

Rethinking Higher Education in Africa: Benefits of Formative Feedback in Enhancing Student Learning

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Abstract

Formative feedback plays a crucial role in enhancing the quality of student learning in higher education. This study presents a comprehensive exploration of the benefits of formative feedback in higher education, utilizing a literature review methodology. Drawing on the social-cultural learning theory and Kolb's reflective learning models, the study reviews empirical research. The findings from the literature analysis reveal that formative feedback significantly improves students' understanding of course material, fosters a more active learning environment, and promotes self-regulated learning. Despite the clear advantages, the study also acknowledges challenges such as time constraints and the need for professional development to effectively implement formative feedback. Formative feedback, distinguished by its ongoing nature and focus on actionable insights, is examined for its role in enhancing student learning outcomes. The study concludes with practical recommendations for educators and institutions, advocating for the integration of formative feedback as a standard practice to support student learning. This research underscores the transformative potential of formative feedback in higher education and calls for ongoing exploration to further optimize its application.

Keywords: *Formative assessment, formative feedback, higher education, student learning*

Introduction

In the dynamic context of higher education, the quest for improving student learning outcomes is paramount. The conversation of shifting the paradigm from teaching to learning-centered approaches is ongoing, particularly in the Western world and a few African countries. The emphasis is on the utilization of formative assessment to improve student learning outcomes and in particular for instructors to make use of the feedback to improve their pedagogical practices (Barr & Tagg, 1995; Brookfield, 2015; Chalmers et al., 2018; Donough, 2022; Guskey & Huberman, 1995; Hattie & Timperley, 2007; Meyer, 2009; Nkealah, 2019; Ramollo & Kanje, 2023; Shute, 2008; Weimer, 2002; Wiliam, 2018; Wilkie & Liefeth, 2020; Yin et al., 2022) (Guskey & Huberman, 1995; Hunt & Chalmers, 2021; Tagg, 2003; Weimer, 2002; Yin et al., 2022).

One of the most influential strategies identified for enhancing educational quality is the use of formative feedback (Bahati et al., 2016; Moss & Brookhart, 2019; Muthuma, 2018; Omorogiuwa, 2021). Unlike summative feedback, which evaluates student performance at the end of an instructional period, formative feedback is an ongoing process that provides students with continuous, actionable insights to improve their learning while it is still happening (Morris et al., 2021). This approach not only aids in the immediate academic development of students

but also fosters long-term skills such as self-assessment and independent learning. Formative feedback is deeply rooted in educational theories, including Vygotsky's Zone of Proximal Development (Kozulin, 2003), which emphasizes the importance of providing support to learners as they develop new skills just beyond their current capabilities. Additionally, Constructivist theories advocate for active learning processes where students construct knowledge through experience and reflection (Brookfield, 2015; Vince, 2022), making formative feedback an essential component of effective teaching and learning.

Despite the recognized benefits, the integration of formative feedback in higher education faces several challenges. These include time constraints for educators, varying levels of student engagement, and the need for consistent and structured feedback mechanisms. Addressing these challenges is critical to maximizing the potential of formative feedback to enhance student learning.

The purpose of this article is to explore the multifaceted benefits of formative feedback in higher education through an extensive literature review. By examining the theoretical foundations and literature, this article aims to provide an understanding of how formative feedback can be effectively implemented to improve student learning outcomes. The review synthesizes findings from literature sources to offer practical recommendations for educators and institutions. Ultimately, this research seeks to highlight the transformative potential of formative feedback in fostering a more engaging and productive learning environment.

Method

This study employs a comprehensive literature review methodology to explore the benefits of formative feedback in enhancing the quality of student learning in higher education. The method used involves several key steps, starting with a literature search across academic databases using relevant keywords to identify peer-reviewed journal articles, books, and conference papers. Inclusion criteria focused on contemporary publications, while seminal works outside this timeframe were also considered. Data extraction involved gathering information on formative feedback's definitions, theoretical foundations, implementation strategies, challenges, and documented outcomes. Thematic analysis categorized extracted data into themes. Synthesizing findings from this analysis constructed a narrative integrating theoretical perspectives with empirical evidence, considering socio-cultural contexts, particularly focusing on applications in diverse educational settings. Practical recommendations were formulated based on synthesized literature, aiming to inform theory, practice, and policy, including strategies for integration into curricula, enhancing educator professional development, and fostering a culture of continuous improvement. Gaps identified in the literature informed suggestions for future research, emphasizing the need for studies in diverse educational contexts.

Theoretical Framework

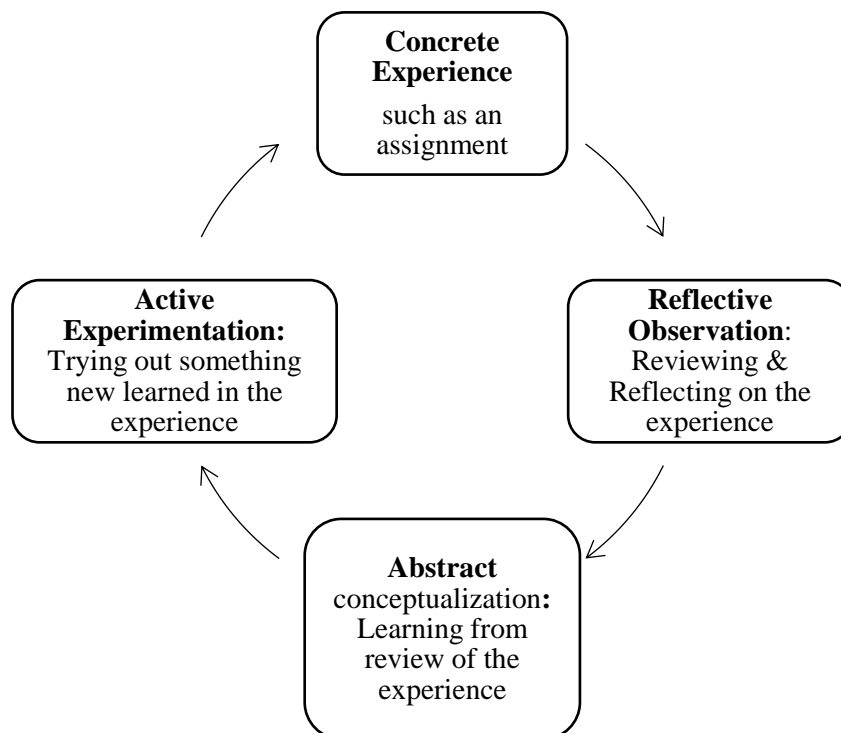
While cognizant of other educational theories, this article was anchored in the social-cultural learning theory as well as Kolb's reflective learning model. Social-cultural learning theory (Kozulin, 2003; Vygotsky, 1978), underscores the pivotal role of social interactions, cultural contexts, and collaborative processes in shaping individuals' learning experiences. Vygotsky posited that learning is not merely a cognitive process occurring within the individual's mind, but rather a social and cultural activity that occurs through meaningful interactions with others. Within the context of higher education institutions, social-cultural learning theory serves as a lens through which to examine the socio-cultural dynamics that influence feedback practices. In the higher education context, cultural values, norms, and traditions play a significant role in

shaping educational practices. Social-cultural learning theory provides insights into how these factors impact feedback processes. The theory highlights the importance of peer interaction, mentorship, and cultural norms in shaping how feedback is given, received, and acted upon within the learning environments. For example, cultural norms regarding authority and hierarchy may influence instructors' willingness to provide constructive oral or written feedback to students about their learning experiences.

Furthermore, social-cultural learning theory emphasizes the role of collaborative learning environments in facilitating feedback exchanges among students and between students and faculty. This theory underscores the potential of peer feedback and group discussions to enhance learning outcomes in higher education institutions where collaborative and communal approaches to learning are often valued (Ellison, 2023; Yin et al., 2022). Peer interaction can provide diverse perspectives, promote critical thinking, and foster a sense of collective responsibility for academic success. Moreover, mentorship relationships, which are often deeply rooted in cultural traditions and values, could serve as important channels for feedback and guidance within the educational context. Faculty mentors, for instance, could offer personalized feedback, support students' academic development, and provide opportunities for reflection and growth (Yan et al., 2021). By recognizing the socio-cultural dimensions of feedback practices, higher education institutions could design interventions and strategies that are sensitive to the cultural context and responsive to the needs of diverse student populations.

Also, in the context of effective formative assessment practices within higher education institutions, Kolb's theory serves as a guide. At its core, Kolb's Experiential Learning Theory encompasses a cycle that encapsulates the learning process, a cycle comprising four distinct stages: Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE). It begins with a Concrete Experience, where learners directly immerse themselves in a learning experience, be it a hands-on activity or a real-world challenge. Following this, the Reflective Observation stage follows, urging learners to take a step back and introspectively examine their experience, probing their feelings, reactions, and insights. From here, it then advances to the Abstract Conceptualization stage, where learners synthesize their observations and reflections, weaving them into abstract concepts and generalizations. This is the phase where connections are drawn between the tangible experience and the realm of existing knowledge, theories, or concepts. This stage naturally paves the way for Active Experimentation, where learners venture forth to apply their newly formed concepts and theories in practical settings (Kolb, 1984; McLeod, 2017; Vince, 2022). This completes the cycle, propelling learners to a new Concrete Experience, thus commencing the iterative learning journey anew. In the unique context of higher education institutions, the practicality of Kolb's theory is likely to become even more evident. The following circular visual representation captures the cyclic nature of learning, conveying the idea of continuous improvement and growth. Figure 1 illustrates the journey, commencing with Concrete Experience, progressing through Reflective Observation and Abstract Conceptualization, and concluding with Active Experimentation.

Figure 1: Kolb's Experiential Learning Cycle



Note. Kolb's Experiential Learning Cycle extracted from Kolb, A.D. (1984, p. 33).

Experiential learning: experience as the source of learning and development. Copyright 1984 by Prentice Hall.

Literature Review

A crucial way to improve student learning outcomes in higher education is the incorporation of formative feedback. During the learning process, formative feedback—as opposed to summative feedback—offers students continuous, practical insights that assist students in identifying their areas of strength and growth. This study focused on reviewing robust literature to uncover the many benefits of formative feedback in higher education settings. Using a wide range of theoretical frameworks and empirical research, the review presented effective ways to use formative feedback to increase student engagement, promote deeper learning, and boost academic achievement. This review provided a thorough knowledge of the transformative potential of formative feedback and practical recommendations for educators by combining evidence from various educational settings.

Benefits of Formative Feedback

Formative assessment is an essential component of education that includes tasks that yield data that can be utilized as feedback to adjust instructional strategies and learning activities. By giving students continuous feedback that enables them to recognize their strengths and shortcomings and focus on the areas that require improvement, the aim is to improve student learning (Muthuma, 2018). There is ample evidence to suggest that formative assessment implemented well can raise academic standards and enhance student outcomes. From this vantage point, formative feedback has been repeatedly demonstrated by studies to significantly raise student achievement. Instructors can better adjust their instruction to match the requirements of their students when they collect and apply evidence on students' knowledge,

comprehension, and abilities. By bridging the performance gap between present performance and targeted learning goals, this technique improves the effectiveness and efficiency of the learning process (Black & Wiliam, 2009).

In addition, formative feedback is important since it gives instructors and students a better understanding of where students are in their learning path, according to Moss & Brookhart (2019). Notwithstanding its significance, there is a sizable discrepancy between student knowledge and development in relation to learning objectives in the classroom. Instructors are less able to provide the kind of focused feedback that is most helpful to students when they do not have access to comprehensive documentation of student performance. Formative feedback should be actionable, precise, and process-oriented rather than person-oriented. It should tell students about their strengths, areas for growth, and strategies for bridging the performance gap between their present level and the learning goals. This kind of feedback improves students' capacity to self-regulate their learning and helps them get a deeper comprehension of the material (Ajjawi et al., 2022).

Consequently, good feedback is essential to learning because it clarifies for students what the learning objectives are, where they are now in regard to those objectives, and what has to be done to get there. Feedback has one of the biggest effects on student's academic performance, especially when it's used to give detailed instructions about the work at hand and the steps involved. In the process of learning, feedback fulfills several vital purposes: first, formative feedback aids in clarifying the learning goals. This is demonstrated by providing clear criteria for success whereby formative feedback helps students understand the learning targets they are aiming to achieve. Second, formative feedback supports students to recognize gaps in their knowledge and understanding, guiding them on what they need to focus on to improve. Third, positive feedback can motivate students by acknowledging their progress and effort, and encouraging them to continue working towards their goals. Fourth, feedback that focuses on the learning process helps students develop strategies for self-regulation, enabling them to take more control over their own learning (Hattie & Timperley, 2007; Teng, 2022).

Gaining Valuable Insights from Students

As seen earlier, creating a sustainable formative assessment requires careful consideration of various factors, including the involvement of key stakeholders such as students (Null, 2011). A case study conducted in Australia offers valuable insights into how student input can enhance the effectiveness and sustainability of the curriculum design process. The study involved curriculum specialists collaborating with a Jewish day school in Australia, aiming to establish a new Jewish Studies curriculum. By examining this case study, we can gain valuable lessons applicable to designing sustainable formative assessments in higher education. The case study highlights the significance of incorporating student voices into the curriculum design process. Traditionally, educators make assumptions about students' preferences and interests, assuming they know what students want to learn. However, this study demonstrates that these assumptions can be inaccurate. Educators can gain valuable insights into their perspectives, needs, and preferences by actively involving students in the decision-making process. Integrating the commonplace voice of students in curriculum design (Deng, 2013; Schwab, 1969) not only enhances the relevance of the content but also fosters student engagement and ownership of their learning experience (Kuhn & Hacking, 2012).

Fosters Deeper Learning

The case study draws on Michael Fullan's (1997) ideas about school partnerships to create a collaborative approach to curriculum development. Engaging in partnerships with various stakeholders, including students, Instructors, administrators, and curriculum specialists, allows for a holistic view of the curriculum's requirements. Collaboration enables the identification of strengths and weaknesses in the existing curriculum and facilitates the integration of diverse perspectives to create a more sustainable and inclusive formative assessment model. Schwab's 'commonplaces' are theoretical constructs that encompass the various components of the curriculum, such as the subject matter, learners, Instructors, and milieu. By integrating these concepts, the case study demonstrates how educators can tailor the curriculum to meet the specific needs and ethos of the school and its students. Considering the unique context of each institution ensures that the curriculum aligns with the values, goals, and aspirations of the learning community (Fullan, 1997; Kohn, 2017; Schwab, 1982, 1983). Though the case study focuses on a Jewish day school, the principles learned regarding the importance of student voice and collaborative curriculum design can be applied to higher education contexts worldwide. Sustainable formative assessment practices in higher education can benefit significantly from engaging students as active participants in the assessment process. The inclusion of student perspectives can lead to more relevant and effective assessments that foster deeper learning and long-term engagement.

In addition to the use of student voices as important input in the curriculum process, the use of formative feedback enhances summative assessment (Christian & Wright, 2021). Research indicates that students who receive well-designed, fit-for-purpose formative feedback on their draft assignments before summative submission demonstrate significantly better performance in both the assignment and module compared to those who do not receive such feedback. An essential aspect of formative feedback design lies in its focus on the learning process rather than solely on the assignment product. This approach aims to foster student self-regulation for learning and promotes a deeper understanding of feedback, ultimately leading to better outcomes.

The positive impact of formative feedback extends beyond individual assignments. Encouraging broader learning within the topic area and fostering student self-assessment contribute to overall improvement across the entire module, resulting in higher module grades. While modularization may pose challenges to providing comprehensive feedback within specific module topics, the literature recommends utilizing student exemplars, student assessment of old peer drafts, and continuous peer assessment to introduce feed-forward elements. These strategies help equip students with transferable skills applicable to modules on different topics (Christian & Wright, 2021). Traditional standard feedback, often comprising isolated symbols and directive comments, can prove unhelpful and frustrating for students. In contrast, constructive and detailed feedback, especially when designed within a constructivist module, fosters deep learning and leads to improved outcomes (Carles, 2011).

Varieties of Effective Formative Feedback

The research conducted by Plater (2007) delves into the realm of student assignment feedback in higher education, focusing on a small-scale action research project involving Year 2 undergraduate initial teacher education (ITE) students. The study encompasses three distinct interventions aimed at enhancing students' engagement with feedback on essay assignments. The first intervention involved traditional written tutor feedback, revealing unexpectedly positive results where the majority of the students found the feedback helpful and carefully

considered it. The second intervention introduced a worksheet activity that required students to summarize past essay feedback and identify improvement strategies. Students found this activity helpful in clarifying their understanding of tutor feedback. The third intervention explored voluntary peer marking, which proved challenging due to various factors, including time constraints. The study highlights students' preferences for explicit feedback from tutors and their reservations about alternative engagement methods. The findings align with previous research indicating students' struggle to comprehend written tutor feedback, their conscientious approach to learning, and their appreciation of peer marking as a supplement rather than a substitute for tutor feedback. The research contributes to the discourse on enhancing assignment feedback processes and suggests further experimentation with peer marking and writing workshops to foster ongoing skill development in academic writing.

Increases Student Engagement and Enhances Teacher-Student Relationship

Also, formative feedback can improve learning outcomes by helping students identify areas for improvement and encouraging them to take corrective action. It can also increase student motivation and engagement, as it provides clear goals and expectations and helps students understand how to succeed. Formative feedback can also enhance the student-teacher relationship by facilitating ongoing communication and collaboration between students and instructors and creating a positive, supportive learning environment (Nsabayezu et al., 2022; Ramollo & Kanje, 2023). A supportive learning environment is one where students feel safe to take risks, make mistakes, and learn from them. Formative feedback contributes to such an environment by fostering open communication between students and instructors and creating a culture of continuous improvement. Constructive feedback that highlights students' efforts and progress can boost their motivation and confidence. When students feel that their hard work is recognized and that they have the support of their instructors, they are more likely to engage fully in the learning process. Formative feedback often involves a dialogue between students and instructors, promoting a collaborative learning environment. This interaction helps build trust and respect, encouraging students to seek help and participate actively in their education.

Formative feedback is a powerful tool in higher education that significantly enhances student learning and development. By providing timely, specific, and actionable insights, formative feedback helps students become self-aware learners, fosters resilience, and creates a supportive learning environment that promotes mindfulness, cognitive flexibility, and self-regulation. There seems to be insufficient specific evidence or empirical research about the benefits of formative feedback on learning outcomes, student motivation, engagement, and the student-teacher relationship.

Transforming Students into Self-Aware Learners

One of the primary benefits of formative feedback is its role in transforming students into self-aware learners. Self-awareness in learning involves an understanding of one's strengths, weaknesses, and the processes that contribute to effective learning. Through formative feedback, students gain insights into their own learning processes. They learn to identify what strategies work best for them and where they need to focus their efforts. This awareness enables them to articulate their learning journey, making it easier to set realistic goals and monitor their progress. Formative feedback encourages students to reflect on their work and the feedback they receive. This reflection helps them understand the underlying principles of their successes and failures, fostering a deeper understanding of the subject matter. Reflective practice is

crucial for developing critical thinking skills and the ability to apply knowledge in new contexts (Vince, 2022).

Cultivating Resilience

Resilience is the ability to bounce back from setbacks and adapt to challenges. Formative feedback plays a critical role in cultivating resilience among students by helping them view setbacks as opportunities for growth rather than as insurmountable obstacles. Formative feedback helps students see mistakes as part of the learning process. When feedback is constructive and focused on improvement, students learn to analyze their errors and develop strategies to avoid them in the future. This approach builds resilience by reinforcing the idea that mistakes are valuable learning experiences. Through continuous feedback, students learn to adapt their strategies and approaches to meet learning objectives. This adaptability is a key component of resilience, as it enables students to navigate challenges and adjust their methods to achieve success (Omorogiuwa, 2021).

Formative Feedback on Student Motivation

Formative feedback not only aids in academic performance but also significantly influences student motivation. In the context of higher education, understanding how feedback affects student motivation can help in designing more effective feedback systems. Effective formative feedback can enhance intrinsic motivation by focusing on students' efforts and progress rather than solely on outcomes. Feedback that highlights growth and learning processes helps students develop a sense of competence and encourages a love for learning (Yan et al., 2021). Feedback that aligns with students' personal goals and interests can increase motivation. For instance, providing feedback that connects course material to real-world applications can make learning more relevant and engaging for students, thus enhancing their motivation. Formative feedback that is supportive and constructive can reduce anxiety and fear of failure. This is particularly important in contexts where academic failure can carry significant social and personal repercussions. Reducing anxiety helps create a more conducive learning environment, allowing students to take risks and engage more deeply with the material (Moss & Brookhart, 2019).

Peer and Collaborative Feedback Mechanisms

Incorporating peer and collaborative feedback mechanisms can diversify the feedback sources and create a more interactive learning environment (Ellison, 2023; Yin et al., 2022). Peer feedback involves students providing feedback to each other. This practice not only benefits the recipient but also enhances the feedback-giver's understanding of the subject matter. It encourages critical thinking (Abdullatif, 2023), communication skills, and the ability to evaluate work against set criteria or rubrics (Nsabayezu et al., 2022; Olson & Krysiak, 2021). Collaborative feedback mechanisms, where small groups of students work together and provide mutual feedback, can enhance learning by promoting discussion and diverse perspectives. This method fosters a community of learners who support each other's development and helps break down hierarchical barriers (Boud, Cohen, & Sampson, 2014). To maximize the benefits of peer feedback, students need training on how to give and receive constructive feedback. Workshops and guided practice sessions can help students develop the necessary skills and confidence to engage in meaningful peer feedback (Nicol, 2007).

Conclusion

The review of literature on formative feedback underscores its crucial role in enhancing student learning outcomes in higher education. Formative feedback, with its focus on continuous, actionable insights, not only aids in immediate academic improvement but also fosters long-

term skills such as self-assessment, critical thinking, and independent learning. Grounded in educational theories like Vygotsky's Zone of Proximal Development and Kolb's Experiential Learning Theory, formative feedback is shown to support students' cognitive and social development through tailored, iterative learning processes.

Despite its proven benefits, the implementation of formative feedback faces significant challenges, including time constraints for educators, varying levels of student engagement, and the need for consistent and structured feedback mechanisms. Addressing these challenges requires a concerted effort from educational institutions to design and implement effective formative feedback systems that are both feasible for instructors and impactful for students.

This article highlights the transformative potential of formative feedback in creating a more engaging and productive learning environment. The insights gained from this literature review can inform the development of practical strategies for educators and policy-makers, aiming to integrate formative feedback more effectively into higher education curricula. Future research should focus on empirical studies that explore innovative approaches to overcoming the identified challenges and extending the applications of formative feedback in diverse educational contexts. By doing so, higher education can enhance the quality of student learning and better prepare learners for the complexities of the modern world.

Recommendation

To inform theory, practice, and policy, higher education institutions should integrate formative feedback into the curriculum as a standard practice, provide professional development for educators on effective formative feedback strategies, encourage student involvement in the feedback process to ensure it is relevant and effective, foster a culture of continuous improvement and reflection among students and educators, and conduct further research on the impact of formative feedback in diverse educational contexts, particularly in Africa where the use of formative feedback seem to be underutilized to enhance student learning.

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