SOCIAL SCIENCES & HUMANITIES

Unveiling Dynamics of Student Engagement in Thesis Supervision

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ABSTRACT

Student engagement with supervisory feedback plays a crucial role in higher education, but the process often presents complexities that are not fully understood. Despite the importance and inherent challenges, student engagement remains underexplored and lacks research at the undergraduate level. Therefore, this research aimed to thoroughly examine how undergraduate students engaged with supervisory feedback during the thesis writing process. It included five students who had completed their undergraduate thesis in the English Education Department at an Indonesian college. Data was collected through semi-structured interviews, think-aloud protocols, and text analysis. The results showed that all students exhibited high affective, cognitive, and behavioral engagement levels with many positive emotions, such as satisfaction and motivation. Furthermore, this research contributed to the existing body of knowledge by underscoring the critical role of affective engagement in fostering cognitive and behavioral outcomes. It also outlined the need for adaptive supervisory models, emotional intelligence training, and the creation of supportive environments. These insights held relevance for academics, university faculty, educational administrators, and students included in the thesis supervision process. Due to the limited number of participants, the research required cautious interpretation, and generalizations should be carefully asserted. Consequently, the analysis suggested the adoption of adaptive supervisory models, the incorporation of emotional intelligence training, and the establishment of supportive environments. Further research with a larger sample size and broader scope was also suggested to validate and expand the results.

Keywords: Engagement, Indonesian students, supervisory feedback, thesis

INTRODUCTION

Supervisory feedback is a crucial aspect of higher education, helping undergraduate and postgraduate students to assess proficiency, enhance research skills, and develop academic writing abilities (Basturkmen

et al., 2014; Carter & Kumar, 2017; Xu, 2017; Xu & Hu, 2020). Specifically, it guides students in understanding academic conventions, becoming proficient members of the disciplines (Kumar & Stracke, 2007; Li et al., 2017), fostering independent learning (Bitchener et al., 2010), and ensuring the timely completion of a thesis (Basturkmen et al., 2014). However, students often face challenges in effectively engaging with feedback due to insufficient self-regulation and difficulty interpreting the feedback provided (Carless et al., 2011; Sadler, 2010).

Student engagement with feedback remains a complex and not fully understood process, with limited research on factors that enhance engagement (Bastola, 2022; Carless et al., 2011; Liu & Carless, 2006; Yang & Carless, 2013). In this context, the supervisor can significantly influence engagement by shaping perceptions, developing a supportive environment, and offering varied types of feedback (Handley et al., 2011; Lunt & Curran, 2010). However, most research focuses on general feedback engagement rather than second language (L2) writing contexts. The existing research also concentrates on postgraduate students, leaving a gap in understanding how undergraduates engage with supervisory feedback (Bastola, 2022; Geng & Yu, 2022; Sun & Trent, 2020; Wang & Lee, 2021; Xu et al., 2021; Yu et al., 2018; Yu & Jiang, 2020; Z. Zhang, 2020).

This current research aims to fill this gap by examining how undergraduate students engage with supervisory feedback in the context of L2 thesis writing in Indonesia,

focusing on engagement's affective, cognitive, and behavioral dimensions. By exploring these aspects, the present research contributes to the literature by providing new insights into undergraduate engagement with supervisory feedback in an underexplored setting. Additionally, the analysis offers practical strategies for enhancing engagement and supporting academic success by providing practical recommendations based on the following questions.

1. How do undergraduate students engage effectively with supervisory feedback during thesis writing?

2. How do undergraduate students engage cognitively with supervisory feedback during thesis writing?

3. How do undergraduate students engage behaviorally with supervisory feedback during thesis writing?

LITERATURE REVIEW

The Concept of Student Engagement with Supervisory Feedback

In academic research, student engagement with feedback has been explored from various perspectives. Early studies focused on student perceptions (Ferris, 1995; Lee & See, 2004), revision behaviors (Hyland, 2003), and cognitive processes related to feedback (Storch & Wigglesworth, 2010). Subsequently, Ferris et al. (2013) emphasized strategies and self-monitoring in handling feedback. Svalberg (2009) also observed that engagement included students actively participating in the learning process.

Engagement with feedback generally included stages such as collecting, reading, reflecting on, and acting upon feedback (Price et al., 2011). This process included both accepting and rejecting feedback after reflection. However, a lack of visible response might have been misinterpreted as disengagement (Handley et al., 2011). Engagement could also be affective, behavioral, or cognitive (Fredricks et al., 2004; Handley et al., 2011; Yu et al., 2018).

More specifically, Ellis (2010) defined engagement with feedback as emotional, behavioral, and cognitive responses to feedback. Affective engagement includes positive emotions, such as motivation and interest, as well as negative emotions, such as anxiety and irritation (Finn & Zimmer, 2012). Positive attitudes and confidence often led to greater use of feedback (Z. Zhang & Hyland, 2018), while negative emotions could lower motivation (Yu & Jiang, 2020).

Cognitive engagement included deep learning and self-regulation (Fredricks et al., 2004; Philp & Duchesne, 2016), depending largely on how well students understood feedback, which varied with the clarity (Han & Xu, 2021; Z. Zhang & Hyland, 2018; Zheng & Yu, 2018). Additionally, behavioral engagement included active participation, effort, and persistence (Fredricks et al., 2004; Skinner & Pitzer, 2012). Some students revised their work to improve it, while others might not engage with feedback when no value was observed (Xu, 2017; Yu et al., 2018; Zheng, Yu, & Liu, 2020). Based on this perspective, the present

research defined affective engagement as student emotions and interest in feedback, behavioral as actions in using feedback, and cognitive as the mental processes of understanding and applying feedback (Ellis, 2010; Fredricks et al., 2004; Han & Hyland, 2015; Storch & Wigglesworth, 2010).

Empirical Studies on Student Engagement with Supervisory Feedback

Research into written corrective feedback (WCF) underscored the significance of student engagement across affective, behavioral, and cognitive dimensions. Despite the significance, few studies addressed these dimensions simultaneously. For example, Zheng and Yu (2018) showed that lower-proficiency L2 Chinese students exhibited positive affective engagement with WCF. However, the cognitive and behavioral engagement remained limited, negatively affecting language accuracy. Han and Hyland (2015, 2019) emphasized dynamic interaction among these dimensions and outlined the crucial role of student agency.

Mahfoodh (2017) observed that affective responses, including acknowledgment and dissatisfaction, significantly influenced how EFL (English as a Foreign Language) students perceived and used WCF. Similarly, Yu et al. (2018) observed improved academic writing through peer feedback engagement among master students. Z. Zhang (2017) and Z. Zhang and Hyland (2018) further identified that student beliefs, proficiency, and motivation impacted engagement with automated feedback. At

the undergraduate level, Ali et al. (2015) found that early interventions enhanced student perceptions of and engagement with feedback. De Kleijn et al. (2013) also reported that positive feedback and clear guidance improved satisfaction and learning outcomes. Zheng and Yu (2018) outlined that lower proficiency negatively affected cognitive and behavioral engagement with feedback. Furthermore, Han and Xu (2021) discussed the multifaceted nature of feedback literacy and its influence on engagement.

F. Zhang et al. (2023) further showed that EFL undergraduates exhibited increased engagement across multiple feedback cycles. Similarly, Z. Zhang and Hyland (2022) showed that integrating automated, peer, and teacher feedback effectively fostered engagement in academic writing. Dang et al. (2022) and Man et al. (2021) also emphasized that specific tasks, including feedback-correction practices and rebuttal-writing assignments, significantly influenced engagement.

In studies considering graduate students, Saeed et al. (2021), Zheng, Yu, Wang, and Zhang (2019), and Lei and Pramoolsook (2020) suggested that engagement with feedback varied depending on the type of feedback and the stage of the writing process. For example, Jin et al. (2022) found that cognitive, affective, and behavioral engagement in peer feedback substantially enhanced postgraduate writing performance. Xu et al. (2021) further emphasized that negotiating cultural values influenced doctoral student engagement

with feedback, while Geng and Yu (2022) reported emotional factors playing a critical role in feedback engagement. In this context, Stracke and Kumar (2016) and Carter and Kumar (2017) asserted that expressive feedback could either motivate or demotivate students, depending on emotional responses.

Research on technological applications in feedback further offered valuable insights. Fernández-Michels and Fornons (2021) showed that online students engaged with WCF through self-regulatory mechanisms. Similarly, Hafour and Alwaleedi (2022) found that cloud-based collaborative writing influenced EFL students' emotional and behavioral engagement. Shi (2021) showed that engagement varied with feedback sources and genres, emphasizing the complexity of engagement influenced by contextual and individual factors.

The literature showed that student engagement with feedback was a complex process influenced by individual differences, feedback types, contexts, and emotions. However, limited research exists on undergraduate engagement with supervisory feedback during thesis supervision. Most articles focused on general coursework or graduate-level feedback, overlooking the unique dynamics of undergraduate thesis supervision. This research aimed to address the gap by examining how undergraduates engaged with supervisory feedback and how it supported thesis completion. The results focused on providing insights to improve supervisory practices at the undergraduate level.

METHODS

Context and Design

This research was conducted as a 6-month fieldwork to investigate undergraduate student engagement with supervisory feedback during thesis writing. It focused on two main considerations: (1) the crucial role of student engagement in effective thesis supervision and (2) the limited research on this topic, primarily on master's and doctoral students. A phenomenological case study explored how students engage with supervisory feedback during thesis writing. This method allowed for an in-depth understanding of student experiences, emotions, and perceptions of supervisory feedback and its impact on engagement. Data were collected through text revision, think-aloud protocols that captured participants' real-time thoughts during tasks (Young, 2005), and semi-structured interviews, providing space for participants to freely share experiences and perspectives (Newman, 2016).

Participants

Before conducting empirical fieldwork, the researchers held an initial meeting with five students who were in the process of writing their thesis. During this meeting, the researchers explained the informed consent form, emphasizing the importance of confidentiality and the intended use of the data for publication purposes. Students were also informed of the right to withdraw from the research at any given time, but all agreed to participate voluntarily.

In this phenomenological research, the sample size of five participants was considered sufficient for three key reasons. These included (1) participants provided diverse perspectives and experiences, leading to rich and comprehensive data; (2) the research focused on individual experiences rather than generalizability, allowing for an in-depth exploration of each participant's insights; and (3) the limited resources available necessitated a manageable sample size to ensure the research could be completed in the available constraints.

The authors or researchers referred to as RS, conducted interviews with all participants who had completed thesis proposals and were preparing for the thesis examination. Participants were coded as follows: Student 1 (S1), Student 2 (S2), and Student 4 (S4) were at an upper-intermediate level, as well as Student 3 (S3) and Student 5 (S5) were at an intermediate level. Additionally, the research acknowledged the participants' proficiency levels, which influenced their engagement with feedback, further supporting the phenomenological method.

Data Collection

Empirical data were collected through semi-structured interviews, think-aloud protocols, and text analysis. The data on student engagement with supervisory feedback were gathered using these methods, informed by previous research. Yu et al. (2018) for effective engagement, Fredricks et al. (2004) and Skinner and Pitzer (2012) for behavioral

engagement, Fredricks et al. (2004), Philp and Duchesne (2016), and Skinner and Pitzer (2012) for cognitive engagement.

During the semi-structured interviews, each question was customized to participants' personal experiences (Table 1). Probe questions were used to explore responses more deeply and uncover additional insights, which typically lasted between 45 and 60 minutes. The interviews were recorded, reviewed, and edited with the consent of the participants and were conducted in both Indonesian and English

to ensure accurate understanding and representation, specifically for terms that might not translate well into English. The data presented in the research article are based on the translated version of these interviews.

A think-aloud protocol was further adopted to corroborate the interview results. In the think-aloud protocols, participants were instructed to articulate their thoughts consistently as students received supervisory feedback in the thesis writing process (Table 2).

Table 1
Interview guideline

Dimensions of Engagement	Questions
Affective	Can you describe a specific instance when feedback from your supervisor motivated you to improve your thesis and how it affected your confidence and motivation?
	Can you give an example of a time when you received negative feedback, detailing how you felt, how you handled it, and how it influenced your motivation and confidence?
	Can you describe a specific instance when you built trust with your supervisor through feedback?
Cognitive	Can you describe a specific instance when feedback from your supervisor required you to think critically about your thesis and how you reflected on and incorporated this feedback?
	How do you use strategies such as relating new information to prior knowledge or generating examples in your thesis writing, specifically when responding to feedback?
	Can you describe a time when you faced a challenge in your thesis writing and used feedback from your supervisor to overcome it?
Behavioral	Can you provide an example of how you demonstrated high levels of attendance and participation in supervisory meetings and how you responded to feedback promptly and effectively?
	How do you actively engage during meetings with your supervisor, communicate progress, and demonstrate persistence and accountability in your thesis writing?
	Can you describe a specific instance when you made significant changes to your thesis based on feedback and effectively managed your time to meet deadlines?

Table 2
Think-aloud protocol

Dimensions of Engagement	Protocols
Affective	Review a recent piece of feedback received from the supervisor on the thesis.
	Read feedback out loud and describe the initial emotional reaction to it. Explain the reason for the feeling.
	Summarize your thoughts on feedback and your engagement with it.
	Describe how you feel now that you have thought more deeply about feedback and how you plan to move forward.
Cognitive	Re-read feedback more slowly and explain what you think your supervisor is trying to communicate.
	Describe how you interpret feedback and whether you have any questions or uncertainties about it.
Behavioral	Describe how you plan to act on the feedback they received. Describe as specifically as possible how you will address the issues raised in feedback and how you will incorporate feedback into their writing process.

Data Analysis

The interview results and think-aloud protocols were transcribed verbatim to ensure accuracy, and pseudonyms were used to maintain anonymity. The data were analyzed using Braun and Clarke's (2006) thematic coding analysis to identify common patterns and evolving themes.

Initially, the researchers became familiarized with the data, focusing on language choices and conversational style. Criteria for affective engagement (Yu et al., 2018), behavioral engagement (Fredricks et al., 2004; Skinner & Pitzer, 2012), and cognitive engagement (Fredricks et al., 2004; Philp & Duchesne, 2016; Skinner & Pitzer, 2012) were applied as a triangulation theory to guide the analysis. This method helped refine patterns and identify the final themes.

The data were sorted and categorized based on recurring patterns relevant to the research question. The authors conducted the coding process and reached a consensus through discussions during coding and interpretation. The researcher used member-checking and triangulation to ensure trustworthiness in analysis and interpretation. Member-checking included not only the authors but also participants, who were asked to confirm the clarity and accuracy of the data. These methods were used to verify the accuracy of the data analysis (Harreveld et al., 2016).

RESULTS AND DISCUSSION

Interview Results

Affective Engagement

The interviews' analysis showed that student affective engagement played a significant role in shaping their experiences and responses to feedback during thesis supervision. Specifically, emotions such as

anxiety, motivation, fear, and preparedness directly influenced how students perceived and engaged with supervisor feedback.

For instance, S1 showed strong affective engagement with feedback, which helped to reduce anxiety and stimulate motivation. The student stated, "I find the motivation more convincing because I struggle with high anxiety. So, I need affirmations to help me stay motivated and complete my thesis." Additionally, S1 also emphasized the importance of being emotionally prepared and maintaining neutrality before supervision, stating, "Before attending supervision, I usually prepare myself and aim to remain neutral."

S2 consistently maintained affective engagement with feedback from the supervisor, reflecting motivation and appreciation for direct and frequent guidance. The student explained, "This supervision model was loved because the supervisor provided direct feedback and requested revisions immediately. Addressing these revisions as quickly as possible was ensured."

S3 welcomed feedback from the supervisor, which fostered a supportive environment. However, emotional responses varied, ranging from calmness to frustration, reflecting the deep engagement with feedback. The student asserted, "When it was related to the thesis, I usually calm down first. Sometimes I delay, but other times, I take care of it immediately." Despite these fluctuations, the student emphasized how feedback was a source of motivation, stating, "Feedback from the supervisor was

a source of motivation during the thesis writing process."

S4 further showed affective engagement by recognizing the value of feedback, even when facing challenges or disagreeing with decisions. The student stated, "Yes, it was a bit challenging because I needed to revise the writing. The interview structure was based solely on observations, for it required changes." Despite these difficulties, the student remained grateful for positive outcomes, stating, "Thank God supervisor was satisfied with the revision. Both parties felt that the results were better than before."

Finally, S5 showed strong emotional engagement, with feedback from supervisors significantly enhancing motivation. The student shared, "The Supervisor usually says, 'Come on, keep up the enthusiasm to finish quickly, 'which significantly fostered motivation."

Cognitive Engagement

The interview emphasized student cognitive engagement with supervisory feedback, with proactive efforts to enhance understanding and application of feedback. For instance, S1 showed significant cognitive engagement by actively seeking clarification from supervisors and peers to improve understanding of feedback. The student stated, "During the analysis of the first finding, I went to the supervisor to ask questions and clarify the analysis I had done."

S2 further showed cognitive engagement by consistently evaluating feedback and decisions. The student reflected on the

research choices, explaining, "The basis of the research came from wondering why certain students were smarter than others, despite the same teacher." Additionally, S3 actively engaged in cognitive processes by reflecting on feedback, recognizing comprehension challenges, and using strategies such as cross-checking and seeking additional references. The student elaborated, "Some of the writings needed to be cross-checked again because supervisor was training me to be independent. I had to find additional references and discuss the discovery with other lecturers."

S4 exhibited cognitive engagement through the understanding of feedback. The student mentioned, "Oral feedback could sound confusing at first, but it was easy to understand." Furthermore, S5 also showed cognitive engagement by reflecting on feedback even when it required extra effort. The student commented, "It was related to writing direct and indirect quotations. I reviewed the references again and had to put extra thought into it."

Behavioral Engagement

The interview results showed that students exhibited varying levels of behavioral engagement with supervisory feedback, as evidenced by their actions and responses. For instance, S1 exhibited behavioral engagement by actively filtering feedback and using it to revise a thesis. The student explained, "After receiving feedback, I filtered it according to the suggestions of supervisor." Additionally, the frequent meetings with supervisors underscored

engagement with the following comment, "I usually met with my supervisor more than three times a week and with the co-supervisor once a week."

S2 exhibited behavioral engagement by actively communicating with supervisors to provide progress updates and address feedback. The student stated, "I usually followed up immediately and informed supervisor when I had completed the revisions." Correspondingly, S3 actively engaged with feedback by responding promptly, making revisions, and participating in the guidance process. The tendency to pursue clarification and discuss feedback represented student behavioral engagement with the following statement, "Even though supervisor usually provided descriptions, I often still met with supervisor for further clarification."

S4 was behaviorally engaged by clarifying feedback on data analysis and actively participating in the revision process. The student mentioned, "I clarified with the supervisor by discussing data analysis in Chapter 4, specifically regarding the categorization in the discussion section." S4 also actively sent revised drafts and scheduled guidance, saying, "Usually, I sent revised drafts through WhatsApp and then asked when the supervision could be scheduled." Finally, S5 showed behavioral engagement by adapting to changing circumstances and maintaining focus. The student asserted, "Perhaps the distraction was related to fluctuations in the motivation to work on the thesis."

Based on the evidence, the interviews showed that affective engagement played a

crucial role in shaping student responses to supervisory feedback, impacting motivation, trust, and progress. The interviews also showed cognitive engagement, with students seeking clarification, evaluating decisions, and applying feedback. Additionally, they emphasized behavioral engagement, including active revision, frequent communication, and adaptive strategies.

Think-aloud Protocol Results

Affective Engagement

The think-aloud protocol results further showed that students exhibited affective engagement with supervisory feedback, emphasizing the emotional responses and attitudes toward the feedback process. For instance, S1 exhibited affective engagement by expressing an understanding of feedback, appreciation, and willingness to improve. The student stated, "I understand why my supervisor gave me this feedback. It makes me feel more motivated to revise and improve the chapter."

S2 further showed a strong emotional connection to feedback, reacting with surprise and happiness. The student remarked, "I feel happy because I see that all of supervisors are working to improve my undergraduate thesis, which helps make it better." Additionally, S3 was emotionally engaged with feedback and displayed strong motivation to complete a thesis. The student stated, "I'm motivated to finish the research."

S4 exhibited an effective engagement despite expressing frustration. The student said, "It was a lot of effort as the reason was unknown." However, S4 showed determination and resilience by accepting mistakes and following supervisor suggestions, reflecting, "I have to do my best, but in the middle of it, you have to be aware that okay, it is not that easy to just finish this way."

Lastly, S5 showed a range of emotional reactions to feedback, including nervousness, panic, embarrassment, and relief. The student described the feelings as follows: "I felt nervous about the corrections. I think my supervisor wanted to understand the speaking topic I was researching in my thesis. I also panicked when asked to add another theory to Chapter 2."

Cognitive Engagement

The think-aloud protocol provided further evidence of student cognitive engagement with supervisory feedback, showing the effort and approach to addressing feedback. For instance, S1 showed cognitive engagement by effectively interpreting feedback and identifying areas for improvement. The student asserted, "I think supervisor suggested that I add more citations or statements from experts and rephrase some of the wording to make it clearer."

S2 further recognized writing skill issues and the need for greater attention to detail. The student stated, "As I mentioned earlier, this feedback suggested that the writing skills still needed improvement. My supervisor advised me to enhance my thesis, avoid mistakes, and make the writing more concise and readable." Additionally, S3 adopted a proactive cognitive method by

emphasizing extensive reading to improve comprehension. The student remarked, "I will practice and keep trying because I believe that the more I read, the fewer revisions I will need." This reflected the commitment to deepening understanding through extensive literature review.

S4 showed cognitive engagement by analyzing feedback and addressing specific areas for revision, such as prioritizing data sources and integrating observations. The student reflected, "I have to revise all of this information and maybe I will just try to revise thesis." This showed student awareness of supervisor concerns and the critical evaluation of feedback.

Lastly, S5 exhibited careful consideration of the supervisor's intentions and the reasoning underlying specific feedback points. The student said, "I believe my supervisor wanted to understand my reasons for choosing this topic, align my theories with my research objectives, and use primary sources to enhance the relevance of my research."

Behavioral Engagement

The think-aloud protocol results provided further insights into student behavioral engagement with supervisory feedback, explaining the planned actions and commitment to making revisions. For instance, S1 showed behavioral engagement by outlining the actions to improve data processing and revise wording. The student stated, "I will learn more about how to process the data, ensuring that everything in the chapter is focused on the topic. Finally, I

will review and revise the wording to make it clearer." This engagement was evident in the motivation to implement changes, which was observed in the following comment, "I feel more motivated to revise the chapter and improve it. I'm going to take some time to consider how I can implement the changes my supervisor suggested."

S2 further described the plan to address and improve the thesis by systematically fixing issues and confirming unclear points. The student stated, "I will address this feedback after fixing everything and confirming any unclear points." The student recognized the need for improvement in writing skills and addressed specific issues with the following comment, "All feedback shows that my writing skills need improvement. I missed some critical points in my thesis. My supervisor mentioned that my writing is quite weak, I need to make it more concise and readable."

Additionally, S3 showed behavioral engagement through commitment to practice and persistence. The student stated, "I am motivated to finish my thesis, but one frustrating aspect is my lack of research knowledge. Despite this limitation, I will not give up. I will practice, persist, and try because I believe that the more I read, the better I will understand and address the revisions." This proactive method included discussions with peers and supervisors, as observed in the following comment, "I also discussed my thesis with several people, including friends, lecturers, and others, to strengthen my understanding and clarify what I have learned from my reading."

S4 detailed the plans to support feedback with additional information and systematic revisions in the following comment, "Then I need to support that with results from the interview sections and provide additional information from other sources." As observed in the following comment, the student also planned to revise the thesis systematically: "Perhaps after I finish the fourth chapter and address the grammatical errors, I will make the necessary revisions."

Finally, S5 showed behavioral engagement, including revising chapters, adding theories, and reorganizing content, as observed in the comment, "I examined additional theories related to the topic and included the topic in Chapter 2. I revised Chapter 5 and the abstract, ensured the paragraphs in Chapter 5 correlated with the research objectives, and added more theories and references to Chapter 2." The student showed a high degree of commitment to implementing feedback and making necessary changes, as suggested in the following discussion, "After understanding supervisor requests, I will examine additional sources and incorporate the discovery into thesis. I will also make revisions based on the corrections provided and thoroughly check and recheck the content to ensure that thesis is relevant to the research."

Based on the evidence, the think-aloud protocol results emphasized student affective engagement with supervisory feedback, showing varied emotional responses and how these reactions impacted the motivation and method of revisions. Additionally, the results showed student cognitive engagement through the efforts to understand, address, and effectively apply feedback. It further outlined behavioral engagement, which includes systematic revisions, proactive planning, and consistent communication with supervisors.

Text Analysis

The analysis of thesis drafts for students S1, S2, S3, S4, and S5 showed a consistent commitment to incorporating feedback to enhance the thesis, as detailed in Table 3.

Table 3 showed that all students actively engaged with supervisory feedback by incorporating most feedback into a thesis, which reflected a strong commitment to improvement. For instance, S3, which received the most feedback, also used the highest number of feedback points, showing a high engagement level with the

Table 3
The use of supervisory feedback

Students	Total feedback	Used feedback	Ignored feedback	Deleted feedback
S1	26	22	3	1
S2	30	25	4	1
S3	112	96	2	4
S4	46	60	2	0
S5	55	51	4	0

supervisory process. Clear feedback was generally incorporated, while ambiguous feedback was often disregarded or deleted to avoid further questioning from the supervisor or examiner. This emphasized a nuanced dynamic in the student-supervisor relationship. Generally, these results showed affective engagement through emotional responses, cognitive engagement using the analysis and understanding of feedback, and behavioral engagement via the active incorporation of feedback. Consequently, the analysis exhibited high student engagement across all dimensions.

DISCUSSION

The research results showed that students exhibited high effective, cognitive, and behavioral engagement when receiving feedback on the thesis from a supervisor. Specifically, emotions such as anxiety, motivation, fear, and preparedness directly shape how students engage with feedback. Students exhibit higher levels of affective engagement compared to cognitive and behavioral engagement. This is consistent with the findings of Bastola and Hu (2023), who indicated that affective engagement has a significant influence on cognitive and behavioral responses.

In this context, students predominantly report positive emotions, such as satisfaction, rather than negative ones. This contrasted with the results of Geng and Yu (2022), which reported a higher prevalence of negative emotions. Additionally, van Tienoven et al. (2022) emphasized that student satisfaction with supervisor support

was a critical predictor of well-being. Affective engagement during research significantly influences student feedback experiences, affecting attitudes and behaviors, including anxiety, motivation, fear, and preparedness (Hill et al., 2021). Recognizing and addressing these emotions in formal feedback scenarios is essential, as the emotions are inherent to the learning process (Karakose et al., 2023; Värlander, 2008). Emotions also play a crucial role in students' willingness to engage with feedback, and understanding students can improve their assessment of learning (Rowe, 2017). Alleviating threats to student self-image in feedback can positively impact self-confidence and perception of emotional support, while feedback anxiety has the opposite effect (Hadden & Frisby, 2019).

The interview analysis shows that affective engagement plays a crucial role in student experiences with feedback and guidance during the thesis. This is correlated with Zheng, Yu, and Liu (2020), who reported that engagement was distinctively extensive in the affective aspect. Student emotions such as anxiety, motivation, fear, and a sense of preparedness directly influence how students perceive and engage with supervisor feedback (Han & Hyland, 2019).

A range of research further underscores the significant impact of student emotions on engagement with feedback and research supervision. Värlander (2008) and Rowe (2017) emphasized the importance of acknowledging and addressing these emotions, and Värlander suggested specific

learning activities for this purpose. Parker and Winstone (2016) and Hill et al. (2021) further outlined the impact of student perceptions and emotional responses on feedback engagement, emphasizing the need for a holistic method of research supervision that considers student emotional experiences. Integrating formative assessment practices in feedback processes can also enhance student engagement and learning outcomes by creating an iterative teaching environment. Regular checkpoints for reflection and targeted input promote deeper cognitive processing and help address emotional concerns, allowing students to express anxieties and uncertainties during the research journey (Jin et al., 2022).

In this context, meeting with the thesis supervisor requires mental preparedness, specifically when deadlines are missed due to various factors. McClure (2005) emphasized the significance of a supportive and culturally sensitive supervisory relationship, as it could help mitigate negative experiences. Styles and Radloff (2001) also stressed the need for a self-regulatory and synergistic model of supervision that includes shared commitment, a common language, effective management, and emotional support. Furthermore, Macfadyen et al. (2019) outlined the supervisor's role in assessing student readiness, motivation, and individual situations, balancing the functions of facilitating, nurturing, and maintaining standards. De Kleijn et al. (2015) also emphasized the importance of adaptivity in research supervision,

suggesting that supervisors should assess student characteristics and customize the support strategies accordingly. This research underlines the importance of fostering a supportive, culturally sensitive, and adaptive supervisory relationship to help students overcome obstacles related to missed deadlines and mental preparedness.

This research further explores emotional reactions to feedback and the gradual development of trust with supervisors over time. These results correlated with Zheng, Yu, and Liu (2020) and de Kleijn et al. (2014), which outlined the importance of trust and a positive relationship in student engagement with feedback, where Zheng specifically asserted the role of reassurance and selective adoption of feedback. Similarly, Inouye and McAlpine (2017) further emphasized the role of individual agency in responding to feedback with a focus on the development of scholarly identity. Carter and Kumar (2017) also added a practical dimension, discussing the tension between timely thesis completion and the development of academic competencies, as well as the need for honest and rigorous feedback. The research shows the intricate interplay between emotional reactions, trust, and the formation of scholarly identity in student-supervisor relationships.

All students are found to exhibit cognitive engagement with supervisory feedback, showing a strong understanding of feedback provided by the thesis supervisor. The results were supported by Zheng, Yu, and Liu (2020), who asserted that the ability of students to seek clarification

for challenging feedback from the thesis supervisor was a key indicator of cognitive engagement. This engagement is further influenced by student agency in responding to feedback, which is connected to the development of the scholarly identity (Inouye & McAlpine, 2017). Student perceptions of feedback, particularly the focus, objective-relatedness, and elaboration, also play a role in satisfaction with supervision and perceived learning (de Kleijn et al., 2013).

This present research found that students behaviorally engaged with supervisory feedback by actively participating, committing, and showing a proactive method. The examination of thesis drafts and interviews shows that student engagement with feedback is evident through the adoption. All students show varying levels of engagement by selectively incorporating, ignoring, or removing feedback. High adoption rates suggest strong engagement and a proactive method of thesis revision. The results correlate with previous research, including Kim and Kim (2017), Saeli and Cheng (2019), Yang et al. (2006), and Z. Zhang and Hyland (2018). According to this research, the supervisor as the source of feedback is a trustworthy resource that students can rely on, prompting feedback to be effective. Instances of ignored and deleted feedback show that students carefully evaluate the relevance. Generally, students are committed but selective in applying feedback to enhance the quality and comprehensiveness of the thesis. Various research has explored this topic, and Zheng, Yu, and Liu (2020) found that

students engaged with feedback by seeking reassurance, trusting the expertise of their supervisor, and selectively following advice. Parker and Winstone (2016) and Bastola (2022) also emphasized the importance of student perceptions and the need for interventions to support engagement with feedback. This research shows that student engagement with supervisory feedback is influenced by perception, feedback nature, and support, leading to effective communication, revised work, meeting deadlines, and incorporating feedback into the thesis.

Generally, this research offers a more comprehensive and nuanced understanding of the multifaceted nature of student engagement with supervisory feedback. It introduces new perspectives on the significance of emotions, trust, adaptivity, and formative practices in influencing student experiences, thereby providing important implications for enhancing feedback processes in undergraduate thesis supervision.

CONCLUSION

In conclusion, this research aimed to elucidate the multifaceted nature of student engagement with supervisory feedback on the thesis, underscoring the crucial role of affective engagement in influencing cognitive and behavioral responses. The results showed that positive emotional states substantially shape feedback dynamics. This suggested that supervisors should emphasize emotional support to establish trust and foster a productive learning

environment. Furthermore, customizing feedback to address the specific needs of each student could significantly enhance engagement. This research further contributed to the literature by providing new insights into undergraduate engagement with supervisory feedback in less-explored settings. It proposed practical strategies for improving both engagement and academic outcomes. The results also underscored the importance of incorporating emotional dimensions into engagement theories and recognizing the complexities of feedback perceptions, thereby necessitating adaptive supervisory models attuned to individual student requirements.

Based on this perspective, supervisors were expected to receive training in emotional intelligence and cultural sensitivity, as well as institutions to cultivate environments that integrate emotional support in feedback processes and promote student agency. A student-centered method was essential, considering each student's background, learning style, and emotional state. Providing constructive feedback that balances the recognition of strengths with areas for improvement could also help students perceive feedback as an opportunity for development. Using diverse feedback methods and creating an inclusive environment mindful of cultural differences could further bolster engagement. Additionally, conducting regular reflective sessions where students could discuss feedback experiences and collaboratively formulate strategies for improvement would enhance the overall learning experience.

This present research further possessed limitations such as the sample size, diversity, subjectivity of self-reported perceptions, and temporal scope, which could constrain the generalizability of the results. Future research should investigate the specific effects of emotions on engagement, undertake longitudinal research to track engagement over time, develop targeted interventions to enhance engagement and explore engagement dynamics across diverse student populations. These efforts would offer deeper insights and more effective strategies for fostering student engagement and academic success.

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