

Designing a Blended Learning Approach for Digital Literacy and Language Acquisition among Senior Learners

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ABSTRACT

The swift advancement of digital technologies underscores the need for digital literacy across all age groups, including older adults. However, the “digital divide” remains a significant challenge. To bridge this gap, a multifaceted strategy that includes access to technology and fostering digital literacy in inclusive learning setting is essential. This study introduces a program aimed at enhancing digital literacy among seniors aged 55 and above that enables them to engage in a Mandarin learning program through a blended approach, while combining face-to-face and online learning sessions for a holistic educational experience. The program is designed using the ADDIE model, a structured instructional design framework consisting of five phases - Analysis, Design, Development, Implementation, and Evaluation.

Keywords: Blended learning, digital inclusion, digital literacy, language learning, lifelong learning

INTRODUCTION

The rapid advancement of digital technologies has led to a growing need for digital literacy among all age groups, including older adults. In the field of digital learning for older adults, one of the significant issues is the disparity in access and technological skills, commonly known as the “digital divide”. Addressing the digital divide among older adults necessitates a comprehensive approach that includes not only providing access to technology but also promoting digital literacy and creating inclusive learning environments.

The adoption of technology among older adults remains a challenge due to

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issues of uncertainty and lack of confidence. It calls for the need for targeted activities and tailored training programmes to increase seniors’ technology use and integration into their daily lives (Perdana & Mokhtar, 2022). To make technology-based products user-friendly for seniors and support their independent use, it is important to first consider the physical challenges they may potentially face. This, in turn, could help to reduce the psychological barriers that may prevent them from engaging with technology for educational purposes. Adopting this holistic approach is essential for creating an inclusive and effective learning environment for older individuals (Chiu et al., 2019).

The ability to navigate digital environments is crucial for maintaining social connections, accessing information, and continuing lifelong learning. Therefore, this study focuses on developing program aimed at enhancing digital literacy among older adults aged 55 years and above, with a specific goal of enabling them to participate in online language learning classes, through a blended approach. The program’s design integrates both face-to-face and online learning sessions to provide a comprehensive and accessible learning experience. The program comprises four structured lessons combining face-to-face and online learning sessions, aimed at familiarizing participants with online learning tools and basic Mandarin language skills.

DESIGN AND DELIVERY OF PROGRAMME

The intention of this study was to explore the implementation of blended learning approach in a two-fold learning program for older adults aged 55 years and above through “Bengkel Teknologi Senior”, a project launched by the Centre for Instructional Technology and Multimedia, Universiti Sains Malaysia in 2019. Developed in collaboration with Multimedia University and Amanz Media, this initiative aims to foster active engagement and knowledge sharing among public and private universities, industry experts, and older individuals. It addresses digital literacy issues within the senior citizen community in Malaysia, promoting lifelong learning and independence by equipping participants with digital technology skills.

In this program, ADDIE instructional design model is used for designing and developing the learning modules (Branch et al., 2009). The implementation of ADDIE is shown in Table 1.

The initial phase focuses on introducing them to basic digital tools and platforms through user-friendly tutorials, face-to-face orientation sessions, and ongoing support from digital buddies. Once they have acquired essential digital literacy, the program transitions into engaging them in an online Mandarin course. This second phase leverages their newly developed skills to facilitate language learning in online learning environment, using virtual classes and learning activities to enhance their Mandarin proficiency. The program structure is shown in Table 2.

Table 1
Implementation of ADDIE model

Phase	Description	Details
Analyse	Identifying learning needs	Conduct analysis that consists of: (i) instructional need analysis; (ii) goal analysis; (iii) learner analysis; (iv) task analysis; (v) context analysis; and (vi) content analysis.
Design	Planning the learning process	Document specific learning objectives, assessment instruments, exercises, and content
Development	Creating learning materials	Develop learning modules tailored to the chosen delivery mode and media, create learning activities, and develop both formative and summative assessment tools to measure outcomes
Implementation	Executing the program in real settings	Upload content to the selected learning management system, train the facilitators, ensure instructor-student interaction, and conduct pilot tests of the learning system and module
Evaluation	Assessing effectiveness	Evaluate course design and materials, assess student skills through summative reflective activities, and make revisions to improve course effectiveness.

Table 2
The program structure

Session	Learning Mode	Structure
1	Face-to-face	Lesson 1 - Program Introduction. Introduces participants to the blended learning format and helps them to be comfortable with the digital tools that will be used in the online sessions.
2	Online	Lesson 2 - Self-Introduction Focuses on basic Mandarin, specifically self-introduction. It provides foundational language skills necessary for everyday conversations.
3	Online	Lesson 3 - Hobbies and Favourites Builds on the previous lesson, covering topics related to hobbies and favourites. Participants enhance their conversational skills and vocabulary related to personal interests.
4	Face-to-face	Lesson 4 - Interactive Activities Focuses on interactive activities to consolidate learning. This session aims to build confidence and fluency in speaking Mandarin.

Various activities are designed by incorporating active learning principles (Horton, 2011) into the blended learning approach. By embedding these active learning strategies into the curriculum, the course aims to create an inclusive and stimulating educational environment that addresses the needs of senior learners.

DISCUSSION AND CONCLUSION

Older adults may encounter mobility challenges that can impede their ability to attend traditional face-to-face classes, leading to fatigue and additional physical strain. These

challenges are particularly pronounced in educational contexts where regular attendance is required. To address this issue, a blended learning approach has been introduced, allowing them to participate in a mix of in-person and online learning sessions. This model may not only could mitigate the physical demands associated with commuting but also provides a flexible learning environment tailored to their needs. In-person sessions offer valuable opportunities for face-to-face interaction, hands-on guidance, and real-time support, fostering a more engaging and socially enriching learning experience. It allows seniors to receive immediate assistance and build confidence in using new tools especially when learning digital technology for the first time. Meanwhile, online sessions allow them to engage with educational content from the comfort of their homes, reducing the need for travel and the associated fatigue. Therefore, this approach is seen to be able to promote sustained engagement and inclusivity, ensuring that mobility issues do not become a barrier to lifelong learning.

However, the implementation of such approach requires careful consideration of the digital literacy levels of senior learners, with additional support and resources provided to ensure they can navigate online platforms confidently and effectively. Ultimately, fostering learning among older adults goes beyond merely altering their perceptions or societal attitudes; it necessitates addressing the genuine challenges associated with aging. Therefore, it is essential to ensure that they are provided with adequate support and opportunities to continue learning and developing.

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