differentiates between direct and indirect pathways. For instance, while visual appeal and price directly influence

impulse buying intention, promotion, user reviews, and product features exert their influence only through arousal. This distinction helps clarify previous mixed findings in the literature regarding the role of user reviews and promotions in driving spontaneous purchases. Theoretically, this model encourages researchers to revisit other constructs often presumed to be direct drivers of behavior and consider how emotional mechanisms may explain their inconsistent effects.

In terms of scale development, this research contributes to the psychometric validation of context-specific measurement tools. Each construct was subjected to rigorous reliability and validity assessments, including HTMT discriminant validity and bias-corrected confidence intervals, ensuring the conceptual robustness of each item within a Chinese social commerce environment. Researchers interested in extending this work to other platforms like Xiaohongshu or TikTok can adapt these validated instruments for comparative studies, promoting theory building across platforms and cultures.

Future theoretical inquiries could benefit from further exploring contextual moderators such as cultural norms, personality traits (e.g., impulsivity, self-control), and platform-specific affordances. Doing so could help refine Stern's model to account for how modern technologies personalize consumer experiences, intensifying emotional responses and thereby shaping spontaneous decisions. In sum, this research reaffirms and extends

Hawkins Stern's theoretical foundation, offering a more granular and empirically tested understanding of how impulsive behaviors are shaped in the dynamic ecosystem of social media commerce.

Practical Implications

From a practical standpoint, the findings offer evidence-based recommendations for marketers, platform designers, and digital strategy teams seeking to encourage consumer purchases in online retail environments, particularly on social media platforms such as Weibo.

First, the results emphasize the strategic importance of emotional arousal as a driver of consumer behavior. Marketers should recognize that it is not the presence of stimuli such as discounts or product descriptions that influences impulse buying, but rather the consumer's emotional response to these stimuli. For instance, campaigns that highlight urgency (e.g., flash sales with countdowns), excitement (e.g., unboxing videos or immersive storytelling), or exclusivity (e.g., limited-edition offers) are more likely to generate the arousal necessary to trigger impulsive decisions.

Second, visual appeal emerged as a significant direct predictor of impulse buying intention. Therefore, visual merchandising and content presentation should not be viewed as mere aesthetics but as a strategic lever for sales. Brands should invest in high-quality, emotionally resonant visuals such as dynamic animations, product usage scenarios, or influencer-endorsed visuals to capture consumer attention quickly and

emotionally. Given the attention economy of platforms like Weibo, where users scroll rapidly, emotionally engaging content must deliver immediate impact.

Third, price perception is confirmed as a rational but emotionally resonant stimulus. Marketers should frame pricing not just in terms of affordability but in terms of perceived value. Price tags accompanied by messages such as “only today,” “smart choice,” or “value pack” can enhance perceived benefits and induce feelings of satisfaction or urgency. However, these should be used judiciously to avoid consumer fatigue or skepticism over time.

Importantly, the finding that promotion does not directly influence impulse buying intention but only does so through arousal offers a critical insight. Rather than relying on generic discounts, practitioners should emotionally frame promotions to stimulate excitement. A promotion becomes impactful not because it reduces cost, but because it creates an experience, for example, through gamification (“spin the wheel to unlock a deal”), personalization (“recommended deal just for you”), or storytelling (“get it before it’s gone”). This shifts the focus from functional to experiential marketing.

Furthermore, platform designers and user experience (UX) professionals should note that a seamless and emotionally engaging interface may significantly enhance arousal and facilitate spontaneous purchases. Elements such as live-stream shopping, interactive product previews, AR filters, and real-time engagement features (e.g., comments, likes, or ‘buy now’ buttons

during video streams) can enhance emotional connectivity with content and encourage unplanned purchases. However, platforms must ensure that these emotional cues are ethically deployed to avoid manipulating vulnerable users, particularly younger or financially inexperienced ones.

Lastly, these findings are especially relevant for localized strategies. This study was conducted in the context of Chinese Weibo users, a demographic that combines high digital literacy, mobile dependency, and frequent online purchasing. Therefore, practitioners should tailor their emotional and visual strategies in accordance with cultural preferences and platform-specific consumption habits. What works on Weibo may differ from what resonates on Instagram or TikTok, even within the same age group.

In summary, this study encourages practitioners to rethink emotional engagement as a strategic tool, not a secondary consideration. Marketing content that is visually compelling, emotionally resonant, and well-timed will more effectively drive impulse buying in the competitive environment of digital commerce. However, these strategies must be adapted to platform affordances, audience preferences, and ethical guidelines to ensure long-term consumer trust and brand credibility.

Limitations and Recommendations for Future Research

While this study offers valuable insights into impulse buying intention on Weibo using established constructs and a robust

theoretical framework, several limitations should be acknowledged to provide context for the interpretation of the findings.

First, the conceptual framework was built using well-established constructs such as promotion, visual appeal, positive user reviews, product features, price, arousal, and impulse buying intention. While these variables are widely supported in consumer behavior literature, the study does not introduce novel constructs or theoretical innovations. As noted by reviewers, the originality of this study lies primarily in its application of these constructs within the Weibo context, rather than in the development of new conceptual variables. Future research may consider incorporating or developing new constructs that reflect emerging aspects of social commerce—such as algorithmic trust, perceived influencer authenticity, or platform-induced decision fatigue—which could provide deeper insights into the evolving digital shopping landscape.

Second, the study was conducted using a cross-sectional survey design, which limits the ability to make causal inferences about the relationships between variables. Although the structural equation modeling approach supports directional hypotheses, it does not establish causality. Future studies might employ experimental or longitudinal designs to examine how impulse buying intention develops over time and how repeated exposure to digital stimuli affects emotional arousal and purchase behavior.

Third, the sample was limited to Weibo users in China aged 18 to 45, many of whom

were students or early-career individuals with lower income levels. While this demographic is appropriate for examining digital shopping patterns on a youth-driven platform like Weibo, the findings may not be generalizable to other age groups, income brackets, or users of different platforms. Future research could extend this work by examining diverse populations across various social commerce platforms, including those in different cultural or economic settings.

Fourth, this study focused exclusively on intentions, rather than actual purchasing behavior. Although intention is a strong predictor of behavior, it may not always translate into action. Future research could integrate behavioral tracking data or post-purchase evaluations to assess whether emotionally driven intentions lead to completed transactions and consumer satisfaction.

Finally, while the study examined the mediating role of arousal, it did not account for potential moderators such as self-control, impulsivity traits, or online shopping experience. These individual differences may significantly shape how users respond to stimuli in social commerce environments. Incorporating such variables in future models could offer a more nuanced understanding of consumer behavior across different psychological profiles.

In sum, while this study extends existing theories into a novel application context, there remains considerable opportunity for future research to explore new constructs, employ varied methodologies, and examine

diverse populations to further advance our understanding of impulse buying in the digital age.

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Developing a Prototype Manual for Translating English Onomatopoeia into Indonesian Through Localization Strategies

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ABSTRACT

This research explores the challenges of translating English onomatopoeia into Indonesian, where literal translations often fail to capture the intended meaning, cultural context, and auditory nuances. Existing translation studies seldom address the unique characteristics of onomatopoeia, creating a gap in developing effective and culturally appropriate translation methods. To bridge this gap, the study proposes a prototype model for translating English onomatopoeia into Indonesian using localization strategies. These strategies adapt onomatopoeic expressions to fit the linguistic and cultural context of the target language, ensuring that the translations preserve their auditory effects and resonate with Indonesian speakers. The novelty of the research lies in the creation of a manual for translating onomatopoeia based on localization strategies, designed to be a practical tool for translators and researchers. The research employs a qualitative descriptive method with triangulation techniques, incorporating data from questionnaires, document analysis, and focus group discussions with linguists and translation experts. This approach deepens the understanding of both languages and enhances the development of effective localization strategies. The resulting manual prototype aims to address the existing research gap and serve as a valuable resource for both academic and practical applications in translation studies.

Keywords: Cultural adaptation, localization strategies, onomatopoeia translation, translation

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INTRODUCTION

Translating onomatopoeia from English to Indonesian presents unique challenges due to linguistic and cultural differences. Onomatopoeic words, which phonetically mimic the sounds they describe, enrich

communication by adding expressiveness and emotion. Effective translation requires preserving phonetic fidelity, ensuring the sound is recognizable to the target audience, maintaining emotional impact to evoke similar responses, and ensuring cultural relevance by adapting the expression without losing its original intent (Ehigie et al., 2024). These criteria are particularly important in literature and comics, where onomatopoeia enhances storytelling. However, the lack of direct equivalence between source and target languages often complicates the process, as onomatopoeia carries unique phonetic and semantic traits rooted in the source culture (Rini et al., 2021; Sinamo et al., 2021). Addressing these complexities demands a nuanced approach to maintain the vibrancy and meaning of the original text while ensuring it resonates with the target audience (Yu, 2023)

Recent advancements in translation studies have highlighted the importance of context and cultural nuances in achieving effective translations. As Yaqubi et al. (2018) emphasize, context-aware translations play a crucial role in improving meaning transfer. Similarly, El Humaira & Cholsy (2023), in the context of English-Indonesian translation of onomatopoeia, underscore the need for strategies that address the phonetic and semantic complexities of onomatopoeic words, as these elements are closely tied to the cultural and linguistic characteristics of each language. Despite these insights, a gap remains in methodologies specifically designed for translating onomatopoeia, particularly from English to Indonesian, as existing studies often lack specificity in

addressing their unique characteristics and intended impact (Wiles, 2021). For example, in *Donald Duck (Donal Bebek)*, “splat” is often omitted or descriptively translated, losing its phonetic expressiveness.

For example, in *Donald Duck (Donal Bebek)*, “splat,” mimicking a wet impact, is often omitted or descriptively translated. This creates both phonetic and semantic challenges, as Indonesian lacks an exact equivalent, reducing the word’s auditory effect and diminishing the vividness of the action within the narrative.

To bridge this gap, developing specialized strategies that cater to the distinctive nature of onomatopoeia is crucial to preserving the core meaning, phonetic qualities, and sensory impact of the original text in translation. This approach aligns with the broader trend in translation studies towards context-aware and culturally adapted translations (Al-Sofi & Abouabdulqader, 2019). For instance, Munoz-Luna (2020) highlights the challenges in translating paralinguistic elements and onomatopoeia, underscoring the need for focused research. Developing methodologies tailored to onomatopoeic words can elevate translation quality and preserve the intended effect across languages.

One primary challenge is the lack of a comprehensive model specifically tailored for the translation of English onomatopoeia into Indonesian. General translation theories, while informative, often do not adequately account for nuanced phonetic and cultural differences between these languages. Researchers like Feng et al. (2021) emphasize the importance of preserving the original text’s effect on readers, underscoring the need

for a prototype model that systematically addresses these challenges. While empirical studies specifically comparing English-to-Indonesian translations of onomatopoeia are limited, existing research indicates that current translation practices often overlook the distinctive phonetic and cultural aspects of onomatopoeic words, potentially compromising the intended effect.

Thus, this study aims to develop a prototype model for translating English onomatopoeia into Indonesian, incorporating linguistic accuracy and cultural relevance. The research involves collecting and analyzing onomatopoeic data from English comics and their Indonesian translations, identifying and validating translation techniques, and developing and testing the proposed model. Validation is essential to ensure the identified techniques are effective and reliable, meeting the criteria of accuracy, acceptability, and readability. Through focus group discussions (FGD) and expert evaluations, the validation process bridges the gap between theory and practice, ensuring the techniques are contextually appropriate and robust. This focus arises from the shortcomings of existing strategies such as deletion, which disrupts narrative flow and emotional engagement; foreignization, which risks alienating readers due to phonetic unfamiliarity; and direct borrowing, which often fails to align with Indonesian phonological norms, reducing readability and cultural relevance. The novelty of this research lies in its specific focus on onomatopoeia, with a qualitative methodology used to validate the model through expert feedback and practical

testing. By addressing these identified gaps, the study seeks to enhance the translation process for onomatopoeic words, leading to more effective and engaging translations in literary works.

This study strives to enhance the fidelity and reception of translated onomatopoeic expressions, addressing challenges identified through a needs analysis. Translators reported difficulties such as limited Indonesian onomatopoeic repertoire, cultural misalignment, and translations that feel unnatural or fail to engage readers. Beaman (2021) highlights the loss of phonetic effects, while Hacımusaoğlu et al. (2023) discuss spatial constraints in comics, often requiring simplification. Giyatmi et al. (2023) note reduced auditory imagery, and Kamalashkyzy et al. (2024) observe a loss of the original "feel." These challenges demonstrate the need for structured methodologies to enhance fidelity and reception, enriching readers' experiences. To achieve these goals, the study addresses a central research question: How can a prototype manual for translating English onomatopoeia into Indonesian be developed using localization strategies that ensure linguistic accuracy, readability, and acceptability, while addressing phonetic and semantic challenges to maintain cultural relevance?

LITERATURE REVIEW

Comics and the Complexity of Translating Onomatopoeia in Comics

Comics, as a unique blend of text and imagery, serve as a versatile medium for storytelling, education, and cultural

expression. Comics have become a popular literary form to meet the demand for accessible, engaging literature. Combining panels, gutters, speech balloons, and narrative boxes, comics effectively convey complex stories in a compact format (Cohn, 2021). Recent research emphasizes the intricacies of adapting comics across languages and cultures, highlighting translation as a crucial aspect of making comics accessible worldwide. Zhai and Wibowo (2023), for instance, explore the adaptation of superhero comics, revealing how sociocultural contexts influence the addition and omission of content during translation. Similarly, Jiang (2023) examines localization strategies and the role of fan communities in translation, shedding light on the collaborative nature of comic translation.

The translation of onomatopoeia from English to Indonesian presents distinct challenges due to the reliance on sound symbolism, which varies greatly between languages. Onomatopoeic expressions are designed to phonetically mimic sounds that resonate with specific linguistic and cultural contexts, but these sound-symbolic relationships do not always align across languages, complicating the translation process. Holt and Fukuda (2022) emphasize the importance of cultural adaptation in preserving both the narrative and emotional resonance of a story, as onomatopoeia significantly contributes to these elements. Without proper adaptation, sound effects may lose their impact, diminishing the reader's immersion and emotional engagement. For

example, in *Donald Duck* (Donal Bebek), the English onomatopoeia "Quack" is adapted as "Kwek" in Indonesian, aligning with local phonetics while capturing the humor and personality of the character. Similarly, "Boom," used for explosions, becomes "Buummm," with extended vowels and repetition to maintain its auditory intensity, familiar to Indonesian readers. The sound of water splashing when Donald falls into a pond is translated as "Byur," providing culturally resonant imagery, while "Clank," representing metal clashing, is localized as "Krak," preserving the original auditory essence. These examples illustrate how onomatopoeic translations require creative adaptation to ensure cultural relevance while maintaining narrative and emotional impact. However, further complexities arise in the translation of onomatopoeia in comics due to its cultural specificity and its critical role in conveying sound symbolism. Baek et al. (2022) introduced the Comic Onomatopoeia Dataset (COO), facilitating the study of text recognition in Japanese comics. In Indonesian comics, the limited repertoire of onomatopoeic words compared to languages like Japanese or English makes it more challenging for translators to maintain semantic equivalence. Borrowing terms from the source language is a common strategy, as seen in translations of *The Kite Runner: Graphic Novel*, but this can lead to inconsistencies, such as changes in character counts or font sizes that distort the original impact (Santoso & Setyaningsih, 2020). Gamage (2022) discusses how the placement of onomatopoeia—whether

integrated into images or confined to speech balloons—affects translation strategies. Embedded onomatopoeia often requires graphic editing, risking disruption of the comic's visual integrity. Translators also face systemic constraints, such as linguistic and cultural conventions, that may require substituting or omitting sound effects to align with the target audience's expectations (Lupiáñez et al., 2019). Genre also influences the translation process, with humor comics, which rely heavily on onomatopoeia for comedic timing, requiring more extensive adaptation than action comics, where visual context often compensates for sound effects. Ardianto et al. (2022) highlight the delicate balance between staying true to the source material and achieving naturalness in the target language, cautioning that over-adaptation can compromise the authenticity of the original. These challenges underscore the complexity of translating onomatopoeia in comics and the importance of preserving linguistic, visual, and cultural elements to maintain both narrative and artistic integrity while ensuring accessibility for diverse audiences.

The complexity is further compounded by the lack of direct equivalents for many sound effects between languages like English and Indonesian. El Humaira and Cholsy (2023) point out that this discrepancy necessitates innovative translation techniques, such as substitution and adaptation, where translators strive to find culturally resonant sound effects in the target language. These strategies, while effective, come with their own strengths and

limitations, as translators work to maintain the auditory quality and emotional tone of the original text.

Strategies and Techniques in Onomatopoeia Translation for Comics

The translation of onomatopoeia in comics presents unique challenges, requiring strategies that balance preserving original sound effects with ensuring cultural relevance. Azari and Sharififar (2017) underscore the importance of applying appropriate theoretical frameworks and quality assessment methods to support effective translation practices. A primary strategy in onomatopoeia translation is foreignisation, which Junaid et al. (2023) describe as a strategy of retaining the essence of onomatopoeic expressions across languages and cultures. By preserving the auditory intent of the source language, foreignisation allows readers to experience the original sound effects. However, this strategy may sometimes clash with the phonetic norms of the target language, potentially limiting its relatability. Conversely, domestication modifies sound effects to align with the phonetic expectations of the target language, ensuring they resonate more effectively with local audiences. According to Phaiboonnugulkij (2023), translators often employ direct onomatopoeia to preserve both the sound and emotional impact of the source text, even when faced with cultural and linguistic differences.

In addition to these core strategies, other approaches such as equivalence and

borrowing offer alternative pathways for adapting onomatopoeia while maintaining sound symbolism and narrative cohesion. For example, Kuleli (2023) highlights the importance of semantic-based decisions to navigate linguistic and cultural challenges, enabling translators to convey both the intended meaning and emotional impact effectively. These strategies complement foreignisation and domestication, providing translators with tools to overcome specific linguistic barriers.

In addition to core strategies, equivalence and borrowing provide alternative techniques for adapting onomatopoeia while maintaining sound symbolism and narrative cohesion. Borrowing retains phonetic structure, whereas adaptation modifies sounds to fit the target language. For instance, "*Thud*" becomes "*Tud*", omitting '*h*' to align with Indonesian phonology, distinguishing adaptation from borrowing. Though "*Tud*" is absent from KBBI, it follows Indonesian onomatopoeic structures (e.g., "*Duk*," "*Buk*"). Misclassification risks confusion, necessitating precise distinctions. Kuleli (2023) highlights semantic-based decisions as crucial for balancing meaning and emotional impact. These strategies, alongside foreignisation and domestication, ensure culturally and linguistically appropriate translations.

In the context of comics, translating onomatopoeia extends beyond linguistic adaptation to include visual considerations. As Larasati and Rasikawati (2022) note, comics are inherently multimodal, combining textual and visual elements to

convey meaning. This interplay necessitates adjustments to both linguistic and graphical representations to ensure consistency within the narrative. For instance, graphical depictions of sound effects must align seamlessly with the storyline to enhance the reader's immersive experience. Building on this, Opperman et al. (2018) advocate for intersemiotic translation, a holistic approach that integrates text and imagery to preserve the visual and emotional intensity of onomatopoeia.

Localization strategies provide a broader framework for bridging linguistic and cultural divides. Localization, as defined by Mityagina and Volkova (2019), is the process of adapting content to align with the linguistic, cultural, and contextual norms of a specific target audience, ensuring pragmatic and communicative equivalence between the source and target texts. This approach plays a pivotal role in achieving balance in translation. Sun (2024) highlights the need to balance phonetic fidelity with cultural resonance, ensuring that translations are accurate and relatable for target audiences. Skopos theory, as elaborated by Trisnawati (2014), offers a purpose-driven framework for maintaining the emotional and narrative impact of translated sounds. Additionally, Chirig et al. (2023) identify techniques such as direct translation, partial transformation, and cultural integration, which address the multimodal complexities of onomatopoeia. Sun further introduces the concept of glocalization, harmonizing global and local elements to produce translations that are both universally appealing and contextually

appropriate. Furthermore, Pym (2003) and Chirig et al. (2023) emphasize the importance of preserving the sensory and emotional richness of the source material to ensure authentic and impactful adaptations.

Chirig et al. (2023) outline several techniques, such as direct translation, partial transformation, and cultural integration, that help address the complex nature of onomatopoeia in translation. These approaches align with Sun's idea of glocalization, which seeks to balance global appeal with local relevance. Similarly, Pym (2003) highlights the importance of preserving the sensory and emotional depth of the original text to produce translations that remain authentic and emotionally engaging.

Advancements in technology have further refined localization strategies. Tools such as artificial intelligence (AI) and machine learning augment the translation process by streamlining technical aspects. For instance, Jiménez-Crespo (2024) explores how AI-assisted localization improves the efficiency of translating digital comics, while Chow et al. (2021) highlight the importance of context-aware and multimodal machine translation in maintaining the interplay between text and visuals. However, despite these advancements, human oversight remains indispensable. Skilled translators are crucial for navigating cultural and emotional nuances that AI tools may overlook. For example, human expertise enables the evaluation of subtle contextual elements, such as cultural symbolism and

the emotional weight of specific sound effects, ensuring that translations resonate authentically with the target audience. AI serves as a complementary tool, automating routine processes while leaving culturally sensitive adaptations to human judgment.

By employing **strategies** such as **foreignization** and **domestication**, and **techniques** like **equivalence** and **borrowing**, translators can adapt sound effects to resonate with target audiences while maintaining their symbolic and narrative significance. The multimodal nature of comics underscores the importance of integrating linguistic and visual elements to preserve the auditory and visual impact of the original work. While AI enhances efficiency in managing technical complexities, human expertise remains critical to ensure cultural and emotional resonance. Ultimately, localization strategies offer a comprehensive framework for addressing the challenges of translating onomatopoeia in comics.

Gap in Translation Models for Onomatopoeia

Despite the availability of established strategies such as foreignization, domestication, equivalence, and borrowing, there remains a critical gap in developing a comprehensive model that systematically integrates these approaches into a unified framework. Current research often addresses these strategies in isolation, leading to fragmented applications and inconsistent outcomes. Translators working on comics face unique challenges due to the multimodal nature of the medium,

where linguistic elements must harmonize with visual representations to maintain narrative coherence. Without structured guidelines, translators frequently rely on subjective decisions, which can result in inconsistencies in adapting sound effects and potentially disrupt the immersive quality of the narrative.

Cultural and contextual considerations further complicate the translation process. Factors such as sociocultural norms and censorship requirements often lead to modifications that dilute the original intent of onomatopoeic expressions. Tacazely et al. (2019) and Yufang and Hui (2024) highlight how localization practices are heavily influenced by cultural and political factors, shaping the final representation of sound effects in ways that may not always align with the source material. These challenges underscore the need for a standardized approach that incorporates both phonetic and cultural considerations, ensuring consistent and high-quality translations that resonate authentically with the target audience.

A comprehensive and structured translation model is essential to address these gaps. This model should synthesize linguistic strategies, cultural sensitivity, and multimodal integration into a cohesive framework. While existing strategies such as foreignization, domestication, and semantic-based decisions provide valuable starting points, they must be systematically combined and adapted to meet the unique demands of onomatopoeia translation in comics. By bridging these gaps, this research aims to offer a practical prototype

for translating English onomatopoeia into Indonesian, combining linguistic precision with cultural relevance. Such an approach would not only enhance the overall quality of comic translations but also provide a scalable solution for adapting onomatopoeic expressions across diverse languages and cultures.

METHOD

Research Design

The research design follows the ADDIE model, which stands for Analysis, Design, Development, Implementation, and Evaluation. This model is an instructional design framework. In this study, a qualitative approach is applied to each phase in order to thoroughly address the challenges associated with translating onomatopoeia. During the Analysis phase, the study used qualitative data from interviews and focus groups to identify the specific challenges of translating onomatopoeia, aligning with Turhan and Bernard's (2022) emphasis on reflexivity to better understand the dynamics of translation. It also incorporates Nasution et al. (2019) insights on the importance of considering both linguistic and cultural factors in localization. In the Design phase, a theoretical framework was created based on case studies, drawing on Gebbia's (2023) strategies for managing metaphorical language to capture the subtleties of onomatopoeia, as both phenomena share a need for resolving semantic and cultural complexities. The Development phase then refined the manual iteratively, guided by user feedback, in line with Qoyyimah's

(2023) approach to qualitative translation research.

During the Implementation phase, the prototype was tested in real-world settings, with adjustments made based on user input to ensure cultural relevance, following the Normalization Process Theory (May et al., 2022) to integrate it into existing workflows. Finally, the Evaluation phase measured the manual's effectiveness through user satisfaction and translation quality, guided by Ikawati's (2022) framework for assessing localization. The research used descriptive qualitative methods, as emphasized by Khasanah and Solikhah (2022), who highlighted the utility of such methods in capturing nuanced perspectives in translation processes. Their focus on the interplay between linguistic and contextual factors provided a foundational framework that aligned with this study's aim to gain a deeper understanding of translators' perspectives.

Participants

This research involved 20 professional translators with a minimum of five years of experience in comic translation and demonstrated expertise in handling the linguistic nuances of onomatopoeia. These translators participated in the initial stages by completing a needs analysis questionnaire to identify challenges in translating English onomatopoeia into Indonesian and later evaluated the prototype manual for translating onomatopoeia during the product testing phase. For data collection, five data collectors with academic backgrounds in linguistics or translation studies were

engaged to gather onomatopoeia data from English and Indonesian comics. The data were subsequently assessed by three raters, each holding advanced degrees in linguistics or translation and possessing a minimum of three years of experience in evaluating translation quality, focusing on accuracy, acceptability, and readability. Additionally, one expert with a doctoral degree in applied linguistics validated the data to ensure alignment with linguistic theories and best practices. During the manual development phase, a linguistics expert with a doctoral degree refined the theoretical framework and linguistic guidelines, while a translation expert with extensive experience in comic translation and manual development ensured the manual's practical applicability. All participants signed consent forms before their involvement, ensuring a clear understanding of their roles in this multi-layered research process, which culminated in the development of a robust manual for translation.

Data and Source of Data

This study utilized three primary types of data: document data, expert input, and questionnaire results. The document data comprised 1,278 English onomatopoeic expressions and their Indonesian translations, sourced from 81 Disney comics and 27 Marvel comics. These comics were selected for their extensive use of onomatopoeia and professional translation practices, providing a reliable basis for analyzing the challenges in adapting culturally rich sound effects to the Indonesian context,

particularly given the noted gap in the Indonesian onomatopoeia lexicon. The total data included 213 cases of adaptation, 151 cases of deletion, 212 instances of discursive creation, and 120 examples of established equivalents. This dataset served as the foundation for identifying localization techniques and examining how onomatopoeic expressions were translated across these iconic comic series.

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Expert input was gathered through Focus Group Discussions (FGDs) with one translation expert and two linguistic experts, offering insights into phonology, morphology, and localization strategies for translating English onomatopoeia into Indonesian. Additionally, 20 professional

comic translators participated in the study, providing questionnaire responses that highlighted practical challenges in localizing onomatopoeia. During the testing phase, these translators worked with onomatopoeic expressions from which original translations were deliberately removed, ensuring reliance solely on the prototype manual. Their translations were evaluated using a comprehensive framework assessing accuracy, acceptability, and readability, with reviews conducted by three raters and one translation expert. This process demonstrated the prototype's effectiveness in guiding translators to produce high-quality translations.

Data collection involved systematic analysis by five data collectors who identified and documented onomatopoeic expressions and their translations in a tabular format, validating findings through triangulation with linguistic theories and expert reviews. Translation techniques were identified through comparisons between English and Indonesian onomatopoeia, with established theories and FGDs supporting validation. The prototype translation model was iteratively refined through FGDs, small-scale testing, and expert feedback, focusing on ensuring accuracy, naturalness, and reader-friendliness in alignment with Indonesian norms. These efforts established a robust foundation for enhancing onomatopoeia translation strategies, considering broader cultural and linguistic contexts.

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Research Procedures

The Research and Development (R&D) process for translating English onomatopoeia into Indonesian followed a systematic approach to create an effective comic translation manual. It began with a Needs Analysis to identify gaps, followed by Qualitative Data Collection, Document Analysis, Evaluation, and expert input, leading to a validated, refined prototype manual.

The Research and Development (R&D) process for creating a comic translation manual for English onomatopoeia into Indonesian followed a structured approach. It started with a Needs Analysis to identify existing gaps, which was then followed by the collection of qualitative data, document analysis, and evaluation. Expert input was incorporated throughout the process, resulting in a refined and validated

prototype manual. Figure 1 illustrates the procedure for developing the manual for translating English onomatopoeia into Indonesian.

The Implementation of Need Analysis

The Needs Analysis was the initial step in developing a prototype for translating English onomatopoeia into Indonesian. This phase involved 20 professional translators with at least five years of experience in comic translation. It began with a literature review to explore challenges and strategies in onomatopoeia translation, followed by data collection through a questionnaire comprising 15 questions across three sections. The questionnaire included a mix of Likert-scale, open-ended, and ranking-based questions. The first section focused on challenges posed by the vocabulary gap, such as the lack of direct equivalents for English onomatopoeia in Indonesian, with participants rating their agreement on a five-point scale. The second section addressed the impact of these gaps on translation accuracy, acceptability, and readability, while the third explored strategies like borrowing, adaptation, and creating new onomatopoeia to overcome these issues. Content analysis of the responses identified key challenges and effective methods, offering critical insights that informed the subsequent phases of prototype development. This structured and detailed approach ensured the analysis was comprehensive and grounded in the practical realities of comic translation.

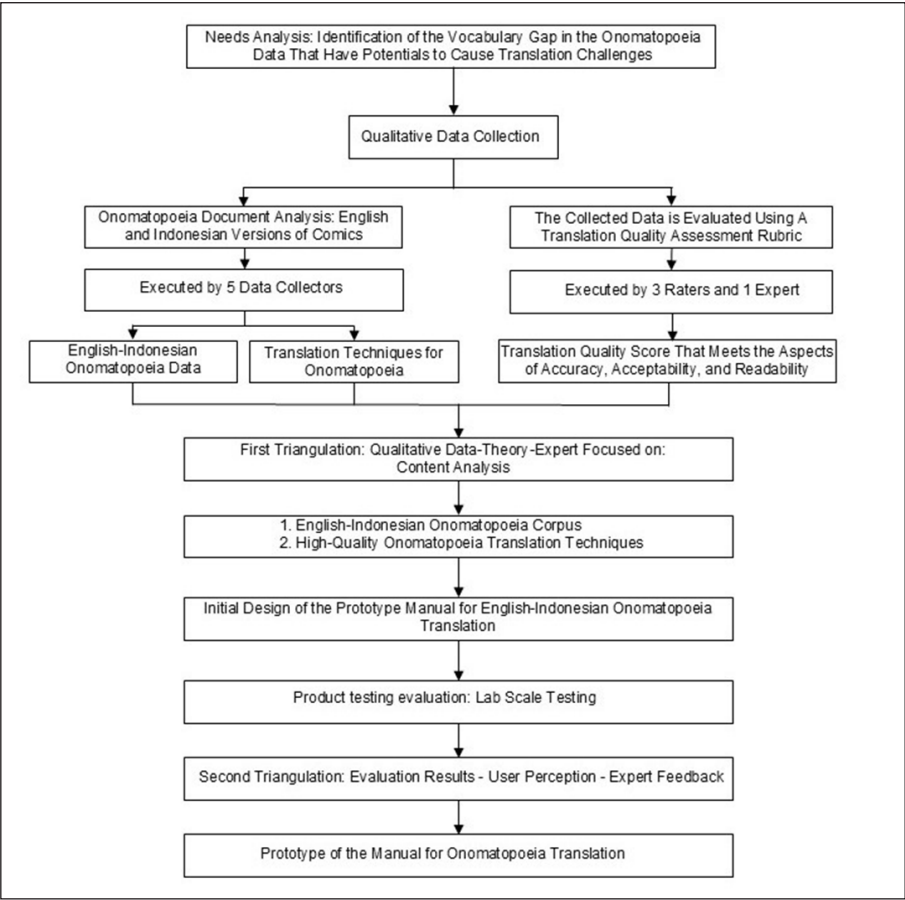


Figure 1. The procedure of developing a manual for the translation of English Indonesian Onomatopoeia

Qualitative Data Collection

The qualitative data collection began with document analysis of the English and Indonesian versions of Disney and Marvel comics, focusing specifically on identifying and categorizing onomatopoeic expressions. Using a rubric adapted from Nababan et al. (2012), this analysis evaluated translation techniques with an emphasis on accuracy, acceptability, and readability. The process followed a systematic four-stage approach. Domain analysis identified recurring onomatopoeic expressions in English and

their functional equivalents in Indonesian, grouping them by sound and contextual usage. Taxonomic analysis structured this onomatopoeia into categories, highlighting patterns in translation techniques, such as borrowing, adaptation, or creation of new terms. Componential analysis further examined the phonetic and cultural nuances of the translations, identifying variations in how the sounds were localized to align with the auditory and emotional expectations of Indonesian audiences. Finally, cultural theme analysis interpreted the broader

cultural implications of the translated onomatopoeia, focusing on how these adaptations preserved both the narrative's dynamism and its cultural resonance. This systematic classification of linguistic units, translation strategies, and their interrelations provided a comprehensive understanding of the challenges and strategies in translating onomatopoeia.

The qualitative data collection involved document analysis of the English and Indonesian versions of Disney and Marvel comics, focusing on identifying and categorizing onomatopoeic expressions. Using a rubric adapted from Nababan et al. (2012), the study evaluated translation techniques based on accuracy, acceptability, and readability. Four challenging categories emerged: Auditory Sounds (e.g., vocalizations, musical effects), Mechanical Sounds (e.g., machinery, explosions, weapon effects), Emotional Expressions (e.g., laughter, sighs, gasps), and Environmental Sounds (e.g., wind, rain, thunder). The analysis followed a four-stage approach. Domain analysis identified recurring onomatopoeic expressions and their Indonesian equivalents, grouping them by sound and context. Taxonomic analysis categorized them, highlighting translation patterns such as borrowing, adaptation, and the creation of new terms. Componential analysis examined phonetic and cultural nuances, assessing how translations aligned with Indonesian auditory and emotional expectations. Cultural theme analysis explored the broader implications, ensuring that adaptations preserved both narrative

dynamism and cultural resonance. This structured classification of linguistic units and translation strategies provided a comprehensive understanding of the challenges in translating onomatopoeia, further explored in the results section, where the effectiveness of each translation technique is analyzed across the identified categories.

The structured classification of linguistic units and translation strategies provides a comprehensive understanding of the challenges involved in translating onomatopoeia. This analysis is expanded upon in the results section, where the effectiveness of each translation technique is evaluated within the identified categories. The details of this evaluation are presented in Table 1.

The data were evaluated by three raters and one expert as part of the validation process to ensure the quality of the translations. The three raters, who were selected based on their strong backgrounds in translation, high proficiency in both English and Indonesian, and extensive experience in translating English texts into Indonesian, assessed the translations on three key aspects: accuracy, acceptability, and readability. Their evaluations provided detailed insights into how well the translated onomatopoeia retained the meaning, naturalness, and comprehensibility of the source text. To enhance the reliability and validity of the evaluation, the process included a Focus Group Discussion (FGD). During the FGD, the raters collaborated with a translation expert, whose role was to provide

Table 1
The rubric of translation quality

No	Types of Instruments	Category	Score and Description
1	Translation Accuracy	Accurate	3 All terminology, phrases, and sentences are accurately conveyed from the source to the target language, preserving the original meaning with no alterations
		Less Accurate	2 Most terminology, phrases, and sentences are accurately translated, but there are minor distortions, ambiguities, or omissions that may slightly impact the clarity of the message.
		Inaccurate	1 The terminology, phrases, and sentences from the original are translated inaccurately or are omitted, leading to significant meaning loss or distortion.
2	Level of Translation Acceptability	Acceptable	3 The translation reads naturally, with familiar technical terms and correct sentence structures that follow Indonesian language conventions.
		Less Acceptable	2 The translation is mostly natural, though minor issues with technical terms and grammar slightly affect its fluency.
		Unacceptable	1 The translation feels unnatural or forced, with unfamiliar technical terms and sentence structures that don't adhere to Indonesian language rules
3	Level of Readability of the Translation	High Readability Level	3 The text is clear and easy to understand, with accessible terminology and sentence structure
		Moderate Readability Level	2 The translation is generally understandable, though some sections may require re-reading for full comprehension
		Low Readability Level	1 The translation is challenging to understand, with significant barriers to clarity and comprehension

Source: Nababan et.al (2012)

additional validation by reviewing the raters' assessments, resolving discrepancies, and ensuring that the evaluation adhered to established translation theories and practices. The expert's input bridged theoretical concepts with practical applications, thereby refining the overall assessment process.

This collaborative approach ensured a systematic and comprehensive validation of the translation quality.

The Triangulation Process

The triangulation process was conducted twice to ensure the validity and reliability

of the findings. In the first triangulation, the focus was on validating qualitative data, theoretical frameworks, and results from the Focus Group Discussion (FGD). This phase culminated in the recommendation of an English-Indonesian onomatopoeia corpus and high-quality translation techniques. The research team played a pivotal role in organizing the process, conducting document analysis, and synthesizing data from multiple sources. Three raters assessed the translations against criteria of accuracy, acceptability, and readability, offering detailed evaluations of translation quality. A translation expert reviewed the raters' assessments, resolved inconsistencies, and ensured that the evaluations adhered to established translation theories and best practices. Data comparisons were made to verify whether English onomatopoeia translations accurately reflected their Indonesian counterparts and aligned with expert-recommended translation techniques. The expert's input validated the document analysis and strengthened the reliability of the raters' evaluations.

The second triangulation, conducted after lab-scale product testing, refined the prototype by integrating earlier theoretical analyses with practical testing outcomes. The lab-scale testing simulated real-world applications in a controlled environment, minimizing external variables to focus on the interaction between the prototype and expert users. Translators and linguists applied the prototype's recommendations, including its step-by-step flowchart, to translate onomatopoeia from English to Indonesian. The outputs were rigorously

evaluated using standardized metrics for accuracy (faithfulness to the source material), acceptability (naturalness within the target language), and readability (ease of understanding). Feedback was collected through structured questionnaires and follow-up FGDs, providing insights into usability, effectiveness, and challenges encountered during the process. These findings were pivotal in addressing usability issues, optimizing the prototype's design, and ensuring its reliability for practical use. This triangulation emphasized the robustness and applicability of the prototype, complementing the participant section that highlights the expertise and contributions of the involved individuals.

Designing the Prototype

The design of the manual for English-Indonesian onomatopoeia translation was developed based on the recommendations from the first triangulation process. Localization strategies were incorporated into the design phase to ensure the manual effectively addressed the challenges identified in the earlier stages of the research, as outlined in the flowchart below.

The design of the manual for English-Indonesian onomatopoeia translation was developed following the recommendations from the initial triangulation process. To ensure that the manual effectively addressed the challenges identified in earlier stages of the research, localization strategies were incorporated during the design phase. These strategies are visually represented in the flowchart below in Figure 2.

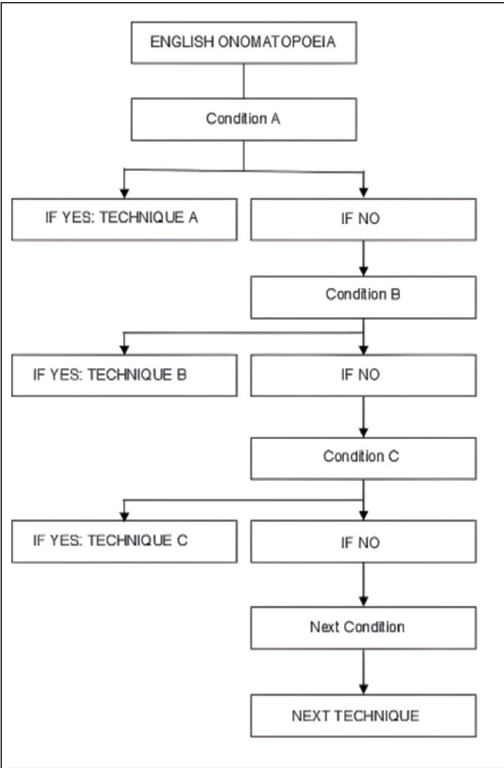


Figure 2. The format of the manual for English-Indonesian onomatopoeia translation

The prototype manual for translating English onomatopoeia into Indonesian was developed systematically based on recommendations from the first triangulation process, which validated qualitative data, theoretical frameworks, and Focus Group Discussion (FGD) outcomes. Localization strategies were integrated into the design phase to address the semantic and cultural complexities identified in earlier stages of the research, ensuring the manual’s practical applicability. The development process followed a structured format, beginning with formulating guidelines through needs analysis, followed by creating a framework

that categorized sound effects to guide translators in choosing between retaining original meanings (*Technique A*) or adapting them (*Technique B*) based on semantic and cultural considerations. Examples from English comics were incorporated to illustrate translations into Indonesian, such as adapting "buzz" to "dengung" to preserve auditory impact and "clang" to "dentang" to align with local perceptions of metallic sounds. The inclusion of **localization and textual strategies** ensured that translations, such as rendering "splash" as "byur," were not only phonologically accurate but also cohesive within narrative contexts, particularly in comics. This structured, decision-based flowchart formed the foundation of the manual, providing translators with a practical tool to achieve accurate, contextually relevant translations while maintaining linguistic integrity and cultural resonance.

Prototype Testing and Refinement

The Prototype Testing and Refinement phase aimed to evaluate the practicality, effectiveness, and usability of the prototype in real-world comic translation projects, involving 20 professional translators. The process began with selecting translators to apply the prototype to a set of English comics featuring various onomatopoeia. Qualitative data were collected through observations, structured questionnaires, and follow-up FGDs, focusing on parameters such as ease of use, accuracy, and cultural relevance. The Ease of use was specifically assessed based on the clarity of instructions,

simplicity of navigation, applicability in translators' workflows, and time efficiency. The translated comics were analyzed to evaluate the success of the onomatopoeia translations, with particular attention to linguistic, cultural, and visual consistency. The findings and feedback from translators informed refinements to address usability issues and ensure the prototype's practicality, resulting in an improved version designed for real-world application.

Finalization and Documentation of the Prototype

The finalization and documentation phase focused on completing the prototype and creating a detailed, user-friendly manual for its implementation. First, the prototype was finalized by incorporating all feedback from the testing and refinement stages, ensuring it was ready for practical use by comic translators. A comprehensive manual was then developed, providing a step-by-step guide on using the prototype, complete with examples, localization strategies, and explanations for translating specific categories of onomatopoeia. These categories include animal sounds (e.g., "cock-a-doodle-doo" translated to "kukuruyuk"), natural sounds (e.g., "splash" translated to "jebur"), inanimate object sounds (e.g., "clang" translated to "ting"), and human sounds (e.g., "achoo" translated to "hatshiu"). These types were selected based on their prevalence in the datasets, their cultural nuances, and their critical role in enhancing the narrative flow in comics. Additionally, the research process, findings,

and the rationale behind the prototype's design were meticulously documented for future reference and academic use, ensuring clarity and methodological robustness in addressing these specific onomatopoeia categories.

RESULTS AND DISCUSSION

The results from the R&D process indicate a comprehensive approach to identifying and addressing the vocabulary gap in translating onomatopoeia between English and Indonesian. This was achieved through qualitative data collection, onomatopoeia document analysis, and expert evaluations. The triangulation of data, theory, and expert feedback, as outlined in the flowchart, informed the development of a prototype manual. This manual, tested and refined through lab-scale evaluations, incorporates high-quality translation techniques that address accuracy, acceptability, and readability challenges. The second triangulation further refined the product based on user perception and expert insights, leading to the finalization of the onomatopoeia translation manual.

The Result of the First Phase

Need Analysis

The need analysis in this study systematically identified key challenges faced by translators when rendering English onomatopoeia into Indonesian. These challenges included cultural and linguistic disparities, the limited repertoire of onomatopoeic expressions in Indonesian, and practical obstacles

encountered in producing translations that are accurate, acceptable, and readable. By uncovering gaps in existing resources and strategies, the analysis provided essential insights that guided the development of a targeted prototype model to support translators in addressing these issues effectively.

The result of the need analysis highlights significant challenges in translating English onomatopoeia into Indonesian, primarily due to a considerable vocabulary gap. Most respondents (15 strongly agree, 5 agree) noted the absence of direct equivalents for many English onomatopoeic expressions, significantly complicating the translation process. For instance, common English terms such as "Whoosh," representing swift air movement, lack direct Indonesian counterparts, often requiring creative adaptation or omission, while "Bang," denoting loud noises, is inconsistently rendered as "Dor" or "Brak" depending on context. Similarly, "Splash," translated as "Jebur," and "Smack," adapted as "Plak," showcase phonetic and cultural disparities that diminish the resonance of the original terms. The limited variety of Indonesian onomatopoeia compared to English, as strongly agreed by 17 respondents and agreed by 3, forces translators to rely on inconsistent strategies, further complicating efforts to maintain naturalness and accuracy. Culturally specific English onomatopoeias like "Buzz," representing a bee's sound, often result in awkward substitutions such as "Dengung lebah," which lack brevity and onomatopoeic

impact. These challenges are exacerbated by differences in sound patterns between the two languages, making it difficult to preserve the auditory essence of terms like "Boom," often adapted as "Bum," which still fails to capture the original's full effect. These findings underline the complexity of translating onomatopoeia between English and Indonesian, necessitating systematic strategies to address vocabulary gaps and cultural disparities.

The vocabulary gap also significantly affects the quality of translations, particularly regarding accuracy, acceptability, and readability. For instance, 17 respondents strongly agreed that the gap frequently leads to a loss of accuracy, forcing translators to compromise when no direct equivalent exists. Similarly, the absence of comparable onomatopoeia in Indonesian impacts the acceptability of translations, making them feel less natural or engaging to the target audience. This gap further diminishes readability, as 17 respondents strongly agreed that it affects the dynamism of the text.

To address these challenges, respondents supported a range of strategies and techniques to enhance translation effectiveness. Borrowing onomatopoeia directly from English was a favored strategy, with techniques such as pure borrowing and naturalized borrowing gaining agreement (15 strongly agree, 5 agree). For example, "Crunch," representing a sharp breaking sound, is often borrowed directly or naturalized as "Krenyes." Adaptation techniques were also emphasized, leveraging

cultural and linguistic context to create equivalents that resonate with Indonesian audiences, such as adapting "Thud" into "Duk" to represent a heavy object hitting the ground. Moreover, 14 respondents strongly agreed and 6 agreed that creating new or unconventional onomatopoeic expressions in Indonesian is sometimes necessary, particularly for terms like "Creak," which lacks a concise equivalent and may be rendered as "Berderit." Contextual interpretation was highlighted by 18 respondents as a crucial factor in compensating for the vocabulary gap, allowing translators to preserve meaning and auditory essence effectively. These findings underscore the importance of a prototype manual that integrates localization strategies with a focus on accuracy, acceptability, and readability, offering structured guidance for navigating the challenges of onomatopoeia translation.

The result of the need analysis identifies four primary challenges in translating English onomatopoeia into Indonesian: vocabulary gaps, absence of direct equivalents, phonetic disparities, and cultural differences. These challenges are particularly prominent in specific categories of onomatopoeia, such as movement, impact, water-related, and animal sounds

1. Vocabulary Gaps

A vocabulary gap refers to the limited range of onomatopoeic expressions available in the Indonesian lexicon compared to English. This issue is particularly noticeable when translating

mechanical or abstract sounds, such as *Whir* or *Sizzle*, which often require creative solutions like omission or description. The lack of equivalent words forces translators to generalize the meanings, potentially diminishing the accuracy and impact of the translation. A strong consensus among respondents (17 strongly agreeing) indicates that these gaps hinder the expressive potential of the translation.

2. Absence of Direct Equivalents

The absence of direct equivalents arises when an English onomatopoeic word has no precise counterpart in Indonesian, requiring the translator to either adapt or omit the term. This challenge is most apparent with sounds that describe movement and impact. For instance, *Whoosh*, representing the sound of swift air movement, often lacks a single equivalent in Indonesian and is sometimes omitted or described instead. Similarly, *Bang*, a term for a loud impact, is inconsistently translated as *Dor* or *Brak*, illustrating the complexities that arise from the absence of an exact equivalent.

3. Phonetic Disparities

Phonetic disparities between English and Indonesian further complicate the translation process. Indonesian does not possess the same variety of sound patterns found in English, making it challenging to replicate certain auditory effects. For example, *Boom* is frequently translated as *Bum*, but this adaptation

does not capture the original's intensity. Additionally, words like *Creak* often require descriptive translations, such as *Berderit*, which lack the immediate auditory impact of the English version. Seventeen respondents strongly agreed that these phonetic differences limit the effectiveness of onomatopoeia translation.

4. Cultural Differences

Cultural differences also play a significant role in the translation of onomatopoeia, especially in animal and nature sounds. For example, the English word *Buzz*, which represents the sound of a bee, is often translated as *Dengung lebah* in Indonesian. While this translation is accurate in meaning, it loses the brevity and onomatopoeic resonance of the original English term, thus diminishing its effectiveness in conveying the same auditory sensation. This issue highlights the challenge of balancing the preservation of the original sound with cultural appropriateness.

To address these challenges, respondents favored strategies such as borrowing onomatopoeia directly from English or adapting it for Indonesian use (e.g., *Crunch* as *Krenyes*). Contextual interpretation was also emphasized as crucial when an exact sound effect cannot be replicated. These findings suggest the need for a structured translation manual that integrates strategies like borrowing, adaptation, and contextual interpretation to ensure that translations

are accurate, culturally acceptable, and engaging for the target audience.

The Result of the Second Phase

Qualitative Data Collection

The findings from the analysis of translation techniques provide valuable insights into how translators approach onomatopoeia, highlighting both effective and ineffective methods. To further understand these translation strategies, a detailed exploration of the source data was conducted. From a total of 108 comic titles, 81 Disney comics and 27 Marvel comics, the qualitative data collection uncovered significant trends in onomatopoeia use and translation techniques applied. The following section will delve into the results of this qualitative data collection, offering a deeper understanding of how these techniques were implemented across various comic genres. Figure 3 below shows the results of qualitative data collection of Onomatopoeia translation.

In the study conducted, seven translation techniques were identified as being used to translate onomatopoeia from English into Indonesian. Among these, the Established Equivalent Translation stands out as a highly recommended technique, employing standardized onomatopoeia found in KBBI. Examples include "click!" translated as "klik!" or "splash!" as "byur!", ensuring accuracy and cultural alignment. Similarly, the Particularization Technique adapts onomatopoeia based on context, providing nuanced translations such as "Bang!" rendered as "Dor!", "Brak!", or "Doar!" depending on the sound's origin. The

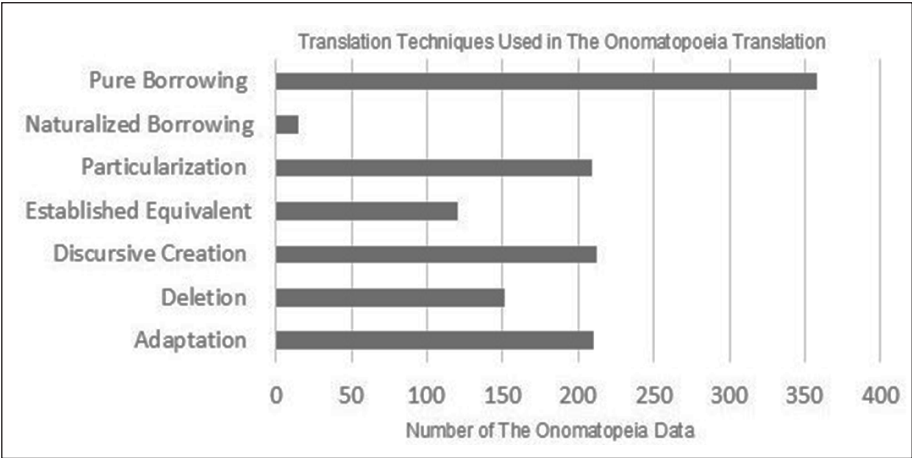


Figure 3. The Results of qualitative data collection of Onomatopoeia translation

Adaptation Technique, another effective method, involves introducing localized but unofficial equivalents like "splat!" becoming "ceprot!", ensuring cultural relevance and reader engagement. The Pure Borrowing Technique and Naturalized Borrowing Technique are also recommended.

The former retains the original form, as seen in "AAARGHH!", remaining unchanged, while the latter modifies the sound for natural pronunciation, such as "Boom!" translated to "Bum!" or "Beep!" to "Bip!", preserving the original sound's impact in the target language.

On the other hand, techniques like deletion and discursive creation are less effective and generally discouraged due to their limitations in preserving the intended meaning. Deletion, as seen in the omission of "AH-CHOOOO!!" (sneeze sound), results in a loss of meaning and context, reducing the translation's completeness. Discursive creation, while sometimes inventive, often leads to inconsistencies, as with "HONK WHONK!" (goose sound) being translated

into "KWEK KWEK!" (duck sound), which misrepresents the original intent. These findings emphasize the importance of prioritizing techniques that preserve the meaning, acceptability, and cultural relevance of the source onomatopoeia while avoiding approaches that diminish the translation's fidelity and coherence. This structured analysis provides a practical guide for selecting effective techniques in onomatopoeia translation.

The data collection, which has undergone the triangulation process, resulted in the recommendation of five translation techniques proposed by Molina & Albir (2002) for inclusion in the Manual. These techniques are Established Equivalent, Particularization, Adaptation, Pure Borrowing, and Naturalized Borrowing. The recommendation for the use of these techniques in the Manual is built upon empirical data from the research conducted by the The data collection, which has undergone the triangulation process, resulted in the recommendation of five translation

techniques proposed by Molina & Albir (2002) for inclusion in the Manual. These techniques are Established Equivalent, Particularization, Adaptation, Pure Borrowing, and Naturalized Borrowing. The recommendation for the use of these techniques in the Manual is built upon empirical data from the research conducted by the writing team, findings from similar studies, relevant theories, and the results of focus group discussions (FGD) with language and translation experts. The proposed translation techniques are those that produce high-quality onomatopoeia translations and are considered ideal based on expert opinion, similar research, and translation theories. The techniques

suggested in the Manual are arranged in order of priority, with the most recommended technique ranked first, as it best meets the criteria outlined in the previous paragraph. The proposed translation techniques are those deemed to produce high-quality onomatopoeia translations, selected based on expert opinion, similar research, and established translation theories. These techniques, as outlined in the Manual, are organized in order of priority, with the most recommended technique ranked first, as it best aligns with the criteria discussed in the previous paragraph. The initial design of the prototype manual for English-Indonesian onomatopoeia translation is illustrated in Figure 4.

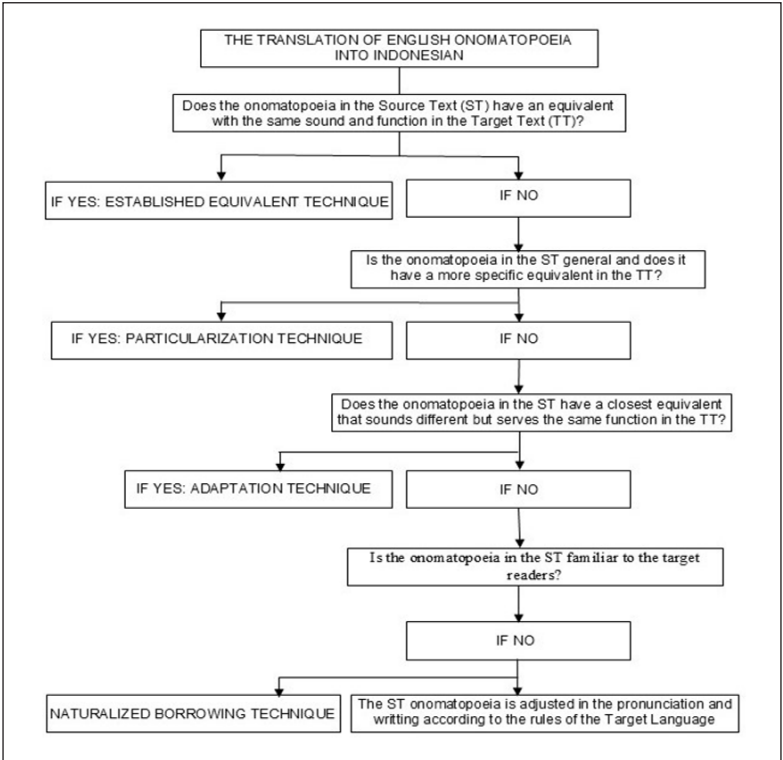


Figure 4. Initial design of the prototype manual for English Indonesian Onomatopoeia translation

The Established Equivalent

The Established Equivalent Translation technique utilizes a localization strategy designed to preserve both the auditory effect and functional meaning of onomatopoeias in the target language. This technique is applied when the onomatopoeia in the source text (ST) has a direct equivalent in the target text (TT), ensuring both linguistic accuracy and cultural resonance. According to the flowchart, this method is most effective when there is a clear alignment between the sound and function of the onomatopoeia in both languages. Translators begin by analyzing the onomatopoeia in the source text to identify its sound and intended function, which are then matched with standardized equivalents in the target language. For example, the English onomatopoeia "click!"—representing the sound of pressing a button—is translated into Indonesian as "klik!", which replicates the auditory essence and functional purpose. Similarly, "splash!" becomes "byur!" to capture the sound of splashing water, while "bok! bok!"—the clucking of a hen—is rendered as "petok! petok!". Other examples include "swoosh!" translated as "wus!" to signify the sound of something moving quickly and "ulp!" localized as "glek!" to represent the sound of swallowing.

Translators begin by analyzing the onomatopoeia in the source text (ST) to identify its sound, intended function, and cultural context. This analysis is crucial to ensure that both the auditory essence and the cultural relevance are preserved when transferring the sound to the target text (TT). For example, "click!" (pressing a button) is

translated as "klik!" in Indonesian, ensuring both linguistic accuracy and cultural familiarity with technology. Similarly, "splash!" becomes "byur!"—capturing both sound and the cultural context of water-related activities. In the case of "bok! bok!" (hen clucking), "petok! petok!" resonates with the culturally familiar sound. Other examples, such as "swoosh!" (quick movement) localized as "wus!" and "ulp!" (swallowing) as "glek!", highlight how the translation maintains both the auditory and functional purpose while adapting to the cultural norms and expectations of the target audience.

This process heavily relies on standardized references, such as the KBBI (Kamus Besar Bahasa Indonesia), to ensure that the chosen equivalents align with the linguistic norms and cultural expectations of the target language. By adhering to these standards, the translations sound natural and are easily understood by the target audience, enhancing their cultural acceptance. This meticulous approach allows the Established Equivalent Translation technique to excel in preserving both the sound and meaning of onomatopoeias across languages, making it particularly effective in literary works, audiovisual media, and everyday communication, where the alignment of auditory and functional fidelity is crucial. As noted by Martendi et al. (2022), the naturalness and familiarity achieved through this technique ensure that translated expressions resonate with target language speakers, maintaining linguistic integrity while bridging cultural gaps. This strategy, supported by references like Rini

et al. (2021), Wiles (2021), and Martendi et al. (2022), highlights the value of employing standardized equivalents to achieve effective and culturally relevant translations.

The Established Equivalent Translation technique heavily relies on standardized references, such as the KBBI (Kamus Besar Bahasa Indonesia), to align chosen equivalents with the linguistic norms and cultural expectations of the target language. This ensures natural, culturally accepted translations that resonate with the target audience, maintaining linguistic integrity while bridging cultural gaps. This approach excels in preserving both the sound and meaning of onomatopoeias, making it particularly effective in literary works, audiovisual media, and everyday communication. As noted by Martendi et al. (2022), the naturalness achieved ensures that translated expressions are familiar to target language speakers. However, certain onomatopoeia categories, such as auditory sounds (e.g., animal noises), mechanical sounds (e.g., "whirr"), emotional expressions (e.g., "groan"), and environmental sounds (e.g., "rustle"), present translation challenges. These arise due to cultural differences in perception, requiring translators to find equivalent sounds that resonate across languages, as highlighted by Rini et al. (2021), Wiles (2021), and Martendi et al. (2022).

Particularization Technique

The Particularization Technique is a localization strategy that adapts onomatopoeias from the source language

(SL) into culturally and linguistically appropriate expressions in the target language (TL). This technique is particularly useful when a single onomatopoeia in the SL can represent multiple auditory scenarios, requiring translators to choose the most contextually accurate equivalent in the TL. For example, the English onomatopoeia "Bang!" can signify different sounds such as an explosion, a loud impact, or a sudden collision. In Indonesian, it is particularized as "Dor!" for a gunshot, "Brak!" for a crash, and "Doar!" for a sudden burst. Similarly, "Beep!", which might represent a car horn or a machine's alert, is rendered in Indonesian as "Teet!" for a horn and "Tik!" for a machine's beep (Terayanti et al., 2023).

Other examples demonstrate how particularization tailors onomatopoeias to specific contexts. The English "Crash!", which can refer to the sound of falling, breaking, or shattering, is translated into Indonesian as "Bruk!" for something falling, "Brak!" for a collision, "Krak!" for snapping, "Prang!" for shattering glass, and "Pyar!" for breaking into small pieces. Similarly, "Creak!", which can describe the sound of a rope being pulled, a branch bending, or a door opening, becomes "Krieet!", "Kreak!", or "Krek!", depending on the specific scenario. Another example is "Boot!", representing either the sound of a kick or rushing wind, which is translated into Indonesian as "Pok!" for a kick, "Dung!" for a heavy impact, and "Wuus!" for the sound of rushing wind. These translations ensure the original onomatopoeia's sound and meaning are preserved while resonating naturally with the target audience.

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The effectiveness of the Particularization Technique is well-supported by research. Yaqubi et al. (2018) emphasize its role in aligning translations with the cultural and emotional context of the TL, ensuring that the audience can relate to the sounds. Rini et al. (2021) highlight how particularization preserves the auditory and functional essence of the original onomatopoeia while maintaining cultural relevance. Braun (2016)

underscores its importance in graphic novels and comics, where sound effects are integral to storytelling. Yatuzzuhriyyah & Hilman (2022) further discuss how the technique ensures that translated sound effects resonate effectively with TL audiences, even in complex scenarios.

The effectiveness of the Particularization Technique is well-supported by research, as it ensures that translated onomatopoeia aligns with the cultural and emotional context of the target language (TL). Yaqubi et al. (2018) emphasize its role in helping audiences connect with sounds, while Rini et al. (2021) highlight how it preserves both auditory and functional essence while maintaining cultural relevance. Braun (2016) underscores its significance in graphic novels and comics, where sound effects are crucial to storytelling, and Yatuzzuhriyyah & Hilman (2022) discuss its ability to make sound effects resonate effectively with TL audiences, even in complex scenarios. However, certain categories of onomatopoeia present significant translation challenges due to cultural differences in sound perception and representation. Animal sounds (e.g., "meow," "bark"), mechanical noises (e.g., "whirr," "click"), and environmental sounds (e.g., "rustle," "thunder") often lack direct equivalents in the TL. Since different languages interpret and reproduce these sounds uniquely, translators must carefully balance phonetic accuracy with cultural familiarity. This process requires creative adaptation to ensure that the translated onomatopoeia remains natural and meaningful to the TL

audience while preserving the original sound's intent.

The Adaptation Technique

The Adaptation Technique transforms onomatopoeias from the source language (SL) into culturally and linguistically suitable expressions in the target language (TL). It is particularly useful when there's no direct equivalent in the TL, requiring translators to creatively reinterpret the sound and meaning while ensuring it fits the TL's cultural and linguistic norms. This approach helps maintain the emotional impact and intended meaning of the original onomatopoeia, even when the adapted expression isn't formally listed in resources like the KBBI (Kamus Besar Bahasa Indonesia) (Utami & Maharani, 2019).

The process starts by analyzing the sound and purpose of the onomatopoeia in the SL. Translators then develop an equivalent that aligns with the phonetic and cultural context of the TL. For example, the English onomatopoeia "smack!"—the sound of a slap—is adapted into Indonesian as "plok!", retaining the same auditory and emotional effect but using a term familiar to Indonesian speakers. Similarly, "splat!" becomes "ceprot!" to mimic the sound of spraying water, "glurgle!" is reimagined as "blup!" to convey bubbling noises, and "grrind!" is rendered as "trrr!" to represent the sound of a grinding machine. These adaptations demonstrate how the technique combines creativity and cultural awareness to make the sounds relatable and immersive for the TL audience (Zhu, 2024).

The translation process begins by analyzing the sound and intended purpose of the onomatopoeia in the source language (SL), followed by adapting it to the target language (TL) while ensuring that it aligns with both the phonetic and cultural context of the TL. For instance, the English onomatopoeia "smack!", which represents the sound of a slap, is translated into Indonesian as "plok!". This adaptation preserves the auditory and emotional effect of the original, while using a term that is more familiar and culturally relevant to Indonesian speakers. Similarly, "splat!" is translated as "ceprot!" to replicate the sound of water spraying, "glurgle!" becomes "blup!" to represent bubbling noises, and "grrind!" is rendered as "trrr!" to convey the sound of a grinding machine. These translations illustrate how the technique of particularization combines creativity and cultural awareness, ensuring that the onomatopoeic sounds are both relatable and immersive for the TL audience (Zhu, 2024).

A major advantage of the Adaptation Technique is its flexibility, allowing it to address gaps where direct translations aren't possible. By focusing on localization, this technique prioritizes cultural familiarity over rigid word-for-word accuracy, making it especially effective in mediums like comics, literature, and audiovisual content. For instance, while "splat!" might feel unfamiliar to Indonesian readers, "ceprot!" creates a sound image that fits within their cultural context, enhancing the storytelling. However, the technique also comes with challenges, such as when the adapted term

shifts too far from the original auditory imagery. For example, translating "bang!" as "wow!" to express surprise might capture the emotion but lose the literal sound, which can lessen the intended auditory impact. Translators must carefully balance emotional resonance and phonetic fidelity to avoid such pitfalls.

The Adaptation Technique provides flexibility in translation, allowing for adjustments when direct equivalents are unavailable. By emphasizing cultural familiarity over strict word-for-word accuracy, this approach is particularly effective in comics, literature, and audiovisual content. For example, while "splat!" may be unfamiliar to Indonesian readers, "ceprot!" conveys a similar auditory and emotional effect, enhancing storytelling. However, a key challenge arises when adaptations deviate too far from the original auditory imagery. For instance, translating "bang!" as "wow!" may capture the intended emotion but lose the literal sound, weakening its auditory impact. To prevent such discrepancies, translators must carefully balance phonetic fidelity with emotional resonance.

Some of the most difficult onomatopoeia to translate include animal sounds (e.g., "meow," "bark"), mechanical noises (e.g., "whirr," "click"), and environmental sounds (e.g., "rustle," "thunder"), as these vary widely across languages and often reflect cultural interpretations rather than direct phonetic accuracy. For example, English speakers recognize "meow" as a cat's sound, while Indonesian speakers interpret

it as "meong." Similarly, the grinding sound "grrind!" has no exact Indonesian counterpart, requiring creative adaptation. These challenges make it essential for translators to maintain both phonetic essence and intended meaning, ensuring cultural relevance while preserving auditory impact.

The Pure Borrowing Technique

The Pure Borrowing Technique uses a localization strategy that involves directly transferring onomatopoeic expressions from the source language (SL) to the target language (TL) without modification. This approach preserves the original form, sound, and emotional impact of the onomatopoeia, making it particularly effective when the borrowed term is universally recognizable or integral to the meaning of the source text (ST) (Putri, 2022). By retaining the authenticity of the SL, pure borrowing allows the audience to experience the same auditory and emotional nuances, ensuring fidelity to the original text. For example, onomatopoeias like "AAARGHH!", representing a cry of pain, and "BIP BIP BIP", denoting a radar sound, are directly borrowed into the TL to preserve their universal resonance. Similarly, "GRRRAAAA!", capturing a scream, and "SNFFF!", representing sniffing, remain unchanged to maintain their precise auditory impact (Hidayati, 2020). This technique strengthens linguistic fidelity and allows readers in the TL to connect directly with the ST's expressive qualities. Despite its advantages, the Pure Borrowing Technique is most appropriate when the target audience

is familiar with the borrowed terms. If the borrowed onomatopoeias are culturally or linguistically unfamiliar, they can create confusion or alienation, diminishing the acceptability of the translation (El Humaira & Cholsy, 2021). In such cases, translators may opt for Naturalized Borrowing, where the spelling or pronunciation is adjusted to align with the TL's norms, as seen when "boom" is adapted into "bum" in Indonesian (Nugraha et al., 2019). Research highlights that naturalized borrowing can achieve higher audience engagement while maintaining the auditory and emotional intent of the original term (Valufi & Noverino, 2022). However, when applied in suitable contexts, such as universally recognized expressions like "PLOP!", representing an object falling into a trap, pure borrowing retains the authenticity and auditory essence of the original text, ensuring a seamless and immersive experience for the TL audience.

The Pure Borrowing Technique uses a localization strategy that involves directly transferring onomatopoeic expressions from the source language (SL) to the target language (TL) without modification. This approach preserves the original form, sound, and emotional impact of the onomatopoeia, making it particularly effective when the borrowed term is universally recognizable or integral to the meaning of the source text (ST) (Putri, 2022). By retaining the authenticity of the SL, pure borrowing allows the audience to experience the same auditory and emotional nuances, ensuring fidelity to the original text. For example, onomatopoeias like "AAARGHH!!", representing a cry of

pain, and "BIP BIP BIP", denoting a radar sound, are directly borrowed into the TL to preserve their universal resonance. Similarly, "GRRRAAAA!", capturing a scream, and "SNFF!", representing sniffing, remain unchanged to maintain their precise auditory impact (Hidayati, 2020). This technique strengthens linguistic fidelity and allows readers in the TL to connect directly with the ST's expressive qualities.

Onomatopoeias like "AAARGHH!!", expressing a cry of pain, and "BIP BIP BIP", denoting a radar sound, are directly borrowed into the target language (TL) to preserve their universal resonance. Similarly, "GRRRAAAA!", representing a scream, and "SNFF!", symbolizing sniffing, are retained without modification to maintain their precise auditory impact (Hidayati, 2020). This technique of pure borrowing supports linguistic fidelity by ensuring the original sounds are preserved in the TL, allowing the audience to experience the expressive qualities of the source text (ST) directly. From a Translation Quality Assessment (TQA) perspective, this method adheres to the *accuracy* category of the rubric, as the terminology is accurately conveyed without distortion, retaining the intended meaning and emotional resonance. The borrowed terms are linguistically unaltered, ensuring *acceptability* by adhering to familiar terms and correct sentence structures, and ensuring high *readability* as the borrowed terms are universally understood and maintain their auditory effect. Culturally, this method respects the universality of these sounds, which resonate similarly across cultures.

Despite its advantages, the Pure Borrowing Technique is most appropriate when the target audience is familiar with the borrowed terms. If the borrowed onomatopoeias are culturally or linguistically unfamiliar, they can create confusion or alienation, diminishing the acceptability of the translation (El Humaira & Cholsy, 2021). In such cases, translators may opt for Naturalized Borrowing, where the spelling or pronunciation is adjusted to align with the TL's norms, as seen when "boom" is adapted into "bum" in Indonesian (Nugraha et al., 2019). Research highlights that naturalized borrowing can achieve higher audience engagement while maintaining the auditory and emotional intent of the original term (Valufi & Noverino, 2022). However, when applied in suitable contexts, such as universally recognized expressions like "PLOP!", representing an object falling into a trap, pure borrowing retains the authenticity and auditory essence of the original text, ensuring a seamless and immersive experience for the TL audience.

Among the various categories of onomatopoeia, environmental sounds (e.g., "rustle," "howl"), animal noises (e.g., "moo," "croak"), and culturally specific expressions (e.g., "tsk-tsk" to signal disapproval) pose the greatest challenges for translation. These sounds often differ significantly across languages due to phonetic perception and cultural interpretation. For example, the English "cock-a-doodle-doo" for a rooster's crow is "kukuruyuk" in Indonesian, reflecting distinct phonological adaptations. Additionally, mechanical sounds like

"clank!" or "whirr!" may lack direct equivalents in the TL, requiring either borrowing or adaptation to maintain their auditory essence. As a result, translators must carefully assess whether pure borrowing is appropriate or if a more localized strategy is needed to balance authenticity and comprehension.

Naturalized Borrowing Technique

The Naturalized Borrowing Technique uses localization strategies to adapt onomatopoeic expressions from the source language (SL) into forms that align with the phonetic, cultural, and linguistic norms of the target language (TL). This technique is particularly beneficial when the original onomatopoeia lacks a direct equivalent in the TL or when its original form feels unfamiliar to the TL audience. By making adjustments to spelling and pronunciation, naturalized borrowing ensures that the onomatopoeia remains relevant, comprehensible, and natural, while preserving its auditory and emotional essence. For instance, the English onomatopoeia "Boom!"—representing the sound of an explosion—is localized as "Bum!", and "Yippee!"—an expression of joy—becomes "Yipiiii!" to better match TL norms. Similarly, "Beep!", often associated with radar or machinery sounds, is adapted as "Bip!", while "Clank!", which mimics the sound of metal clashing, becomes "Klang!". Finally, "Tooot!", representing the sound of a ship's horn, is transformed into "Tuut!", aligning more naturally with the TL's phonetic and cultural expectations.

The translation of onomatopoeias like "Boom!" to "Bum!" and "Yippee!" to "Yipiiii!" exemplifies Naturalized Borrowing. TQA analysis reveals that these adaptations maintain Translation Accuracy by preserving the original meaning without distortion. In terms of Translation Acceptability, the localized forms are culturally and phonetically appropriate, and the translation feels natural in the target language. Regarding Readability, the borrowed onomatopoeias are easily understood, ensuring clarity and ease of comprehension for the audience. These naturalized adaptations demonstrate a seamless integration of the original sounds into the target language while ensuring both linguistic and cultural coherence.

This technique relies on three key localization strategies. First, it modifies spelling and pronunciation to align with the phonetic rules of the TL while retaining the core sound and meaning of the onomatopoeia. Second, it emphasizes cultural relevance, ensuring that the adapted expressions resonate with the audience in the TL context. Third, it preserves the auditory impact of the original onomatopoeia, ensuring that its communicative purpose is maintained. Research underscores the value of this technique in creating culturally resonant translations. For example, Moghadam and Ghazizade (2021) highlight how naturalized borrowing preserves the emotional and sensory experience of the SL, crucial in literary and artistic translations. Ma and Wang (2020) emphasize the role of sound symbolism in evoking audience

responses, which is retained through careful localization. Additionally, Laharomi (2013) notes that aligning onomatopoeia with TL linguistic norms enhances its acceptability and accessibility.

The technique's flexibility and relevance across genres, from literature to media, are further supported by studies like Redelinghuys and Kruger (2015), who discuss its ability to enhance immersion and audience engagement. Moreover, Al-Adwan and Abuorabialedwan (2019) explore its utility in contexts such as children's literature, where simplified pronunciation aids comprehension and sound-meaning association. Ultimately, the Naturalized Borrowing Technique offers a balance between maintaining the authenticity of the SL and ensuring readability and cultural resonance in the TL, as highlighted by Butkuvienė and Petrulionė (2023), Monzó-Nebot (2020), and Kunilovskaya et al. (2018). This makes it a reliable strategy for translating onomatopoeias while preserving their emotional and sensory impact. However, translating animal sounds, environmental noises, and mechanical sounds remains challenging due to linguistic and cultural variations, requiring careful adaptation to ensure authenticity and audience engagement.

The Result of the Third Phase

The Results of the User Perception Questionnaire

The interpretation of the User Perception Questionnaire results reveals overwhelmingly positive feedback regarding

the recommended onomatopoeia translation techniques. In the Perception of Translation Techniques and Accuracy section, nearly all respondents (19 out of 20) strongly agreed that the manual's decision-making processes effectively guided them in selecting appropriate techniques, such as Established translation equivalents, particularization, and adaptation, for translating onomatopoeia. Respondents also indicated that the manual's guidance on pure and natural borrowing techniques was clear and easy to follow, with only one respondent agreeing rather than strongly agreeing across the items. This consistency shows that the manual significantly enhances the translators' ability to apply accurate and culturally appropriate techniques.

Similarly, in the Acceptability and Readability sections, all respondents consistently rated the manual highly, with 19 out of 20 respondents strongly agreeing that the manual improved their translation outcomes. They reported that the translations produced were natural, contextually acceptable, and easy to read in Indonesian. The manual's clear instructions and decision-making framework were seen as helpful in ensuring that translations remained accurate, readable, and appropriate for the target audience. Moreover, respondents unanimously indicated that they were able to translate all onomatopoeia in the trial and expressed their willingness to recommend the manual for future use. Overall, the manual was perceived as a highly effective tool for improving translation quality.

The Results of the Evaluation of Product Testing

An evaluation was conducted involving 20 professional translators tasked with translating onomatopoeia in Disney and Marvel comics, where the original translations had been removed. The translators used a prototype manual specifically designed for translating onomatopoeia from English to Indonesian. The aim was to assess how effectively they could apply the manual to produce accurate, acceptable, and readable translations. The results demonstrated that the translations met the required standards, indicating the prototype manual successfully guided translators in producing high-quality onomatopoeia translations. The consistent application of the techniques recommended in the manual ensured the emotional and contextual nuances of the original sound expressions were maintained, making the translations comprehensible and engaging for Indonesian readers (Putri, 2022; Restiana & Nugroho, 2021).

The development of the prototype for translating English onomatopoeia into Indonesian. Through localization strategies was accomplished following a comprehensive evaluation process was followed. This process incorporated triangulation to validate data through theoretical frameworks, feedback from questionnaires during a Focus Group Discussion (FGD), and input from an expert panel. Insights from 20 respondents further refined the prototype, ensuring it embodied practical translation strategies grounded in localization principles (Nugraha et al.,

2019). The successful testing demonstrated the manual's effectiveness in improving the quality of onomatopoeia translations, specifically within the medium of comics. It offers a structured approach to addressing cultural and linguistic differences while maintaining sound symbolism and emotional resonance (Purnomo, 2021; Valufi & Noverino, 2022).

CONCLUSION

This research successfully developed a prototype manual for translating English onomatopoeia into Indonesian using localization strategies, making a significant contribution to the field of translation studies. The manual provides structured guidelines for selecting appropriate translation techniques, ensuring accuracy, acceptability, and readability, while addressing the unique challenges posed by sound-symbolic expressions. Through thorough testing and expert feedback, the manual was refined to preserve the original emotional and auditory effects of onomatopoeic words, adapting them to the cultural and linguistic context of Indonesian readers. This practical tool, tested with professional translators, not only fills a gap in current methodologies but also enhances translation quality across various media platforms.

The prototype developed in this research offers several important implications. First, it serves as a practical tool for translators, particularly those working in comics and other multimodal media, by providing guidelines that help maintain

the integrity of the source text while making the translations more relatable and engaging for Indonesian audiences. Second, this research makes a significant contribution to translation studies by filling a gap in the literature on onomatopoeia translation, offering a systematic approach to translating sound-symbolic words, an area that has been underexplored. It also underscores the importance of localization in translation, enriching broader discussions on cultural adaptation. Finally, while the current prototype is manual-based, it opens possibilities for further research on integrating localization strategies into AI-based translation tools, potentially automating parts of the translation process without compromising cultural sensitivity.

Limitations and Recommendations for Future Research

The study faced several limitations, including cultural constraints where some English onomatopoeias lacked adaptable Indonesian equivalents, affecting emotional and auditory resonance. Additionally, the sample size was limited to 20 translators and selected comic titles (Disney and Marvel), and the focus on manual translation excluded a deeper exploration of the visual aspects of sound representation. The inconsistent use of terms such as strategy, technique, and approach in the analysis may also pose theoretical limitations, which could be addressed in future research for greater conceptual clarity.

Future research should expand the dataset to include a wider variety of

media, such as animated films, graphic novels, and webtoons, to provide a more comprehensive understanding of onomatopoeia translation across platforms. It would also be beneficial to explore the integration of AI and machine translation tools to improve translation efficiency while maintaining cultural relevance. Moreover, future studies should consider the inclusion of actual target readers, such as children and teenagers, to better understand their reception of onomatopoeic translations. Additionally, a more detailed examination of how visual elements, like font, size, and placement of sound effects in comics, interact with translated onomatopoeia could enhance the effectiveness of multimodal media translations. This would provide a more complete understanding of how onomatopoeia translation operates across both auditory and visual dimensions.

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Negotiating Hegemonic Masculinity in Ian McEwan's *The Cement Garden*

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ABSTRACT

The late 20th century saw societal shifts and a reevaluation of gender identities, particularly in Western societies, which informed how writers rethought traditional notions of masculinity, heteronormative ideals, and family structure in their works. British writer Ian McEwan explores these issues through his novel, *The Cement Garden* (1978). While the novel's portrayal of masculinity has received scholarly attention, this study posits that the reading of this theme could be further facilitated through the lens of hegemonic masculinity. Set against the socio-cultural and gender landscapes of 1970s Britain, the novel centers on Jack, a young male protagonist whose identity is shaped by the idealized yet troubled forms of masculinity. Drawing on Raewyn Connell's concept of hegemonic masculinity as a configuration of gender practices, this study investigates the ways the novel depicts Jack's relational struggle to achieve legitimacy and recognition within a fractured family environment. The analysis shows this process includes ambivalence towards and resistance to hegemonic masculinity, and exploration of alternative gender practices. Despite *The Cement Garden's* provocative stance, this article argues that the novel is aware of both the potential and limitations of challenging hegemonic masculinity. Thus, it reflects on how, despite efforts, the specters of long held and entrenched Western ideals of masculinity remain ever-present and inevitable. This article contributes to the discussion on the representations of masculinity in fiction and how authors such as Ian McEwan engage with the contours of hegemonic masculinity and its repercussions on the construction of identity for young men.

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INTRODUCTION

In the late 20th century, the rise of mass media and the information age reshaped public perceptions of strength and power,

prompting shifts in gender norms and sparking the emergence of masculinity studies. As (Western) societies began to prioritize intellectual and emotional skills over physical strength, traditional metrics of masculinity came under scrutiny. According to Martha McCaughey, the economic and political shifts of late modernity have undermined traditional masculine ideals. She argues that “men today have been offered a way to think of their masculinity as powerful, productive, even aggressive—in a new economic and political climate where real opportunities to be rewarded for such traits have slipped away” (2010, p. 4). This disconnection demonstrates the fragility of ideal hegemonic masculinity, and the high demands placed on men by prevailing social conventions and views of masculinity, as further suggested by Goffman’s (1963, as cited in Kimmel & Messner, 2010) argument that middle-class, white, heterosexual masculinity serves as a standard against which other masculinities are measured and subordinated. Goffman’s observation reiterates how ideal hegemonic masculinity marginalizes other masculinities to maintain its legitimacy. Societal shifts in male identity and masculinity during the late 20th century are reflected in the works of British authors of the period. Davies (2003) notes that writers such as John Fowles, Julian Barnes, Irvine Welsh, Iain Banks, Michael Ondaatje, and Ian McEwan explore symptoms of the “British male literary psyche at the turn of the millennium” (p. 118). Their male protagonists are often portrayed as passive,

retreating into imagination to preserve a semblance of traditional masculinity. Among them, McEwan stands out for his engagement with the grotesque and macabre, with his early works categorized as “shock lit” (Gieni, 2018, p. 47). Ryan (1994) characterizes the “willful obscenity and eccentric violence” of McEwan’s early works as a critique of hegemonic masculinity (p. 5). The male characters in his early works are depicted as grappling with imposed roles of dominance and control, illustrating the burdens of patriarchal expectations (Davies, 2003).

Published during a period of significant shifts in gender roles, *The Cement Garden* (1978), Ian McEwan’s debut novel, explores the complexities of male identity, familial dynamics, adolescence, and masculinity. Critics note that McEwan’s early works display “an obsession with sketching and re-sketching of gender identities, especially masculinities” (Hosseini, 2015, p. 192). According to Head (2007), the shifting family dynamics and the rise of second-wave feminism in the 1970s likely informed McEwan’s perspectives on gender and domestic life. Set in the late 20th century, *The Cement Garden* follows 15-year-old Jack, the second oldest of four siblings aged six to seventeen, as they struggle to survive alone after the deaths of their parents. The loss creates a vacuum that compels them to reenact a semblance of traditional family structure, propelling Jack into a process of self-discovery and the exploration of his masculinity.

The Cement Garden's interrogation of traditional gender norms can also be contextualized within the rise of punk culture in 1970s Britain. Emerging in response to economic depression and post-war political disillusionment, the punk movement challenged authority and conventional norms (Popović, 2013). Jack's rebellion and masculinity development in the novel align with the era's marginalized figures who resisted societal expectations. The parents' death metaphorically suspends social order, mirrored by the siblings' self-imposed isolation from the outside world and from normative structures (Popović, 2013). This setting serves as a microcosm for exploring how, even in isolated settings, traditional societal structures persist and permeate the renegotiation of gender roles.

The presence or absence of a positive male role significantly shapes perceptions and performances of gender. In the novel, this is exemplified by Jack's father, who represents a traditional, though flawed, model of hegemonic masculinity. Hosseini (2015) describes the father as a staunch believer in his superiority, embodying a culturally idealized masculinity that asserts dominance over women and other men. The central tension, Hosseini argues, lies in Jack's negotiation of masculinity, caught between his father's oppressive model and Jack's own shifting experiences and perceptions.

This study argues that *The Cement Garden* not only portrays the oppressive effects of hegemonic masculinity encountered by late 20th-century men

but also examines the transformation of gender roles as adolescent males negotiate masculinity within their domestic environment. Nünning (2002, as cited in Horlacher, 2015) rightfully argues that literature serves as a crucial space to examine the waning legitimacy of patriarchy and how different groups of men negotiate these changes. Horlacher (2015) further elaborates that literature not only provides insights into the distinct configurations, functions, and shortcomings of masculinity but also empowers readers to critically reconsider their own understanding of masculinity.

In reading *The Cement Garden*, this study employs Raewyn Connell's (2005) concept of hegemonic masculinity, a culturally idealized configuration of gender practices that legitimizes men's dominance in society and justifies the subordination of women and other marginalized masculinities. It explores how this hegemonic masculinity impacts the construction of masculinity for Jack, the young male narrator and protagonist of the novel. Jack's struggle to achieve hegemonic masculinity in the novel exemplifies Connell's argument that masculinity is relational, formed through interactions with others and continually negotiated within specific social contexts (Connell & Messerschmidt, 2005). By examining Jack's attempts to achieve hegemonic masculinity within a fragmented family unit, this study argues that *The Cement Garden* not only portrays the oppressive effects of hegemonic masculinity but also reveals its unattainability and fluidity, particularly

in contexts where traditional structures of authority are absent or disrupted.

LITERATURE REVIEW

Ian McEwan's debut novel, *The Cement Garden* (1978), explores the journey of four siblings as they search for their own identities after the death of their parents. This novel, along with his early short stories collection, *First Love, Last Rites* (1975) and *In Between the Sheets* (1978), has been characterized by critics as "shock lit", which delve into "lurid subject matter, including stories of rape, incest, molestation, sadomasochism, and murder" (Gieni, 2018, p. 47). Wells (2010) suggests that McEwan's exploration of the "violent, twisted and psychopathic characters" reflects a modern, urbanized culture characterized by "alienation, isolation, selfishness, and exploitation of others" (p. 34). In *The Cement Garden*, the child characters respond to the loss of their parents and the collapse of their family structure with unsettling and extreme actions, including encasing their mother's body in cement in the cellar—an act that lends the novel its title. These responses also reflect an ongoing negotiation of identity and masculinity. Jack, the eldest male sibling, must navigate inherited patriarchal expectations and his emerging identity, shaped by both the absence of adult guidance and the persistent influence of societal norms within their isolated world.

Head (2007) argues that the siblings' attempts to replicate adult societal norms in the absence of their parents lead to distorted behaviors such as incest, which

indicates the disjunction between societal ideals and personal identity formation. Slay (1996, as cited in Wells, 2010) notes that the family's replication of conventional gender roles mirrors the patriarchal structures in the late twentieth-century British lower-middle class. Gieni (2018) also elaborates on this theme by suggesting the cultural imperative of patriarchal control reflected in Jack's vulnerability and assertion of dominance. These analyses show how the siblings' isolation intensifies their struggle with inherited gender expectations. The novel's portrayal of masculine crisis, family dynamics, and social pressures offers insight into how gender identities are potentially reconfigured within disrupted familial and cultural structures.

Scholars have highlighted the theme of masculinity in crisis in Ian McEwan's *The Cement Garden*. Childs (2006), for example, examines the impact of absent adult male figures on children's development by focusing on how the siblings in *The Cement Garden* adapt to and negotiate roles left vacant by their parents. Childs (2006) notes that the children in the novel internalize socially accepted gender roles as they take on the parental roles of father and mother. Jack's masculine identity, shaped by his parents, continues to be primarily influenced by his father even after his death. This influence reflects the societal power structures within the insular family setting (Wells, 2010). Our study contends that the father represents a dynamic form of hegemonic masculinity, which Jack emulates and negotiates through ongoing gendered practices.

The absence of nurturing parental figures compels a renegotiation of gender roles in *The Cement Garden*. Sistani et al. (2014) discuss the impact of “emotional assurance” (p. 452) on Jack’s development, noting how the lack of nurturing relationships compels him to create “internal objects inside himself” as psychological substitutes for unsatisfactory real-world interactions (Mitchell, 1981, as cited in Sistani et al., 2014, p. 455). This dynamic is evident in Jack’s relationship with his father, an “internalized object” that informs his approach to masculinity. The maternal relationship, emotionally significant to Jack, exacerbates his trauma after his mother’s death, pushing him and his sister Julie to adopt parental roles. Their transition into these roles, culminating in an incestuous relationship, represents their quest for lost parental affection and a renegotiation of gender roles. The study contends these internalized figures continue to influence Jack’s masculine identity and that his masculinity is an amalgam of personal desires and external social norms. Our study aligns with this perspective but prioritizes how hegemonic masculinity as an ideal influences Jack’s construction of masculinity, rather than focusing primarily on trauma.

Meng (2023) explores the fluidity of gender roles in *The Cement Garden*, applying Virginia Woolf’s concept of androgyny to show that masculinity and femininity are complementary, not oppositional. Meng (2023) notes that Jack’s expression of femininity—characterized by tenderness

and sensitivity—originates from his longing for maternal affection and resistance to his father’s harsh masculinity. Conversely, rather than asserting dominance, Julie’s adoption of masculine traits in the novel suggests an attempt to interrogate and reject the typical passive female role entrenched in their society. This study corroborates the hypothesis that *The Cement Garden* illustrates the dissolution of conventional gender order and the emergence of alternative masculinities. By depicting masculinity and femininity as complementary rather than oppositional, the novel accentuates how alternative masculinities are constructed and negotiated in localized contexts—specifically, the socially confined setting of the family.

The collapse of traditional gender binaries could also imply the emergence of new forms of masculinity. In so arguing, Hosseini (2015) employs Raewyn Connell’s concept of hegemonic masculinity to examine the portrayal of patriarchal influence in the novel. Coining the term “filiarchy”—“the reign of sons”, Hosseini (2015) argues that the novel portrays a shift from traditional hegemonic masculinity, typically represented by the father, to a scenario where sons coexist interdependently with women rather than dominating them (pp. 192–193). This transition not only upends conventional male-female power dynamics but also signals the unsustainability of traditional male dominance within the novel’s setting, consistent with the broader societal impact of rising feminism on traditional gender identities during the

time. While we acknowledge Hosseini's interpretation of the negative impact of hegemonic masculinity, our study focuses instead on the mechanisms through which it is established and its interaction with the dynamic configuration of personal practices. As Messerschmidt (2018) clarifies, hegemony involves submissiveness on the part of the dominated—a distinction particularly relevant to Jack's inability to establish a stable masculine identity.

Previous studies by Gieni (2018), and Mitra and Srivastava (2014) highlight the psychological motivations for Jack's behaviours and McEwan's critique of patriarchal authority through shock and transgression. Their studies confirm the link between the father's hegemonic masculinity and authority, but do not further discuss its impact on Jack's behaviour. Our study applies Connell's reformulated theory of hegemonic masculinity. The emphasis on contextuality, relationality, and fluidity (Connell & Messerschmidt, 2005) allows for analysing Jack's masculinity as constructed through interactions with his father, mother, Julie, and Derek. Rather than a fixed ideal, Jack's pursuit of hegemonic masculinity emerges as an aspirational, relational project characterised by tension, conflict, and social isolation.

THEORETICAL FRAMEWORK

Raewyn Connell's Hegemonic Masculinity

Historically, men have been regarded as "the normative gender" (Kimmel, 1986, p. 519). It was not until the 20th century that

psychoanalysis and gender studies revealed the ambivalence and oppression inherent in traditional male identity. Following these developments, men's studies saw significant growth after the 1970s. Raewyn Connell's concept of hegemonic masculinity, first introduced in the 1980s, defines the normative ideals of a "real man" and addresses how ideal masculinity is both oppressive and desirable. In her seminal work, Connell (1996) characterizes masculinity as a "configuration of practice" (p. 56) which focuses on actual behaviors rather than expectations. She explains masculinity as involving one's position in gender relations, the practices influencing this position, and their impact on personal and cultural aspects (Connell, 2005). Connell (2005) identifies hegemonic masculinity as the prevailing configuration of gender practices of the West in the 1970s that legitimizes patriarchy.

Connell characterizes hegemonic masculinity as a dominant configuration that informs men's gender identities through ongoing practices. She notes that "gender is organized in symbolic practices" (Connell, 2005, p. 72). This concept evolves, guiding contemporary men's behaviors, shaping their personalities, and influencing gender relations. In the 1970s, hegemonic masculinity was characterized by men's dominance over women in power, economic, and sexual spheres. Demetriou (2001) refers to this as "external and internal hegemony" (p. 341), where external hegemony denotes the institutionalization of men's dominance over women.

Connell (2005) also discusses how the current Western gender order revolves

around the dominance of men over women. Hegemonic masculinity, she argues, is a strategy that “guarantees (or is taken to guarantee) the dominant position of men and the subordination of women” (Connell, 2005, p. 77). Internal hegemony within hegemonic masculinity signifies dominance over other men and creates a hierarchy among them (Demetriou, 2001). Connell (2005) identifies the relational nature and dynamics of masculinity, namely “hegemony, subordination, complicity, marginalization” (p. 76). These terms detail the oppressive dynamics towards men who do not conform to hegemonic traits, and how masculinity intersects with other social structures like class and race.

Connell (1987) identifies three configurations within male hierarchies: hegemonic masculinity, the dominant but largely unattainable ideal; conservative masculinities (complicit masculinities), which do not fully embody hegemonic norms but benefit from them; and subordinated masculinities, which are culturally devalued, including but not limited to gay masculinities (p. 110). Connell and Messerschmidt (2005) reconceptualize hegemonic masculinity as a fluid, relational construct that adapts to shifting social contexts. Unlike dominant masculinity, which is most common within specific settings, hegemonic masculinity achieves cultural legitimacy by establishing itself as normative and socially validated. Crucially, not all dominant masculinities are hegemonic. As a dynamic configuration of practices, hegemonic masculinity gains legitimacy by materially embodying

and/or symbolizing culturally supported gender superiority and gender inferiority (Messerschmidt, 2018). In constructing hegemonic masculinity, individuals simultaneously establish unequal gender relations with others at the cultural level. Hegemonic masculinity also evolves through continual negotiation, absorbing and neutralizing alternative masculinities to maintain its cultural dominance.

Connell’s concept of hegemonic masculinity functions as a culturally legitimized and aspirational ideal. However, its exclusivity and unattainability generate instability, contradiction, and the potential for transformation (Connell, 2005; Connell & Messerschmidt, 2005). While alternative masculinities are often marginalized and “culturally discredited or despised” (Connell, 2000, p. 217), their divergence from hegemonic norms can provoke resistance and renegotiation. This dynamic interplay reveals masculinity as a continually evolving construct, particularly in periods of social transition, familial rupture, or adolescent development.

In *Gender and Power* (1987), Connell argues that hegemonic masculinity is not maintained solely through dominance but through ongoing negotiations with subordinate genders. Connell illustrates how women challenge or adapt to hegemonic masculinity, such as by negotiating authority within the domestic sphere or adopting aggressive, nonconformist styles, like punk fashion. These negotiations reveal that hegemonic masculinity is relational and context-dependent, sustained by

its capacity to contain and incorporate alternative practices rather than overpower the prevailing structure. However, such interactions often result in superficial adjustments rather than genuine shifts in gender power dynamics, which further affirms hegemonic masculinity's resilience and adaptability.

Connell's work in *The Men and the Boys* (2000) is particularly relevant to the analysis of *The Cement Garden*. Connell (2000) argues that developing masculinity involves "active negotiation in multiple social relationships", shaped by resistance and conformity to institutional pressures (p. 31). Importantly, Connell emphasizes that the process of forming masculinity is neither linear nor passive; instead, it is a complex, dialectical process involving moments of confrontation, denial, and adaptation. The emotional dynamics within families make negotiations central to family life, sometimes challenging the gender order. Connell (1987) observes that localized deviations, where women assume dominant roles, can influence the larger gender order.

METHODOLOGY

This study explores masculinity in Ian McEwan's *The Cement Garden* through Raewyn Connell's framework of hegemonic masculinity. Using textual analysis, it examines how the novel's father figure embodies hegemonic masculinity and shapes the protagonist, Jack's perception of male identity within a patriarchal family setting. The analysis then traces Jack's evolving masculinity through his initial

emulation of his father, his struggles to assert dominance, and his interactions with siblings as he negotiates his gender identity. These dynamics are further complicated by the socially confined environment of the family, which limits Jack's ability to achieve hegemonic masculinity and forces him to adapt his gender practices. The study demonstrates that Connell's concepts of hegemonic masculinity, relational masculinity, and masculinity hierarchies are essential for understanding Jack's psychological development and gender practices within this isolated setting.

RESULTS AND DISCUSSION

Hegemonic Masculinity in the Family

The Cement Garden unfolds within an isolated household devoid of adult supervision, serving as a microcosm to examine hegemonic masculinity in confinement. McEwan (1979, as cited in Ricks, 2010) notes that his novel explores a setting stripped of social control, where children navigate identity formation without traditional authority. While Jack's models of masculinity are confined to familial figures, the novel reflects broader socio-cultural tensions of 1970s Britain, including second-wave feminism, punk subculture, and the weakening of patriarchal structures. Although Jack's development is rooted in familial dynamics, his negotiation of masculinity is also informed by these cultural anxieties. The novel's domestic setting complicates Jack's masculinity by denying him external validation and cultural legitimacy—factors Connell and

Messerschmidt (2005) argue are essential for hegemonic masculinity. This insularity highlights how hegemonic masculinity is relational and contingent upon social recognition rather than isolated dominance.

Connell's (2005) assertion that families are "fields of relationship within which gender is negotiated" (p. 146) is reflected in *The Cement Garden*. In the novel, the protagonist Jack's initial conceptions of masculinity, shaped by his parents, mirror traditional gender norms. Narrated from Jack's first-person perspective, *The Cement Garden* opens with his reflections on how his father's dominant role and his mother's submissive demeanor shaped the family dynamics. This scenario epitomizes Connell's (2000) definition of hegemonic masculinity as a culturally exalted form that stabilizes the gender order. In the late 20th century, the prevailing patriarchal system in the Western world required wives and children to comply with the father's demands. Connell (2005) notes that patriarchy guarantees the dominant position of hegemonic masculinity. On the other hand, the mother, embodying "emphasized femininity", represents compliance with male interests and desires (Connell, 1987, p. 183).

In *The Cement Garden*, Jack's conception of masculinity is structured around his father's authoritarian presence, symbolized by the smoking pipe, which Jack describes as "a missing section of his [father] own anatomy" (McEwan, 2003, p. 15). This emblem of authority reflects how hegemonic masculinity is enacted through

symbols of power and control rather than direct violence. McEwan's sparse, measured prose conveys how authority is asserted through suggestion and manipulation. For instance, when Jack's father ends a financial disagreement with his wife by tapping his pipe and quietly stating, "out of the question" (McEwan, 2003, p. 15), the dismissal functions as both rhetorical dominance and exclusion, banishing the wife from economic power and reinforcing the hierarchy within the family. Jack mimics this gesture through an "imaginary pipe" (McEwan, 2003, p. 16) in interactions with Julie, to emulate his father's tactics and symbols of control despite lacking their social legitimacy. Jack's emulation of his father's symbolic gestures illustrates Connell's notion of hegemonic masculinity as aspirational and performative. His reliance on such props signals his incomplete internalisation of masculinity and reveals how hegemonic norms are learned through everyday practices, interactions, and discourses. The mother's compliance with the father, contrasted with Julie's resistance to Jack, illustrates how attaining hegemonic masculinity depends on securing consent and reinforcing unequal gender relations, often intersecting with other forms of social inequality, such as age.

In the novel, Jack's retired soldier father exemplifies hegemonic masculinity through his strict, militaristic order within the family. He uses severe measures to uphold his masculine standards, using Mother against Tom, Jack's younger brother, "much as he used his pipe against her" (McEwan, 2003,

pp. 17–18). He mocks Jack for his pimples, Sue for her faint eyebrows and lashes, Julie for her athletic pursuits, and their mother for her arithmetic, with each critique “stage-managed” to maintain control (McEwan, 2003, pp. 19–20), ensuring “none of them ever worked against him” (McEwan, 2003, p. 20). The children privately “set to work filling pages with crude overworked jokes” (McEwan, 2003, p. 20) against their father to resist his demeaning humor. The father is considered the sole exemplar of masculinity in the closed environment. Jack aspires to emulate this masculinity, seeking to attain the same autonomy and authority. This phenomenon can be likened to Connell’s (2005) model of hegemonic masculinity in society, which functions through a few male role models. Additionally, this exemplifies Connell and Messerschmidt’s (2005) emphasis on how gender intersects with other social hierarchies. In this case, age and gender inequalities are legitimized through the father’s verbal devaluation, militarized control, and the family’s willing compliance. As such, the father exemplifies the workings of hegemonic masculinity outlined by Connell (2005). This dynamic illustrates the psychological costs of conforming to hegemonic ideals and hints at the possibility of reconfiguring gender practices through subtle acts of defiance.

Outwardly, while the father’s hegemony stabilizes the family’s adherence to traditional gender order, it exposes at the same time the inherent vulnerabilities of hegemonic masculinity. Connell (2005) notes that “gender is vulnerable when the

performance cannot be sustained” (p. 54), a point exemplified by the father’s debilitating heart condition. His inability to meet the demands of his patriarchal role causes his authority to falter, especially as the children notice his physical and authoritative weaknesses. This growing awareness within the family reveals the fragility of hegemonic masculinity and prompts Jack to explore alternative gender practices.

Pursuing Hegemonic Masculinity: The Influences of the Parents

As an adolescent, Jack identifies with his father’s masculinity. With no other model, Jack’s emulation of his father’s masculinity becomes a form of social practice: embodied, experimental, and shaped by isolation, rather than a socially ratified expression of masculinity. Connell’s (2005) notion of complicit masculinity suggests that men benefit from systems of patriarchal dominance even without overt exertion of power. However, in Jack’s case, this benefit is ambiguous: he imitates hegemonic masculinity without necessarily gaining its rewards, as Julie and others often undermine his authority.

His attempts to emulate his father’s masculinity are particularly evident when he tries to assert himself in front of the cement workers. Mimicking his father’s posture, Jack hopes that enacting this role will initiate his transition into manhood:

I wanted to say something terse and appropriate, but I was not sure I had heard them right. ... my father stepped out, biting on his pipe and holding a

clipboard against his hip ... I folded the comic into my back pocket and followed the three men up the path to the lorry. (McEwan, 2003, p. 14)

This incident highlights Jack's fragile approximation of authority, which lacks the external validation and social power normally associated with hegemonic masculinity. His internal conflict is further underlined during a domestic argument, when he observes his father's behaviour with both admiration and critical distance: "I sensed he was right. But how self-important and foolish he looked as he took the thing [the pipe] out of his mouth, held it by its bowl and pointed the black stem at my mother" (McEwan, 2003, p. 15). This scene illustrates Jack's complex relationship with the hegemonic masculinity he seeks to embody. Jack's ambivalence towards his father, through his emotional resistance and simultaneous tacit approval, elucidates the dynamics of power, recognition, and identity within the patriarchal structure.

However, Julie, Jack's older sister, perceives their father's strictness as compensating for his declining physical capabilities, saying, "now Father was a semi-invalid he would have to compete with Tom for Mother's attention" (McEwan, 2003, p. 17). This comment suggests that the father's authority is influenced not just by his will but also by his physical condition. As his illness reduces his ability to maintain power, it catalyzes a shift in family dynamics, prompting the children, especially Julie, to reinterpret their roles and

power distribution within the family. This realignment reflects Connell's notion that a shift in hegemony can provoke changes within the dominated group (2000).

The death of Jack's father and his mother's illness leave him unsupervised, causing him to adopt traditional hegemonic patterns as he tries to assert power and resist maternal influence. Connell (2005) describes this as a response to childhood powerlessness, manifesting "an exaggerated claim to the potency that European culture attaches to masculinity" (p. 111). After the death of his father, Jack oscillates between seeking autonomy and responding to his mother's discipline, driven by her love. His mother criticizes his neglect of personal hygiene, but he feels proudly "beyond her control" (McEwan, 2003, p. 26). As her health declines, guilt compels Jack to clean up on his 15th birthday, following Julie's advice: "I filled the washbasin with hot water. ... It was the closest I came to washing. ... I cut my fingernails and combed my lank brown hair ... deciding at last to celebrate my birthday with a center parting" (McEwan, 2003, pp. 43–44). This act of grooming symbolizes his conflicted feelings and his quest for his mother's approval.

Jack's behavior is informed by his father's example of hegemonic masculinity, which he emulates through displays of physical acts and emotional detachment from his family. However, he simultaneously harbors resentment towards his father and emotional attachment to his mother, who serves as both a caretaker and emotional anchor. Despite resisting his mother's

guidance, Jack is willing to change for her. His awe for his father's authority and his bond with his mother influence his actions. However, any change in his gender practices is temporary and does not alter his underlying adherence to male hegemony.

Subordinated Masculinity: Jack's Ineligibility of Hegemony

Following the death of their mother, the siblings decide to place her remains in concrete within the basement to "keep their sense of family together" (Head, 2007, p. 47) and prevent separation by social services. The siblings fear that disclosing her death, especially after their father's earlier passing, would lead to foster care placement. Yet, Jack confesses experiencing "a sense of adventure and freedom" at his mother's death (McEwan, 2003, p. 79). This concealment signifies a rejection of external authority and an attempt to establish a self-governing familial order, albeit shaky and illegitimate. The death of their parents heightens the siblings' moral and societal defiance. Slay (1996, as cited in Head, 2007) states that McEwan's unsettling plot forces readers to confront societal brutality and that recognizing such realities is essential for transformative change. This behavior, indicative of the alienation wrought by toxic masculinity and rigid patriarchal norms, is a critique of the family's and society's underlying dysfunctions.

The death of Jack's mother signifies the end of the contradictory influences of his parents, leaving him and Julie to take charge as their mother intended (McEwan, 2003).

This marks the beginning of a gendered power struggle between the siblings in a household devoid of traditional authority. Julie's dominance over Jack highlights his distance from the hegemonic masculinity he seeks and recalls his father's failures in asserting control. Connell (2005) describes such dynamics as gender relations of dominance (hegemonic masculinity) and subordination (subordinated masculinity). Jack's inability to fulfil his father's hegemonic role relegates him to a subordinated masculinity, considered "expelled from the circle of legitimacy" (Connell, 2005, p. 79).

Unlike Jack, who struggles with identity and patriarchal expectations, Julie, on the other hand, exhibits feminist traits and effortlessly assumes familial and parental responsibilities. Despite their mother's directive for shared leadership, Jack finds himself overshadowed by Julie's "quiet strength and detachment", as well as her beauty (McEwan, 2003, p. 29). Julie's practical proficiency is evident when she manages the finances of the siblings and prepares the cement to bury their mother, overpowering Jack, who feels sidelined and accuses her of "exploiting the position" (McEwan, 2003, p. 50). Julie's authority over Jack can be read as disrupting traditional forms of emphasized femininity. Instead of merely accommodating Jack's attempts at masculinity, she asserts control. This reversal also disrupts Jack's attempt to access cultural legitimacy because Julie's power operates in defiance of the very hierarchy Jack tries to emulate.

Feeling disillusioned about his place within the family, this dynamic upends Jack's understanding of male-female relationships and amplifies his sense of inadequacy and quest for recognition. Connell (2000) notes that such alternative masculinities to the hegemonic model are often "culturally discredited or despised" (p. 217).

Jack's attempts to assert authority within the family, such as by questioning Julie's financial decisions and inquiring about her and Sue's activities, consistently meet resistance. His efforts to demonstrate capability by cleaning the kitchen are met with derision, as the sisters remark that "[h]e's done his bit for a few weeks" (McEwan, 2003, p. 82). This treatment by the sisters, suggesting his exclusion from the legitimate circle of hegemonic masculinity, combined with Julie's authoritative demeanor, challenges traditional masculine tactics. Jack perceives Julie's responses as patronizing, feeling she speaks to him "as if to a child about to burst into tears" (McEwan, 2003, p. 92). This dynamic captures how the establishment of hegemonic masculinity is contingent upon the recognition and affirmation of others, which Jack cannot obtain. As Jack's interactions with Julie and Sue reveal, hegemonic masculinity is not simply a trait he can embody but a configuration of practices that depends on relational validation and mutual recognition. This dynamic illustrates the limitations of traditional masculinity in a family context where feminine authority is not only present but effective. The shift of authority towards Julie illuminates that hegemonic masculinity

is not an isolated possession but rather an ongoing negotiation that can be contested or reconfigured within specific social contexts.

Jack's attempts to exert his authority are further challenged by the arrival of Julie's boyfriend, Derek, who the siblings immediately more favorably receive. Derek, described as "very tall and looked as if he were dressed for a wedding—pale grey suit, cream-colored shirt and tie, cuff links and a waistcoat with a small silver chain" (McEwan, 2003, p. 101), clearly impresses the siblings. Derek's accepted masculinity contrasts with Jack's shaky authority, illustrated particularly during a snooker game where Derek's confidence eclipses Jack's insecurity. Observing the match, Jack quietly wishes that Derek's opponent, Greg, would win (McEwan, 2003, p. 115). This reveals his ambivalence and the subconscious acceptance that Derek represents a more successful, socially accepted version of masculinity—qualities Jack finds elusive.

Jack's regression towards the end of *The Cement Garden*, where he exhibits infantile behaviour, yearning to be carried and weeping uncontrollably, can be read as a final withdrawal from his failed gender project. This tension surfaces in a dream where Jack yearns for childhood comfort, crying out, "I was crying because I was tired, and I wanted to be carried. ... I shook my head and wailed louder" (McEwan, 2003, p. 142). As Connell and Messerschmidt (2005) argue, hegemonic masculinity is sustained through the maintenance of unequal gender relations. Jack's masculinity is deemed to

fail because it lacks both institutional and interpersonal recognition. Messerschmidt's (2018) distinction between hegemonic and dominant masculinity further clarifies this breakdown. Jack aspires to embody hegemonic masculinity but cannot achieve even dominance within his household, as Julie and Derek consistently undermine his authority. The return to childlike behaviour reflects Jack's acknowledgment that the masculine ideal he strives for remains inaccessible. Moreover, his adolescence renders his gender project inherently experimental and incomplete as he lacks the social legitimacy necessary to perform hegemonic masculinity effectively. His retreat into infancy thus symbolises his failure to negotiate a coherent masculine identity within the fractured domestic sphere McEwan constructs.

Head (2007) interprets the siblings' effort to recreate a traditional family structure as "driven to construct a parody of the family structure they needed to react against in order to achieve maturity" (p. 48). While Jack briefly escapes societal norms in the absence of other adult males, allowing him some freedom to reconstruct his masculinity, this freedom is fleeting. Derek, likely the one who alerted the police after discovering the siblings' actions, cementing their mother's body and engaging in unconventional relationships—embodies the societal forces ready to reassert control. The arrival of the police towards the end of *The Cement Garden* symbolizes the inescapable authority of social structures and scrutiny that enforce hegemonic masculinity

and standards of male behavior. McEwan's narrative closure, while seemingly open-ended, subtly critiques the cyclical and rigid nature of gender roles, suggesting that any deviation from societal norms is ultimately short-lived and subject to correction by overarching power structures.

CONCLUSION

Ian McEwan's *The Cement Garden* explores the pervasiveness and instability of hegemonic masculinity, even as the narrative momentarily allows for alternative expressions of gender. Raewyn Connell's concept of hegemonic masculinity serves as a crucial framework for understanding the novel's delineation of masculinities and how they are organized around social recognition, cultural legitimacy and social validation. In the novel, the father embodies this hegemonic ideal and represents traditional norms of manhood in late twentieth-century Britain, where physical strength and dominance are key indicators of masculinity. However, as the novel progresses, Jack's construction and negotiation of masculinity portray ambivalence and even resistance to this ideal. While moments in the novel, such as the death of the father, suggest a shift towards alternative gender practices—where the maternal influence offers Jack a different model of masculinity—these shifts are, however, tentative and temporary at best.

Jack's negotiation with hegemonic masculinity might temporarily disrupt the hegemonic order, and in doing so, offer the readers a glimpse of alternative masculinities and gender practices. However, the novel

ultimately reflects the inevitability of these entrenched societal norms. The hint at a return to hegemonic masculinity at the end of the novel somehow subdues its narrative critique of traditional gender structures. *The Cement Garden* shows how deviations from societal norms are closely monitored and swiftly corrected. The novel thus serves as an experiment with provocative ideas about familial institutions and the potential for and limitations of challenging hegemonic masculinity.

Implications of the Study

This study demonstrates how hegemonic masculinity influences Jack's construction of masculinity within the isolated setting of *The Cement Garden*. Applying Connell's framework reveals Jack's negotiation of masculinity as a relational process which involves fluctuating between hegemonic ideals and alternative practices. Jack's adolescence complicates this negotiation; his attempts to assert authority remain fragmented and undermined by his dependency and vulnerability. Connell's theory proves to be feasible in reading the novel, particularly in showing the construction of masculinity as a protracted and fraught process, which necessitates ongoing negotiation with hegemonic masculinity.

Limitations and Recommendations for Future Studies

This study focuses primarily on Jack, the novel's main protagonist. While our analysis considers how familial relationships inform his construction of masculinity, further

research on other male and female characters in the novel and McEwan's oeuvre in general, would enrich our understanding of how hegemonic masculinity operates. Connell's theory encompasses masculinity and femininity as they relate to patriarchal structures. Further research in this area would expand the discussions of gender, identity, and power.

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