

Formative Assessment through Supervisory Feedback on Undergraduate Thesis Writing

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Abstract

This study examines supervisor written feedback as a form of formative assessment on undergraduate thesis writing. The objectives of the study are to: (1) determine the frequency of types of feedback, and (2) examine patterns of change in the frequency of feedback across three drafts of writing. The study involved the writing of the final year project proposal by five undergraduate students in a global communication degree program. Each student had a different supervisor, and three drafts of their final year project proposal were analyzed. The theoretical frameworks of the study were Vygotsky's sociocultural theory and Sadler's theory of formative assessment. The analysis revealed that directive feedback constituted the majority of the responses, accounting for 56.6% of the 369 total comments. This was followed by referential feedback at 29.8%, and expressive feedback at 13.6%. A closer examination of the commentary provided by five supervisors across three successive drafts identified two distinct patterns. First, there was a marked reduction in the volume of feedback by the third draft. For instance, Supervisor 1 initially made 70 comments (57%) on the first draft, which declined to 38 comments (30.9%) on the second draft and further to 15 comments (12.2%) on the third. In contrast, other supervisors, such as Supervisor 5, demonstrated greater consistency in the early stages, offering 29 comments (41.4%) on both the first and second drafts before decreasing to 12 comments (17.1%) in the final draft. The tracking of supervisors' feedback over drafts produces novel findings on the usefulness of the supervisor's scaffolding in getting undergraduate students closer to writing conventions in the research community.

Keywords: *Supervisory Feedback, Formative Assessment, Undergraduate Students, Thesis Writing, Scaffolding*

INTRODUCTION

Formative assessment holds irreplaceable instructional value in the higher education system (Alt & Raichel, 2021). The core purpose of formative assessment lies in identifying the "optimal gap" between a student's current performance and the intended learning goals (Yu, 2023). Feedback is regarded as a key component of formative assessment and one of the most influential factors affecting student learning (Owen, 2016). This view has gained increasing attention in policy documents, and is gradually being acknowledged by teachers, and is expected to become an integral part of institutional culture (Hanefar et al., 2022). Supervisory feedback refers to the information supervisors provide to help students close the gap between their current performance and the expected academic standard (Stracke & Kumar, 2016; Nurie, 2018; Saeed et al., 2021). Supervisory feedback acts as formative assessment, guiding students progressively toward academic writing competence. Formative assessment aims to provide teachers with information about students' current learning status, guide instructional adjustments, and help students clarify their learning goals and improve their performance (Yu, 2023). Salas-Bustos et al., (2025) further emphasize that students' ability to understand and effectively use feedback in formative assessment process is crucial for enhancing learning outcomes. Feedback enables

students to reflect on their knowledge, abilities, and comprehension (Scott, 2014) and determine the necessary steps for advancing their academic writing (Kumar & Stracke, 2007; Basturkmen et al., 2014; Carter & Kumar, 2017; Xu, 2017; Xu & Hu, 2020). Supervisory feedback in higher education functions as a key form of formative assessment, aimed at supporting students' ongoing learning rather than merely evaluating completed work. It provides guidance that helps students refine their academic writing, clarify expectations, and develop critical thinking skills. As the importance of teacher feedback gains greater recognition (Fitriyah et al., 2024), the provision of feedback has become a central element of the supervisory process, serving as a key form of instruction (Stracke & Kumar, 2016; Chugh et al., 2022; Bastola & Hu, 2023). As a dialogic and developmental process, such feedback encourages reflection and gradual improvement, aligning with the core principles of formative assessment, namely, its focus on learning progression, responsiveness, and active student engagement.

One line of inquiry has primarily examined corrective feedback provided by language teachers, particularly in relation to language use. For example, several studies (Karim & Nassaji, 2018; Karim & Endley, 2019) suggest that direct feedback is more effective than indirect feedback, as it explicitly indicates how errors should be corrected. Other researchers (Kim & Park, 2017; Kusumastuti et al., 2025) argue that indirect feedback offers greater long-term benefits, as it encourages students to engage in critical thinking and assess their own writing.

Another line of inquiry has focused on supervisory feedback for theses. Existing studies have primarily examined feedback on theses, dissertations, and other academic writing, with most research focusing on applied linguistics (Kumar & Stracke, 2007; Xu, 2017; Gedamu & Gezahegn, 2021; Saeed et al., 2021). These studies identify three fundamental speech functions in feedback: referential, directive, and expressive. In both studies, the referential function of feedback is used more frequently than the directive and expressive functions. This type of feedback primarily focuses on direct corrections, additions, or deletions, addressing key areas such as linguistic accuracy/acceptability, appropriateness, and editorial, organizational, and content-related issues. For instance, supervisors frequently target grammar, spelling, formatting, or structural errors, which are concrete and require minimal negotiation. As a result, referential feedback is direct and unambiguous, enabling students to easily comprehend and implement the suggested changes.

Researchers (Kumar & Stracke, 2007; Xu, 2017; Gedamu & Gezahegn, 2021) have found that feedback on language functions is effective as it enhances students' comprehension and utilization of the provided comments (Saeed et al., 2021). Kumar and Stracke (2007) investigated the different types of feedback given by a supervisor on the first full draft of a PhD thesis in Applied Linguistics. They developed an analytical framework comprising three types of feedback: referential, directive, and expressive. Interestingly, the supervisor most frequently employed the expressive function in overall feedback, whereas this function was used least often in in-text feedback. In contrast, the referential function was more prominent in in-text feedback, with a noticeably higher frequency than in overall feedback. Considering the total number of comments, the referential function emerged as the dominant one. Subsequently, Stracke and Kumar (2016) found frequent use of expressive feedback by supervisors of four PhD graduates from Australia, Malaysia, and New Zealand. Besides semi-structured interviews, they also analyzed written feedback from their supervisors and found usefulness of feedback in fostering academic writing development. Another two studies conducted in New Zealand also found frequent use of positive expressive comments which boosted their confidence and motivation (Stracke & Kumar, 2010; Xu, 2017). Stracke and Kumar (2010) analyzed feedback provided by two supervisors and three examiners to a New Zealand PhD student while Xu (2017) studied feedback given to a Chinese international doctoral student by a white supervisor. In fact, Xu (2017) found almost no directive comments in his data, showing an emphasis on autonomous learning by students. However, Basturkmen *et al.* (2014) found frequent use of referential feedback focusing on direct corrections and factual information. They used Kumar and Stracke's (2007) framework of feedback functions.

Studies in non-Western contexts found frequent use of directive feedback. Gedamu and Gezahegn (2021) mixed-methods study of 55 postgraduate students, four supervisors, and five thesis drafts in Ethiopia revealed that supervisory feedback was largely directive, with critical comments far outweighing praise and constructive suggestions. Similarly, Saeed et al. (2021) study on two Malaysian postgraduates' research proposals and their responses to feedback found more frequent directive clarification than directive instruction, indicating a greater emphasis on prompting students to elaborate on their ideas rather than providing explicit instructions.

While existing studies have examined the types and effects of feedback, such as referential, directive, and expressive functions. There is limited exploration of tracking changes in feedback practices across different stages of a student's academic writing. There is a gap of knowledge on how feedback practices evolve across successive stages of a student's academic writing. Understanding these changes is essential not only to uncover how supervisors adjust their instructional strategies over time, but also to examine how students interpret and act upon feedback. The way learners engage with and respond to feedback, whether by revising their texts, seeking clarification, or ignoring certain comments, reveals how responsive they are to scaffolding by experts in research writing. Moreover, the findings provide an indication of which types of feedback are most likely to be taken up by students at different stages of the writing process, thereby informing more effective and responsive pedagogical practices that support sustained academic growth.

This study examines supervisor written feedback as a form of formative assessment on undergraduate thesis writing. The objectives of the study are to: (1) determine the frequency of types of feedback, and (2) examine patterns of change in the frequency of feedback across three drafts of writing.

THEORETICAL FRAMEWORK

The theoretical frameworks in this study on changes in supervisory written feedback functions over time are Vygotsky's (1978) sociocultural theory and Sadler's (1989) theory of formative assessment. The essence of these two theories will be explained next.

Vygotsky's (1978) sociocultural theory

Within Vygotsky's (1978) sociocultural theory, the core concept of "scaffolding" emphasizes that instructional support should be aligned with the learner's Zone of Proximal Development in order to effectively facilitate learning. A core concept in Vygotsky's (1978) sociocultural theory is scaffolding (Maftuna, 2025), which is regarded as a crucial mechanism for facilitating learners' transition from their current level of performance to their potential developmental level.

Scaffolding ensures that instructional support is aligned with the learner's zone of proximal development and is gradually withdrawn as learners gain proficiency and become more capable of self-regulation. As stated by Maftuna (2025), scaffolding is a temporary instructional support through prompts, guidance, and encouragement, enabling students to accomplish tasks they would not be able to complete independently. Importantly, scaffolding must maintain the integrity of the task while managing elements that exceed the learner's capacity and gradually transfer control back to the learner as their competence increases (Behroozizad et al., 2014).

In the context of Vygotsky's (1978) sociocultural theory, feedback by supervisor provides the social interaction needed by students to advance in their research writing. The feedback on successive drafts of writing provides the one-to-one guidance that students need because they cannot complete the final year research proposal independently. The feedback is the scaffolding provided by a more knowledgeable other (supervisor) to help novice researchers to bridge the gap between school writing which they are capable of doing on their own to research writing, which they can only achieve with assistance. Areas of advanced research writing that students need to acquire include argumentation, structure, or critical analysis. In this sense, the feedback is not just evaluative but also instructional, enabling students to internalize higher-order thinking processes and writing strategies through the social interaction with their supervisor. Supervisors, as part of the academic community, provide feedback that helps students understand disciplinary norms and expectations.

Formative assessment

In this section, the essence of formative assessment according to Sadler (1989) and Black and Wiliam (2018) will be explained. Sadler's (1989) theory of formative assessment emphasizes that the primary function of assessment is to help students recognize and close the "optimal gap" between their current performance and the intended learning goals. This gap must be calibrated—not too small to render the

task unchallenging, nor too large to cause discouragement. Effective formative feedback is characterized by specific, actionable, and criteria-based information that helps students understand the gap and take steps to improve. Three essential conditions underpin effective formative assessment: students must have a clear understanding of the target criteria; be able to compare their current performance to those standards; and be capable of taking action to reduce the discrepancy. Written feedback is a key interactive process between supervisors and students, fostering the development of academic writing skills and intellectual growth (Saeed et al., 2021). Frank et al. (2018) emphasizes that students must not only receive feedback but also be able to use it effectively to support learning, which requires metacognitive ability and the transition from passive recipients to active constructors of knowledge.

Formative assessment, as defined by Frank et al. (2018), is a process aimed at enhancing student learning through ongoing feedback that informs both teaching and learning practices. According to their seminal work, formative assessment is not about assigning grades, but about providing students with the information necessary to improve their understanding and skills. This feedback should be timely, specific, and constructive, guiding students on how to move forward in their learning journey. Black and Wiliam (2018) emphasize that formative assessment involves a feedback loop in which students actively engage with the feedback to make revisions, reflect on their learning, and adjust their strategies.

Sadler (1989) and Black and Wiliam (2018) both emphasize formative assessment as a tool for improving student learning rather than just grading. Both highlight the importance of feedback in guiding students toward improvement and fostering engagement in the learning process. However, Sadler (1989) focuses on the student's role in understanding the gap between their current performance and the desired standard, advocating for self-regulation and reflection to close that gap. In contrast, Black and Wiliam (2018) concentrate on the dynamic interaction between teachers and students, where formative assessment involves a feedback loop that allows teachers to adjust their teaching based on student responses. While Sadler (1989) prioritizes student autonomy, Black and Wiliam (2018) stress the reciprocal relationship between teaching and assessment in enhancing learning outcomes.

In the context of academic writing, supervisory feedback can be seen as a key element of formative assessment. Supervisors' comments on students' drafts, whether related to structure, argumentation, or critical analysis, provide students with insights on their strengths and areas for improvement. Such feedback not only helps students revise their current work but also informs their future writing practices, fostering deeper engagement with the writing process. When feedback is framed according to the principles of formative assessment, it encourages students to view their writing as a developmental process, rather than a finished product, and actively guides them towards higher levels of academic achievement.

From this theoretical perspective, the study not only contributes to the existing body of literature on supervisory feedback, but also offers practical suggestions for optimizing feedback mechanisms in the context of formative assessment, with the aim of enhancing the quality of feedback practices and promoting supervisors' professional development.

METHODOLOGY

The descriptive research involved the analysis of drafts written by undergraduates enrolled in a global communication degree program in a Malaysian university. The undergraduate thesis constitutes a compulsory element of the bachelor's degree program, designed to cultivate students' fundamental research skills and academic writing abilities. The thesis carries three credits in semester five for the proposal and three credits in semester six for the report. The thesis, the student is expected to demonstrate the qualities of fluency, clarity, and informative content, as well as independent thinking.

Fifteen drafts of thesis were analyzed, consisting of three drafts each from five students (S1 to S5) under the supervision of five supervisors (T1 to T5). Table 1 provides further information about the students' thesis drafts. Written feedback from supervisors was analyzed.

To gather data on the types of supervisory feedback in undergraduate students' writing, the following procedures were implemented. First, the second researcher explained the study to supervisors. With the assistance of the supervisors, students were then informed about the research, and their consent

was obtained to analyze both their writing and the feedback they received. Each of the five supervisors was asked to provide three drafts from one student. The drafts consisted of a total of 25,353 words, focusing on topics related to language and communication. Subsequently, Draft 1, along with the revised Drafts 2 and 3, and the corresponding supervisor feedback, were collected from the supervisors. To ensure confidentiality throughout data collection, identifying information was removed from reports and analyses. All data and materials were securely stored on a password-protected personal computer, accessible only to the research team.

Table 1 Information about students' thesis drafts

Student	Supervisor	Title of theses	Area of thesis	Words in length
S1	T1	Interpersonal communication strategies used in instagram by the modest fashion brands IN Malaysia	Malaysian culture	7823
S2	T2	The usage of interactive video games by ESL students to enhance their English-speaking skills.	language	9275
S3	T3	The use of Quillbot as an AI-based academic writing tool among Malaysian undergraduate students	language	2183
S4	T4	The influence of multiplayer games on enhancing speaking ability among Malaysian university students.	language	1220
S5	T5	A Study on Buddhist Chinese and Christian Chinese Obituary	Chinese culture	4852

Note: Length refers to the word count of the three drafts

Supervisory feedback is analyzed as evidence of learning and improvement, supporting its role as formative assessment. The analysis framework for functions of supervisor feedback is adapted from Saeed et al. (2021), as shown in Table 2. The supervisory feedback is categorized into three linguistic functions: directive, expressive, and referential. Directive feedback involves the instruction and suggestion of specific tasks to the supervisee and questions are further categorized into clarification, eliciting information, confirmation and clarification. Referential feedback involves providing information and corrections. Expressive feedback conveys emotions and includes praise, criticism, and opinions (Kumar & Stracke, 2007; AlKhatnai, 2023). Specifically, feedback that acknowledges or encourages a student's work is classified as praise, while feedback expressing disapproval or dissatisfaction is categorized as criticism. Finally, feedback that provides guidance on how to improve the work falls under the umbrella of opinions (AlKhatnai, 2023). The pragmatic feedback model is therefore an appropriate framework for this study.

Table 2 Analysis framework for functions of supervisory feedback based on Saeed et al. (2021)

Feedback Function	Subcategory of feedback Functions	Example
Directive	Eliciting information	Where are the citations for these numerous research?
	Seeking justifications	Why? Why only one? Who?
	Seeking clarification	There must be a specific place in IG where you take your data, not the whole world.
	Seeking confirmation	Are these part of your objectives?
	Instruction to do / not to do	to be discussed - must align to the gaps discussed after the problem statement.
	Suggestion to do/not to do	strategies – you should be defining this, and not only interpersonal comm.
Referential	Providing information	Find citations that focus on the benefits, perhaps one or two.
	Providing correction	YOU MUST PUT A COMMA HERE.
Expressive	Praise	This is the right research gap. The name of this section is OK
	Criticism	Too old. Not clear
	Opinion	I think no.

Note: Examples are from the present study

Typically, written feedback is provided directly by supervisors as annotations within the text. In this study, every comment, phrase or word that conveyed information to the student is considered an independent unit of communication (Table 2). The analysis is conducted in chunks of text, as shown in the example. The length of each text segment depends on the function of the feedback. The chunk may be one word (e.g., “incorrect”) or a few sentences (e.g., “Find citations that focus on the benefits, perhaps one or two”).

I do not know what this means. **【*expressive- criticism on content】**, *Citation? What benefits?*
【*Directive- Eliciting on content 】, *Find citations that focus on the benefits, perhaps one or two.*
【*referential- provide info on content】

Analysis of functions of supervisory feedback in the students’ thesis drafts occurred through several stages. Supervisors’ comments were initially read to check whether the framework of analysis was adequate for coding purposes. For example, “In this study, modest fashion refers to _____” looks like it may have a directive function or a referential function. Through a closer reading of the thesis draft and analysis framework, the feedback is an implicit instruction. This comment means the student writer needs to fill in the blank with the operational definition of term. No information was given, meaning that it is not a referential function. Therefore, this comment is coded as directive-instruction.

To ensure reliability, the second researcher checked the analysis of the first researcher. The process was iterative. The intercoder agreement reached was initially 81.5% but after several rounds of analysis, most of the disagreements were resolved and the percentage of agreement reached 91%. In the process, the analysis framework was improved so that it offers clearer guidance to ensure reliability of the analysis.

In the data analysis, the percentages of the types of feedback are calculated for drafts 1, 2 and 3 as a combined group as well as by individual student. The group results show the patterns for the group but the individual analysis enables the researcher to track a particular student’s improvement in research writing over time. Following Black and Wiliam’s (2018) notion of formative assessment, the data analysis focuses on how the supervisor’s feedback in draft 2 vary from draft 1, as this provides empirical evidence of how supervisors adjust their feedback based on student’s responses to their previous round of feedback. In addition, the analysis also took account of how student’s respond to their supervisor’s feedback and adjust their writing. This is based on Sadler’s (1989) notion of formative assessment that focuses on the student’s role in understanding the gap between their current performance and the desired standard. Taken together, tracking the changes in feedback types and student responses enables a study of the role of formative assessment in learning of research writing. By comparing the feedback from different supervisors and across different drafts, we track how the nature of the feedback evolves in response to the student’s revisions.

RESULTS

In this section, results are presented on the frequency of the three types of supervisory feedback, followed by qualitative descriptions of types of supervisory feedback. The final section of results on tracking supervisory feedback over three drafts is a novel approach not explored in previous studies on supervisory feedback. The supervisors’ comments given as examples have not been edited for language correctness to retain the authenticity of the data.

Type of supervisory feedback

Table 3 shows frequency and percentage of supervisory feedback on undergraduate students’ theses. Out of 369 feedback instances, 56.6% were directive feedback. Supervisors frequently provided specific instructions or suggestions for improvement. Comparatively, there was less focus on providing information or corrections, as shown by a lower percentage of referential feedback (29.8%).

Table 3 Frequency and percentage of types of supervisory feedback

Type	Number	Percentage
Directive	209	56.6%
Referential	110	29.8%
Expressive	50	13.6%
Total	369	100%

The least common type was expressive feedback (13.6%) showing the little emphasis on praise or criticism and greater emphasis on practical, task-oriented guidance in supervisory feedback. Next, the three types of supervisory feedback are explained with examples.

Qualitative descriptions of types of supervisory feedback

Directive feedback

Over half (56.6%) of the feedback instances were directive feedback. Most supervisors utilize directive feedback to instruct students by eliciting information, seeking clarifications, justifications, and confirmations, as well as to suggest what actions to take or avoid in their writing. Supervisors may give instructions (Excerpt 1) and elicit information on content (Excerpt 2), suggest what to do on appropriateness issues (Excerpt 3), or give instructions on appropriateness (Excerpt 4), and give instruction on organization (Excerpt 5).

Excerpts 1-5:

1. *Since you are using the consumer and advertising as a reason to say that social media is a good place for businesses to target to increase sales, the yellow should move later* (draft 1/T1) 【*Directive-instruction on content】

2. *IS THIS YOUR OWN TRANSLATION? IF YES, NEED TO STATE. ON THE OTHER HAND, WHY DON'T YOU DIRECTLY QUOTE HIS ENGLISH ORIGINAL?* (draft3/T5) 【*Directive -Eliciting information on content】

3. *PREVIOUS STUDIES SHOULD FOCUS MORE ON LATEST STUDIES (YEAR 2017/2018-2023).* (draft1/T2) 【*Directive suggestion on appropriateness】

4. *try your best not to repeat the same style of "according to"*(draft 2/T3) 【*Directive instruction on appropriateness】

5. *Explain in steps, what is the first thing to do. what is next, etc, etc.*(draft1/T2) 【*Directive -instruction on organization】

For example, in Excerpt 1, the supervisor directly instructs the student to move a highlighted section to a later part of the text. This directive aims to improve the logical flow of argumentation and enhance organizational coherence. Similarly, in Excerpt 2, the supervisor elicits information by prompting the student to clarify whether a translation is their own and suggesting an alternative approach (quoting the original text). This reinforces source attribution and academic integrity, demonstrating how directive feedback helps address both content and citation issues.

Moreover, Excerpt 3 illustrates a directive suggestion, where the supervisor advises the student to prioritize recent studies (2017–2023). While not a strict command, this guidance steers the student toward more appropriate academic choices, reflecting the flexibility within directive feedback. In Excerpt 4, the supervisor explicitly instructs the student to avoid repetitive phrasing, offering stylistic direction to improve linguistic sophistication and readability. Finally, Excerpt 5 highlights directive instruction on organization, where the supervisor directs the student to structure their explanation step by step, ensuring clarity and coherence in their argument.

Referential feedback

A total of 29.8% of the feedback instances were referential feedback. Referential feedback aims to provide information and corrections concerning content, editing, and organization (Excerpts 6–9).

6. *Wrong way to cite* (draft1/T1) 【*Referential-Provide information on appropriateness】

7. *This paragraph is written in the style for Chap 2* (draft1/T1) 【*Referential-providing info on organization】

8. *For Chap 1, you take what is necessary to build the argument for the gap* (draft1/T1) 【*Referential-providing info on content】.

9. *This requires quasi-experimental research design (pre- and post- test) to be able to measure the effects better. If perceptions or self-reported effects alone, it may be “questionable”.*(draft2/ T3) 【*Referential provide info on content】

Referential feedback allows them to interpret and apply the information to improve their academic writing. For example, a supervisor may identify an error in citation style, ensuring adherence to proper academic conventions (Excerpt 6). Additionally, another supervisor highlights a mismatch between the writing style for a paragraph in relation to Chapter 1, pointing out structural inconsistencies (Excerpt 7). The supervisor also provides guidance on the expected focus of Chapter 1, ensuring alignment with the broader research objectives (Excerpt 8). Besides academic writing conventions, supervisors also focus on knowledge of research methodology. Excerpt 9 shows that the feedback is in the form of an explicit recommendation to use a more rigorous experimental design to enhance the validity of the study.

Expressive feedback

Expressive feedback is not common among the five supervisors (13.6% of feedback instances). Expressive feedback serves to convey emotions, opinions, and evaluations regarding students' writing. Unlike directive and referential feedback, which focus on providing instructions or information, expressive feedback often reflects the supervisor's subjective response to the student's work. Expressive feedback may involve criticism of the content or editorial aspects (Excerpts 10-11), or may involve opinion about organization (Excerpt 12).

10. *This purple is not clear*(draft1/T1) 【*Expressive -criticism on content 】

11. *Please don't do this Luq! Very UPSR-ish.* (draft2 /T3)【*expressive criticism on appropriateness】

12. *– I feel very disturbed, because the paragraphs no longer join*(draft1/T1) 【*Expressive-opinion on organization】

Excerpt 10 shows a supervisor's criticism of the clarity of the content. Excerpt 11 shows the frustration of a supervisor with his student who writes like primary school students. UPSR in Malaysia is the Primary 6 examination at the end of the six years of primary education before they proceed to secondary school. Excerpt 12 illustrates the frustration of a supervisor with the poor coherence of the piece. The phrase “I feel very disturbed” the supervisor conveys an emotional reaction, signaling to the student that structural issues significantly affect readability without specific revision suggestions, the student may struggle to determine how to improve cohesion. These excerpts for expressive feedback show the supervisors directly criticising the quality of expression without offering explicit guidance for revision. However, there are indirect suggestions for improvement like making the writing clearer (Excerpt 10) and improving coherence between paragraphs (Excerpt 12).

Tracking supervisory feedback over three drafts

Table 4 and Figure 1 show the frequency and percentage of the types of supervisory feedback given by

five supervisors (T1 to T5) on three drafts (D1 to D3) of their undergraduate students' work (S1 to S5). In essence, Table 4 presents a breakdown of the 369 comments presented in Table 3. Directive feedback is the most frequently used (51.2%), followed by referential (35.8%) and expressive feedback (16, 13%). Overall, feedback is most intensive in Draft 1 (57%), declines in Draft 2 (30.9%), and is minimal in Draft 3 (12.2%). The decline in amount of feedback indicating that the supervisor provides more guidance initially and gradually reduce input as the student revise writing. Two trends are evident, that is, there is a decrease in the number of comments across the three drafts, and the feedback comments remain consistent in the first two drafts but drastically drops in Draft 3. The decline in the number of feedback instances can be considered an evidence of scaffolding because students move from a low level of knowledge of academic writing to a higher level, and do not need as much guidance by draft 3.

Table 4 The Frequency and Proportion of Supervisory Feedback Function Subcategories of T1, T2, T3, T4, T5

Feedback	T1 - D1	T1 - D2	T1 - D3	T2 - D1	T2 - D2	T2 - D3	T3 - D1	T3 - D2
Directive Total	34(27.6%)	25(20.3%)	4(3.3%)	15(16.5%)	28(30.8%)	12(13.2%)	12(37.5%)	7(21.9%)
Elicit info	2(1.6%)	3(2.4%)	2(1.6%)	1(1.1%)	6(6.6%)	2(2.2%)	3(9.4%)	2(6.3%)
Seek justifications	0(0%)	1(0.8%)	0(0%)	2(2.2%)	3(3.3%)	1(1.1%)	0(0%)	0(0%)
Seek clarification	1(0.8%)	0(0%)	0(0%)	5(5.5%)	6(6.6%)	3(3.3%)	0(0%)	0(0%)
Seek Confirmation	0(0%)	2(1.6%)	0(0%)	1(1.1%)	0(0%)	2(2.2%)	0(0%)	0(0%)
Instruct	27(22%)	19(15.4%)	2(1.6%)	6(6.6%)	12(13.2%)	4(4.4%)	8(25%)	5(15.6%)
Suggest	4(3.3%)	0(0%)	0(0%)	0(0%)	1(1.1%)	0(0%)	1(3.1%)	0(0%)
Referential Total	29(23.6%)	9(7.3%)	6(4.9%)	1(1.1%)	14(15.4%)	8(8.8%)	2(6.3%)	0(0%)
Provide info	18(14.6%)	9(7.3%)	6(4.9%)	1(1.1%)	14(15.4%)	8(8.8%)	2(6.3%)	0(0%)
Correct	11(8.9%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)
Expressive Total	7(5.7%)	4(3.3%)	5(4.1%)	2(2.2%)	10(11%)	1(1.1%)	3(9.4%)	1(3.1%)
Praise	0(0%)	0(0%)	0(0%)	0(0%)	1(1.1%)	0(0%)	1(3.1%)	1(3.1%)
Criticise	5(4.1%)	4(3.3%)	2(1.6%)	2(2.2%)	5(5.5%)	1(1.1%)	2(6.3%)	0(0%)
Give opinion	2(1.6%)	0(0%)	3(2.4%)	0(0%)	4(4.4%)	0(0%)	0(0%)	0(0%)
Grand total	70(57%)	38(30.9%)	15(12.2%)	18(19.8%)	52(57.1%)	21(23.1%)	17(53.1%)	8(25%)

Table 4 The Frequency and Proportion of Supervisory Feedback Function Subcategories of T1, T2, T3, T4, T5 (continued)

Feedback	T3 - D3	T4 - D1	T4 - D2	T4 - D3	T5 - D1	T5 - D2	T5 - D3
Directive Total	5(15.6%)	8(15.1%)	11(20.8%)	11(20.8%)	12(17.1%)	16(22.9%)	9(12.9%)
Elicit info	1(3.1%)	0(0%)	0(0%)	0(0%)	0(0%)	5(7.1%)	1(1.4%)
Seek justifications	0(0%)	1(1.9%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)
Seek clarification	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)
Seek Confirmation	0(0%)	0(0%)	1(1.9%)	0(0%)	0(0%)	1(1.4%)	6(8.6%)
Instruct	4(12.5%)	6(11.3%)	6(11.3%)	11(20.8%)	12(17.1%)	6(8.6%)	2(2.9%)
Suggest	0(0%)	1(1.9%)	4(7.5%)	0(0%)	0(0%)	4(5.7%)	0(0%)
Referential Total	1(3.1%)	2(3.8%)	4(7.5%)	5(9.4%)	13(18.6%)	11(15.7%)	2(2.9%)
Provide info	1(3.1%)	2(3.8%)	2(3.8%)	5(9.4%)	13(18.6%)	9(12.9%)	2(2.9%)
Correct	0(0%)	0(0%)	2(3.8%)	0(0%)	0(0%)	2(2.9%)	0(0%)
Expressive Total	1(3.1%)	2(3.8%)	7(13.2%)	3(5.7%)	4(5.7%)	2(2.9%)	1(1.4%)
Praise	0(0%)	0(0%)	1(1.9%)	2(3.8%)	3(4.3%)	1(1.4%)	0(0%)
Criticise	1(3.1%)	1(1.9%)	3(5.7%)	0(0%)	0(0%)	1(1.4%)	1(1.4%)
Give opinion	0(0%)	1(1.9%)	3(5.7%)	1(1.9%)	1(1.4%)	0(0%)	0(0%)
Grand total	7(21.9%)	12(22.6%)	22(41.5%)	19(35.8%)	29(41.4%)	29(41.4%)	12(17.1%)

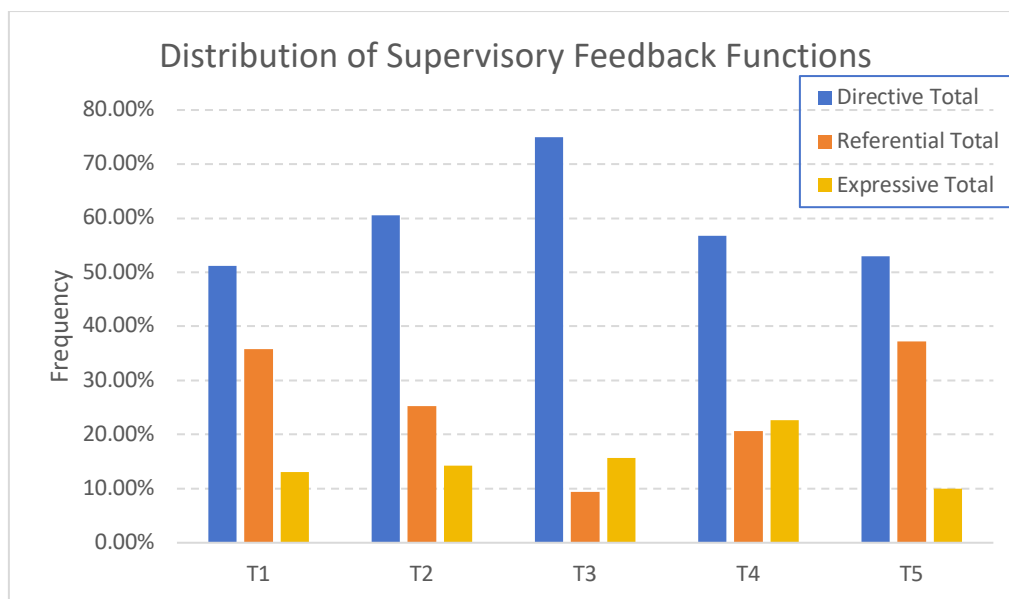


Figure 1 The frequency and proportion of supervisory feedback function subcategories of T1, T2, T3, T4, T5

The supervisor provided a total of 70 feedback instances on the T1-D1 draft, accounting for 57% of all feedback, indicating the most intensive support occurred during the initial stage of writing. Among these, directive feedback made up 34 instances (27.6%), predominantly comprising directive instructions (22%), suggesting the supervisor played a leading role at this stage by offering concrete revision directives and guidance on writing structure and content. Additionally, referential feedback was also prominent, with 29 instances (23.6%), including 18 instances of providing information (14.6%), highlighting the supervisor's critical role in supplying background knowledge and content-related information. These high-frequency, explicit feedback types reflect the scaffolding strategy in pedagogy, wherein the instructor builds a supportive structure to assist learners in completing tasks that are initially beyond their ability and they cannot do it independently.

In T1-D2, the number of feedback comments decreased to 38 (30.9%), yet directive feedback remained dominant, comprising 25 instances (20.3%), with 19 of them being directive instructions. This indicates that the supervisor continued to guide the student in constructing logical flow and refining content. Although the quantity of feedback declined, its function remained directive, suggesting the student was still in a stage of dependent development, lacking the autonomy to make significant revisions independently. There were three instances of eliciting information that emerged, signaling the supervisor's initial attempts to prompt student reflection through questioning—marking a step toward fostering learner autonomy. Moreover, there were four instances of “Criticize”, a type of expressive feedback. The supervisor's criticism is targeted at provoking critical thinking about the student's writing logic, signaling a shift toward more metacognitive and exploratory feedback. The change in focus of feedback indicates that the supervisor noticed a different need of the student in self-directed learning.

By T1-D3, feedback further dropped to 15 instances (12.2%), a marked reduction. Directive feedback sharply declined to just four instances (3.3%), while referential feedback also decreased to six instances (4.9%). Feedback focus shifted clearly toward expressive feedback with two instances of “Criticize” and three instances of “Give opinion” (2.4%). This transformation indicates a gradual withdrawal of instructional scaffolds, transferring greater responsibility to the student and encouraging them to think about their revision and make the necessary corrections. The decline in frequency and directiveness does not signify reduced pedagogical support, but rather the function of scaffolding within formative assessment, allowing students to revise more independently.

For the second supervisor (T2), Table 4 shows that the supervisor's feedback showed a steady drop in the number across the three drafts. In T2-D1, there were 15 instances of directive feedback (16.5%), but “Eliciting information” increased to six instances (6.6%) in T2-D2 from T2-D1 1 instance (1.1%), and “Seek clarification” increased to six instances (6.6%) in T2-D2 from T2-D1 five instance (5.5%). This reflects a shift from directive feedback to dialogic engagement, where the supervisor

sought to clarify students' intended meaning and prompt their reasoning, promoting reflective learning and active participation. Grand total feedback increased to 52 instances (57.1%) in T2-D2 from T2-D1 18 instances (19.8%), likely due to major structural revisions requiring more intensive intervention. Although directive feedback increased to 28 instances (30.8%) in T2-D2, the presence of "Give opinion" and "Criticize" (combined 9.9%) suggests a growing emphasis on prompting students to express their own views and critically engage with their writing. In T2-D3, grand total feedback dropped to 21 instances (23.1%), indicating that scaffolding strategies were shifting from directive to supportive and facilitative.

Based on Table 4 and Figure 1, it is evident that Supervisor 3 (T3) provided extensive feedback on Draft 1, with less on Drafts 2 and 3. This pattern reflects a gradual withdrawal of supervisory scaffolding as the student's writing improved. T3-D1 received 17 feedback instances (53.1%), T3-D2 received 8 (25%), and T3-D3 received 7 (21.9%). Eliciting information appeared three times in T3-D1 (9.4%), then decreased to two instances in T3-D2 (6.3%) and one instance in T3-D3 (3.1%), suggesting a preference for prompting student reasoning over providing direct solutions. Expressive feedback also declined—from three instances in T3-D1 (9.4%) to one instance (3.1%) in both T3-D2 and T3-D3—mostly comprising praise and criticism, indicating the use of evaluative language to promote self-awareness and self-correction.

Directive feedback dropped from 12 instances in T3-D1 (37.5%) to seven in T3-D2 (21.9%), and remained at five in T3-D3 (15.6%), showing that the supervisor continued to offer targeted guidance on key issues. Overall, the supervisor progressively allowed the student to take greater control of the revision process, aligning with the principles of formative assessment that emphasize the shift from external support to learner autonomy. By T3-D3, the supervisor's role evolved into that of a facilitator and encourager rather than a content authority, as evidenced by the continued presence of affective support such as praise. This underscores the importance of scaffolding and sustained feedback throughout the learning process. As Darling-Hammond (2008) notes, the ongoing use of feedback and formative assessment has a profound impact on effective teaching and learning.

As for T4, in T4-D1, 12 instances (22.6%) were provided, with directive feedback at 15.1%, while both expressive feedback and referential feedback remained low, suggesting a continued shift toward more guiding rather than directive feedback. In T4-D2, a total number of feedback rose to 22 instances (41.5%), with provide information (five instances) dominating, implying that the student might still struggle with content organization, prompting the supervisor to supplement with factual input. Nonetheless, the continued presence of "opinion" and "Criticize" demonstrates a balance between assessment and encouragement. In T4-D3, a slight decline to 19 feedback instances was shown, with directive and expressive feedback nearly balanced, reflecting dynamic scaffolding. The supervisor offered support where needed, while gradually relinquishing control over more competent aspects of the student's writing to encourage independent revision.

Based on the data from T5's three drafts in Table 4, the supervisor's feedback showed a clear developmental pattern aligned with the student's writing progress. In T5-D1, 29 feedback instances (41.4%) were provided, with focus on directive (17.1%) and referential (18.6%) feedback, reflecting the supervisor's guiding role in building the writing foundation. Expressive feedback (5.7%), mostly praise, also suggested encouragement alongside instruction. In draft 2 (T5-D2), the feedback frequency remained the same, but directive feedback increased to 16 instances (22.9%), particularly through eliciting information (7.1%), indicating a pedagogical shift from instruction to stimulating student thinking. Referential and expressive feedback decreased, suggesting reduced reliance on direct content input and evaluative language. By draft 3 (T5-D3), a total number of feedback dropped to 12 instances (17.1%), with seeking confirmation six instances (8.6%) becoming prominent. This reflects the supervisor's gradual withdrawal, supporting learner autonomy and self-regulation. Overall, T5's feedback evolution from directive guidance to dialogic prompting and finally to minimal intervention demonstrates effective scaffolding and formative assessment, fostering increasing student independence in academic writing.

DISCUSSION

The findings of this study on the linguistic functions of supervisors' feedback on undergraduate theses have led to two key findings on the type of feedback and change in focus of feedback over time.

Firstly, the results on the type of feedback indicate that supervisors primarily use directive feedback in their comments to supervisees. Supervisors often use directive instruction to instruct supervisees in taking or avoiding specific actions in their writing, similar to the findings of Nurie (2018) who analyzed written feedback from eight supervisors at Bahir Dar University in Ethiopia. Directive feedback, often in the form of questions or statements, help students articulate their ideas more clearly by highlighting ambiguities and guiding revisions, particularly regarding theoretical frameworks and research designs. Supervisors believe in using directive clarification to provide detailed and essential feedback, enhancing students' writing skills through clear revision instructions (Kumar & Stracke, 2007). Their analysis of written feedback on a doctoral thesis draft shows that referential feedback was the most frequently used type of feedback. Supervisees perceived referential feedback as the easiest to process, allowing them to quickly revise and improve their work. Moreover, both supervisors and supervisees in Kumar and Stracke's (2007) study believed that editorial and organizational issues should not appear in a PhD thesis, leading to heightened attention to these aspects. The supervisees were particularly cautious about editorial errors, viewing them as a reflection of the author's attentiveness. As a result, they maintained strict control over these aspects during revision, ensuring consistency in style and improving the readability of the final draft.

Secondly, the results on the change in focus of feedback over time shows a decrease in the type of feedback and number of feedback instances. The implementation of scaffolding pedagogy by the five supervisors is clear based on these two parameters.

Across the three drafts, there is a shift in feedback type from predominantly directive to increasingly referential, as the student's writing proficiency improves. This transition in feedback style reflects formative assessment in action, that is, facilitating the learner's transformation from external dependence to autonomous construction through the gradual release of responsibility. Specifically, in the early stages of academic writing, when students struggle with topic focus or argument development, supervisors tend to use directive feedback to offer clear guidance on research scope and methodology. As the student's research competence improves, the supervisors reduce direct intervention and instead adopts referential feedback and progressively transfers learning agency to the student.

Next, the amount of feedback clearly decreases by the time of the third draft. The number of comments dropped steadily for three out of the five supervisors but for two supervisors, only the first draft was heavily commented. In each draft, the supervisor provided students with specific and constructive feedback, giving them the opportunity to review and improve their work before the next submission. For example, the supervisor T1 provides more directive instructions in the initial stages and expected the student to internalize and apply these comments as they revise. Similarly, eliciting information appears more in Draft 2 but decreases in Draft 3, indicating that as the student refines writing, they require less prompting. The decrease in the number of comments can be considered to reflect an improvement in the student's academic writing from the first draft (D1) to the second (D2) and then the third (D3). The supervisors' guidance through the comments on consecutive drafts gave students multiple opportunities for active engagement through a progressive scaffolding approach. The shift suggests the gradual release of responsibility—an important feature of scaffolded formative assessment. This phenomenon can be explained using Vygotsky's (1978) Zone of Proximal Development theory, that is, the supervisor-student relationship is dynamic, evolving over time from an expert-novice model to a more collaborative and cooperative relationship. In this process, feedback functions as a form of scaffolding, helping students understand the supervisors' comments and gradually take on the responsibility of developing as legitimate authors in their respective academic fields.

Finally, the results are discussed in the context of formative assessment approaches of Sadler (1989) and Black and Wiliam (2018). Sadler (1989) focuses on the student's role in understanding shortfalls in their writing and taking steps to close the gap between their current performance and the desired standard. Left to themselves, students starting out in their research project are unable to evaluate their own writing to identify their shortfalls, which is why regular supervisor feedback is important. It is then left to the student's initiative to act on the feedback given by their supervisors. This is where

Black and Wiliam's (2018) approach in formative assessment is relevant. Over time, from the first draft to the second and then the third, supervisors and students work collaboratively, providing each other with valuable feedback and exploring how to use it more effectively to enhance learning for both parties (Wiliam, 2011). Black and Wiliam (2018) emphasize the dynamic interaction between educators and learners. In the context of writing the research proposal for their final year project, the students learn from their supervisor's feedback on draft 1 and adjust their writing. The supervisors also adjust their comments based on the changes in drafts 2 and 3. There is evidence of a feedback loop highlighted by Black and Wiliam (2018), showing a reciprocal relationship between teaching and assessment in enhancing learning outcomes.

The study shows that regular feedback and continued improvement of final year project writing is important for students to learn well. Effective instructional feedback cannot be a one-way transmission of information, but rather requires active student participation throughout the assessment process. This interactive formative assessment essentially constitutes a dynamic instructional support system. Through mentor feedback, it helps learners build bridges between their "current level" and "potential developmental level," thereby facilitating continuous advancement of cognitive abilities. The one-to-one attention given by supervisors to students enables students to enjoy individualized instructional support which leads them towards independent, self-regulated learning – at least this is the hope of lecturers. Ultimately, Vygotsky's (1978) theory of zone of proximal development and Sadler's (1989) model of formative assessment converge in asserting that meaningful learning occurs through a balance of social interaction, iterative feedback, and learner autonomy.

The crux of formative assessment is the utilisation of feedback to facilitate learning, however, it should be noted that not all feedback is inherently formative. In the context of supervisory feedback on thesis writing, feedback becomes formative only when it serves a scaffolding function, such as posing guiding questions or offering targeted suggestions. The purpose of this function is to help students deepen their understanding and bridge the gap between their current cognitive level and their desired writing goals. Research in educational assessment highlights that students' interpretation and utilization of feedback are essential aspects of formative assessment. Sadler (2010) emphasizes that assessing the impact of formative assessment necessitates a focus on how effectively learners understand feedback and incorporate it into their ongoing learning. This perspective aligns with Ramaprasad's (1983) earlier conceptualization of feedback, which, from an organizational theory standpoint, defines feedback as such only when it is actually used to close the gap between current performance and the intended learning goal (Sadler, 1987).

IMPLICATIONS

Supervisory feedback is not just writing support, but a key component of formative assessment in higher education (Maftuna, 2025). The study on the types of feedback provided by supervisors to undergraduate students in their thesis writing over one semester showed the frequent use of directive feedback, and less frequent use of referential and expressive feedback. Tracking the type of supervisory feedback reveals evidence of scaffolding in terms of the number of comments and changes in the type of comment (from directive to referential). This is a finding that is new to the field, mainly because other researchers analyzed comments on one piece of writing at a given point in time (Jafarigohar, Hoomanfar, & Jalilifar, 2018; Nurie, 2018). By tracking changes in supervisor feedback over time, the study has shown that supervisors adjust their feedback frequency and focus to the student's improved writing because some students take on board the comments and are able to make the expected improvements while others lag behind. Effective scaffolding in academic writing hinges on two critical factors. First, the student must possess metacognitive abilities to understand and internalize feedback. Second, the supervisor must engage in ongoing formative diagnosis to accurately identify the student's zone of proximal development and dynamically adapt instructional strategies accordingly. It is through this bidirectional co-construction that formative assessment achieves its ultimate goal: an educational shift from knowledge transmission to the cultivation of independent competence.

Practical implications for supervisor training and curriculum design highlight the need for strategic pedagogical approaches. Educators are encouraged to break down long-term learning goals

into achievable sub-tasks based on students' zone of proximal development, and guide them through ongoing negotiation, reflective questioning, and responsive feedback. In contrast, vague directive comments such as "work harder" or "revise again" lack clear guidance on how or why to take action and therefore fail to meaningfully support student learning and improvement. In this context, the role of expressive feedback is questionable because it does not give students a clear idea of what needs to be improved, but positive expressive feedback may motivate students to take control of their writing. Explicit guidance like directive and referential feedback may be more useful for students who lack knowledge.

For supervisor training, it is essential that educators develop the ability to provide formative feedback that is specific, timely, and actionable. They should also be prepared to guide students in effectively engaging with supervisory feedback, thereby fostering both critical thinking and feedback literacy. Additionally, educators must learn to interpret students' responses to feedback as indicators of their understanding and developmental stage. This includes identifying the optimal learning gap—the space between a student's current performance and their learning goals in order to adapt instructional strategies that support continuous growth. Bridging this gap can foster a stronger sense of motivation and drive for improvement (Massri, 2025).

CONCLUSION

Academic writing courses should intentionally embed the cultivation of feedback literacy as a core objective for curriculum designers. The success of formative assessment hinges on whether instruction that follows is able to address students' learning needs meaningfully. Learning tasks should maintain an appropriate balance, being sufficiently challenging to foster engagement while avoiding excessive difficulty that may lead to frustration.

Future research should further explore the impact of feedback on undergraduate students' writing development. In other words, it is necessary to investigate how undergraduates apply the feedback in their revision processes to better understand the effectiveness of various types of supervisory feedback.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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