



Understanding Feedback Literacy in Higher Education: Concepts, Practices, and Future Directions

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ABSTRACT

Feedback literacy has emerged as an important concept in higher education by emphasizing students' capability to interpret, evaluate, and utilize feedback for continuous learning. This study examines feedback literacy through a Systematic Literature Review (SLR) following the PRISMA 2020 framework. Studies published over the last ten years were systematically collected from major academic databases and synthesized using a framework-based thematic analysis. Five themes were identified: the emergence of feedback literacy, its core components, educational practices supporting its development, educational contributions, and future perspectives. The findings indicate that feedback literacy strengthens learner autonomy, self-regulated learning, academic engagement, and lifelong learning through dialogic feedback, peer assessment, self-assessment, and reflective educational practices. The review also highlights the growing influence of digital technologies, sustainable assessment, and artificial intelligence in shaping future feedback processes. Developing feedback literacy should therefore become a strategic priority for higher education institutions.

Keywords: *Assessment, Dialogic Feedback, Feedback Literacy, Higher Education, Peer Feedback.*

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1. | INTRODUCTION

Feedback has long been recognized as one of the most influential components of teaching and learning in higher education. Effective feedback enables students to understand their current level of performance, identify areas requiring improvement, and develop strategies for future learning. Traditionally, feedback has been viewed primarily as information transmitted from instructors to students following assessment activities. However, increasing evidence suggests that simply providing feedback does not necessarily result in improved learning outcomes, as many students experience difficulties in interpreting, evaluating, and applying feedback to subsequent learning tasks.

The limitations of traditional feedback practices have prompted a significant shift in higher education research from emphasizing feedback delivery toward understanding students' active engagement with feedback. Rather than considering feedback as a one-way communication process, contemporary educational perspectives recognize that meaningful learning occurs when students actively interpret feedback, reflect on its meaning, regulate their emotional responses, and implement improvements in future academic work. This transition has given rise to the concept of feedback literacy, which emphasizes students' capacity to make productive use of feedback throughout their learning experiences.

Feedback literacy has rapidly emerged as an important theoretical framework that redefines feedback as a collaborative learning process rather than a simple instructional activity. Nieminen and Carless (2023) describe feedback literacy as an evolving concept that extends beyond receiving comments by emphasizing learners' abilities to understand, evaluate, and utilize feedback effectively. Similarly, Molloy, Boud, and Henderson (2020) propose a learning-centered framework in which feedback literacy develops students' capabilities to engage actively with feedback while strengthening their responsibility for continuous learning and improvement.

Recent scholarship has further expanded the conceptual understanding of feedback literacy by recognizing its multidimensional nature. Rather than representing a single academic skill, feedback literacy encompasses learners' appreciation of feedback, capacity to make informed judgments about academic work, ability to manage emotional responses to evaluation, and willingness to take action based on feedback received. Chong (2021) argues that feedback literacy should be understood within an ecological perspective where individual learners, instructors, assessment practices, and institutional learning environments interact to influence students' engagement with feedback. Likewise, Yan and Carless (2022) emphasize that feedback literacy strengthens self-assessment by enabling students to evaluate their own work more effectively while integrating external feedback into future learning.

The development of feedback literacy also depends upon educational practices that encourage students to participate actively in feedback processes. Dialogic feedback, peer assessment, self-assessment, and collaborative reflection have increasingly been

recognized as effective approaches for strengthening students' ability to interpret and apply feedback. Han and Xu (2020) found that teacher feedback significantly influences the development of students' peer feedback literacy by encouraging reflective evaluation and collaborative learning. Similarly, Hoo, Deneen, and Boud (2022) demonstrated that combining self-assessment with peer assessment interventions provides meaningful opportunities for students to strengthen feedback literacy through authentic learning experiences.

Technological advancement has further transformed how feedback is generated, delivered, and utilized in higher education. Digital learning environments increasingly incorporate online feedback systems, technology-mediated peer review, learning analytics, and automated feedback tools that provide students with timely and personalized learning support. Ryan, Henderson, and Phillips (2019) found that students perceive digital and non-digital feedback differently, highlighting the importance of selecting appropriate feedback modes to maximize learning effectiveness. More recently, Buckingham Shum et al. (2023) and Hooda et al. (2022) suggest that artificial intelligence and automated feedback technologies offer new opportunities for strengthening feedback processes while simultaneously requiring students and educators to develop new forms of feedback literacy suitable for technology-enhanced learning environments.

Although research on feedback literacy has expanded rapidly during recent years, existing studies frequently investigate individual aspects such as peer feedback, self-assessment, digital feedback, or dialogic feedback independently. Comparatively fewer studies synthesize these interconnected perspectives to explain how feedback literacy has evolved conceptually, how it is developed through educational practice, and how emerging technologies are reshaping future feedback processes in higher education. A comprehensive synthesis is therefore needed to integrate current evidence and identify future directions for feedback literacy research.

Accordingly, this study employs a Systematic Literature Review (SLR) following the PRISMA 2020 framework to examine feedback literacy in higher education. By synthesizing studies published between 2019 and 2023, the review explores the conceptual development of feedback literacy, its core components, educational practices that support its development, its contributions to student learning, and emerging directions for future research. The findings are expected to provide educators, researchers, and higher education institutions with a comprehensive understanding of how feedback literacy can support meaningful learning and sustainable educational development.

2. | LITERATURE REVIEW

The Emergence of Feedback Literacy

Feedback has traditionally been regarded as an integral component of assessment and learning in higher education. For many years, educational practice emphasized feedback as information provided by instructors to help students identify strengths,

weaknesses, and areas requiring improvement. Within this traditional perspective, the effectiveness of feedback largely depended on the quality, clarity, and timeliness of comments delivered by educators. However, growing evidence suggests that even carefully designed feedback often fails to improve learning because students may not understand, value, or effectively use the information they receive. This realization has encouraged researchers to reconsider the role of learners within feedback processes.

Contemporary scholarship increasingly views feedback as an active learning process rather than a one-way transmission of information. Instead of focusing exclusively on feedback delivery, recent research emphasizes students' ability to interpret, evaluate, and apply feedback within future learning situations. This conceptual shift has led to the emergence of feedback literacy, which recognizes that meaningful feedback depends not only on what educators provide but also on learners' capability to engage productively with feedback. Winstone and Carless (2019) argue that effective feedback processes require students to become active participants who continuously interpret and utilize feedback to improve subsequent performance rather than passive recipients of instructor comments.

The concept of feedback literacy has developed rapidly as an independent area of research within higher education. Nieminen and Carless (2023) describe feedback literacy as an emerging framework that extends traditional feedback theories by emphasizing learners' capacities to appreciate, interpret, evaluate, and apply feedback effectively. Similarly, Molloy, Boud, and Henderson (2020) propose a learning-centered framework in which feedback literacy supports students in developing sustainable capabilities for lifelong learning through continuous engagement with evaluative information rather than isolated assessment events.

Researchers have also expanded the theoretical understanding of feedback literacy by examining the multiple factors influencing students' engagement with feedback. Chong (2021) adopts an ecological perspective, arguing that feedback literacy develops through interactions among students, educators, institutional assessment practices, and broader learning environments. This perspective recognizes that students' ability to engage with feedback is shaped not only by individual skills but also by the educational contexts in which feedback is generated and discussed. Consequently, feedback literacy has become increasingly associated with collaborative learning cultures that encourage dialogue, reflection, and shared responsibility for learning.

Another important development concerns the relationship between feedback literacy and learner autonomy. Rather than relying solely on external evaluation, students with strong feedback literacy become capable of monitoring their own learning, evaluating the quality of their academic work, and identifying strategies for continuous improvement. Yan and Carless (2022) emphasize that self-assessment is strengthened through feedback literacy because students learn to integrate external feedback with their own evaluative judgments. Likewise, Yu and Liu (2021) demonstrate that feedback literacy enhances students' academic writing by enabling

them to interpret instructor comments critically and translate feedback into meaningful revisions.

The evolution of feedback literacy therefore reflects a broader transformation in higher education from teacher-centered assessment toward learner-centered educational practice. By positioning students as active participants in feedback processes, feedback literacy provides a comprehensive conceptual foundation for understanding how feedback contributes to sustainable learning, academic development, and lifelong educational capability.

Components of Feedback Literacy

Feedback literacy is widely recognized as a multidimensional capability that enables students to engage effectively with feedback throughout the learning process. Rather than representing a single academic skill, feedback literacy consists of several interconnected components that collectively support learners in interpreting evaluative information, regulating their responses, and applying feedback to improve future performance. Contemporary frameworks consistently emphasize that students must develop cognitive, emotional, and behavioral capacities in order to benefit fully from feedback experiences.

One fundamental component is appreciating feedback. Students must first recognize the educational value of feedback and understand its purpose as a tool for learning rather than merely as justification for grades or evaluation. Appreciating feedback encourages learners to view comments as opportunities for growth and continuous improvement. Molloy, Boud, and Henderson (2020) explain that students who value feedback are more likely to engage actively with evaluative information and demonstrate greater commitment to improving subsequent academic performance. Similarly, Han and Xu (2021) found that students with higher levels of feedback literacy exhibit stronger engagement with instructor feedback because they perceive feedback as an essential resource for learning.

A second component involves making informed judgments about academic work. Feedback-literate students develop the ability to evaluate the quality of their own work and compare it with expected academic standards. This evaluative capability supports independent learning by enabling students to identify strengths, weaknesses, and potential improvements before receiving external feedback. Yan and Carless (2022) argue that self-assessment and feedback literacy operate together because effective self-evaluation requires students to interpret assessment criteria while integrating feedback from multiple sources. Likewise, Yu and Liu (2021) demonstrate that students who develop evaluative judgment improve their ability to revise academic writing and make informed decisions regarding future learning strategies.

Managing affect represents another essential component of feedback literacy. Receiving feedback often involves emotional responses such as disappointment, anxiety, or frustration, which may reduce students' willingness to engage with evaluative information. Feedback literacy therefore includes the ability to regulate

emotional reactions and interpret feedback constructively even when comments identify weaknesses or require substantial revision. Chong (2021) emphasizes that emotional regulation enables students to sustain productive engagement with feedback by reducing defensive responses and encouraging reflective learning.

The final component concerns taking action based on feedback. Feedback becomes educationally meaningful only when students translate evaluative information into concrete improvements in subsequent learning activities. Taking action requires learners to plan revisions, modify learning strategies, monitor progress, and apply previous feedback to future academic tasks. Hoo, Deneen, and Boud (2022) found that self-assessment and peer assessment interventions strengthen students' ability to implement feedback effectively by providing repeated opportunities to practice feedback application within authentic learning contexts.

Collectively, these interconnected components demonstrate that feedback literacy extends beyond understanding instructor comments. It represents a comprehensive learner capability integrating appreciation of feedback, evaluative judgment, emotional regulation, and purposeful action. Developing these components enables students to participate more actively in assessment processes while strengthening their capacity for self-directed and lifelong learning.

Developing Feedback Literacy

The development of feedback literacy requires educational experiences that position students as active participants in assessment rather than passive recipients of instructor comments. Contemporary higher education increasingly recognizes that students develop feedback literacy through repeated engagement with authentic feedback processes involving dialogue, reflection, collaboration, and self-evaluation. Consequently, feedback literacy is viewed as a capability cultivated over time through carefully designed educational practices that encourage learners to interpret, discuss, and apply feedback within meaningful learning contexts.

One widely adopted approach for developing feedback literacy is dialogic feedback. Unlike traditional feedback models that emphasize one-way communication from instructor to student, dialogic feedback encourages reciprocal interaction in which students actively discuss feedback, ask questions, clarify expectations, and negotiate strategies for improvement. This interactive process promotes deeper understanding of assessment criteria while strengthening students' ability to interpret evaluative information. Er, Dimitriadis, and Gašević (2021) propose a collaborative framework in which dialogic peer feedback supports meaningful learning by encouraging communication and shared reflection among learners. Similarly, Wood (2022) found that technology-mediated dialogic peer feedback improves students' willingness to engage with feedback while strengthening feedback uptake and overall feedback literacy.

Peer feedback also plays an important role in developing students' evaluative capabilities. By reviewing the work of classmates and providing constructive

comments, students learn to recognize quality standards, compare different approaches, and develop critical judgment regarding academic performance. Huisman et al. (2019) demonstrated through a meta-analysis that formative peer feedback significantly improves academic writing and learning outcomes in higher education. Likewise, Simonsmeier et al. (2020) reported that peer feedback contributes not only to academic achievement but also to students' academic self-concept by increasing confidence in their ability to evaluate and improve their own work.

Self-assessment further strengthens feedback literacy by encouraging learners to monitor their own progress and identify opportunities for improvement before external evaluation occurs. Rather than relying exclusively on instructor feedback, students who engage in self-assessment become more capable of comparing their performance against academic standards and making independent judgments regarding their learning. Yan and Carless (2022) emphasize that self-assessment functions as an important mechanism for developing feedback literacy because it enables students to integrate internal evaluation with external feedback. Similarly, Arefian (2022) found that self-assessment literacy promotes reflective learning and supports students in becoming more self-directed learners within online educational environments.

Assessment design also influences the development of feedback literacy. Learning activities that incorporate multiple feedback opportunities, iterative revision, peer collaboration, and reflective practice create environments in which students repeatedly engage with evaluative information and progressively strengthen feedback-related capabilities. Han and Xu (2020) found that teacher feedback positively influences the development of peer feedback literacy by modeling effective evaluative practices and encouraging students to participate actively in collaborative feedback processes. Hoo, Deneen, and Boud (2022) similarly demonstrate that integrating self-assessment and peer assessment within course design creates authentic opportunities for students to practice interpreting and applying feedback throughout their learning.

Overall, the literature indicates that feedback literacy develops through sustained participation in dialogic, collaborative, and reflective educational practices rather than through isolated feedback events. Universities that design assessment systems encouraging interaction, reflection, and learner autonomy provide stronger conditions for developing students' long-term capacity to engage effectively with feedback.

Educational Contributions of Feedback Literacy

Feedback literacy contributes to higher education by strengthening students' ability to regulate learning, engage with assessment, and continuously improve academic performance. Rather than viewing feedback as an endpoint of assessment, feedback-literate students treat evaluative information as a resource that informs future learning decisions. This shift transforms feedback into an ongoing learning process that supports independent learning, academic development, and lifelong educational capability.

One important contribution of feedback literacy is the promotion of self-regulated learning. Students who possess strong feedback literacy become more capable of

monitoring their own learning, evaluating academic progress, and adjusting learning strategies in response to feedback. Molloy, Boud, and Henderson (2020) argue that feedback literacy strengthens learner agency by encouraging students to assume greater responsibility for interpreting and using evaluative information. Likewise, Yan and Carless (2022) demonstrate that integrating self-assessment with feedback literacy enables students to develop more accurate evaluative judgments while improving their capacity for independent learning.

Feedback literacy also enhances student engagement with assessment processes. Students who understand the purpose of feedback and appreciate its value are more likely to participate actively in feedback discussions, reflect on instructor comments, and implement suggested improvements. Han and Xu (2021) found that students with higher levels of feedback literacy demonstrate stronger engagement with feedback activities and exhibit greater willingness to revise their work based on evaluative information. Similarly, Winstone, Mathlin, and Nash (2019) reported that structured initiatives designed to develop feedback literacy increase students' confidence in using feedback as an integral component of their learning.

Academic performance represents another important educational outcome associated with feedback literacy. Students who actively interpret and apply feedback are better positioned to improve subsequent assignments, refine academic skills, and achieve higher levels of learning. Yu and Liu (2021) found that feedback literacy significantly enhances students' academic writing by supporting effective interpretation and application of instructor feedback. Furthermore, Simonsmeier et al. (2020) reported that peer feedback contributes to improved academic self-concept, creating positive conditions for sustained academic achievement and continued learning improvement.

Beyond immediate academic outcomes, feedback literacy supports the development of lifelong learning capabilities. The ability to seek, interpret, evaluate, and utilize feedback remains valuable throughout professional practice, where continuous learning and adaptation are essential. Winstone and Carless (2019) argue that feedback processes should be designed to develop learners who can independently engage with evaluative information beyond formal education. Consequently, feedback literacy contributes not only to success within higher education but also to graduates' long-term capacity for reflective practice, professional growth, and continuous learning across diverse career contexts.

Future Perspectives

The continuing evolution of feedback literacy reflects broader transformations in higher education, including digital learning, educational technology, artificial intelligence, and the growing emphasis on sustainable assessment. Rather than viewing feedback as a discrete instructional event, contemporary perspectives increasingly conceptualize feedback as an ongoing learning ecosystem in which students, educators, and technological systems collaboratively support continuous improvement. These developments suggest that future research will extend feedback literacy beyond

traditional classroom practices toward more adaptive, technology-enhanced, and learner-centered educational environments.

One emerging direction concerns the integration of digital feedback into higher education. Online learning platforms, learning management systems, and technology-mediated assessment increasingly provide opportunities for timely, personalized, and interactive feedback that supports students throughout their learning processes. Ryan, Henderson, and Phillips (2019) found that students perceive digital feedback differently from conventional feedback, indicating that the effectiveness of technology-enhanced feedback depends on how learners interpret and engage with various feedback formats. Similarly, Wongvorachan et al. (2022) propose a framework for improving feedback literacy within electronic assessment environments by encouraging students to interact actively with digital feedback rather than simply receiving automated comments.

Artificial intelligence (AI) represents another significant development that is reshaping feedback practices in higher education. AI-supported assessment systems, automated feedback tools, and large language models have expanded opportunities for providing immediate, individualized, and scalable feedback to students. Buckingham Shum et al. (2023) argue that the effective use of automated feedback technologies requires both educators and students to possess appropriate feedback literacy so that technological recommendations can be interpreted critically and applied meaningfully. Likewise, Hooda et al. (2022) highlight the growing role of artificial intelligence in supporting assessment and feedback processes while emphasizing that technological innovation should complement, rather than replace, human judgment and reflective learning. Alqahtani et al. (2023) further suggest that advances in natural language processing and large language models will continue transforming assessment practices by enabling more adaptive and responsive feedback systems.

Another important future direction involves strengthening sustainable assessment practices that prepare students for lifelong learning. Sustainable assessment emphasizes developing learners' capacity to evaluate their own work, seek feedback proactively, and apply evaluative information across future learning and professional contexts. Rather than focusing solely on immediate assessment outcomes, sustainable assessment encourages continuous development of feedback literacy as a transferable capability. This perspective aligns closely with contemporary higher education goals that emphasize learner autonomy, reflective practice, and continuous professional development.

Despite rapid progress, several research gaps remain. Limited evidence exists regarding the long-term development of feedback literacy across different academic disciplines, cultural contexts, and educational systems. Additional research is also needed to examine how students engage with AI-generated feedback, how digital technologies influence feedback uptake, and how institutional assessment cultures shape the development of feedback literacy over time. Furthermore, greater attention

should be given to identifying evidence-based instructional strategies that effectively integrate human interaction with emerging technological innovations.

Overall, future developments suggest that feedback literacy will continue evolving alongside advances in educational technology, assessment design, and learner-centered pedagogy. Higher education institutions that successfully integrate dialogic feedback, sustainable assessment, digital innovation, and artificial intelligence within supportive learning environments will be better positioned to cultivate learners who can actively engage with feedback throughout their academic and professional lives.

3. | RESEARCH METHOD

This study employed a qualitative Systematic Literature Review (SLR) to examine the conceptual development, educational practices, and future directions of feedback literacy in higher education. Rather than evaluating feedback solely as an instructional activity, the review synthesized current evidence regarding feedback literacy as a learner capability that supports students in interpreting, evaluating, and utilizing feedback for continuous learning and academic improvement.

The review followed the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework proposed by Page et al. (2021). The review process consisted of four stages: identification, screening, eligibility assessment, and inclusion of relevant studies. Applying the PRISMA framework ensured methodological transparency, systematic study selection, and comprehensive synthesis of the available literature.

Relevant publications were identified through Scopus, ScienceDirect, SpringerLink, Taylor & Francis Online, Wiley Online Library, ERIC, and Google Scholar. The search strategy combined keywords including *feedback literacy*, *student feedback literacy*, *teacher feedback literacy*, *dialogic feedback*, *peer feedback*, *self-assessment*, *digital feedback*, *artificial intelligence*, *sustainable assessment*, and *higher education*. Only English-language publications published between 2019 and 2023 were included to ensure that the review reflected contemporary developments in feedback literacy research.

The inclusion criteria comprised peer-reviewed journal articles, conference proceedings, scholarly books, book chapters, and systematic literature reviews focusing on feedback literacy and related feedback practices in higher education. Studies examining dialogic feedback, peer assessment, self-assessment, sustainable assessment, digital feedback, AI-supported feedback, and learner engagement with feedback were included. Editorials, opinion papers, duplicate publications, dissertations, and studies conducted outside higher education settings were excluded from the review.

Data were synthesized using a framework-based thematic analysis, allowing the findings to be organized according to the conceptual structure of feedback literacy rather than by individual study outcomes. Five analytical themes emerged: (1) the emergence of feedback literacy, (2) the components of feedback literacy, (3) educational practices supporting feedback literacy, (4) educational contributions of

feedback literacy, and (5) future perspectives. This analytical approach enabled the integration of conceptual, empirical, and technological perspectives within a coherent review framework.

The analytical framework positions feedback literacy as a multidimensional learner capability developed through interactions among students, educators, assessment practices, and learning environments. It recognizes that appreciating feedback, making evaluative judgments, managing emotional responses, and taking informed action are interconnected capabilities that enable students to engage productively with feedback. The framework further acknowledges that dialogic feedback, peer learning, digital technologies, sustainable assessment, and artificial intelligence increasingly shape the future development of feedback literacy within higher education.

4. | RESULTS

The framework-based thematic analysis identified five interconnected themes that describe the conceptual development, implementation, and future evolution of feedback literacy in higher education. The reviewed studies consistently indicate that feedback literacy extends beyond receiving feedback by emphasizing learners' capacity to interpret, evaluate, regulate, and apply evaluative information for continuous academic improvement. Furthermore, the literature demonstrates that feedback literacy is strengthened through collaborative educational practices, learner-centered assessment, and emerging digital technologies that promote sustained engagement with feedback.

The Conceptual Evolution of Feedback Literacy

The reviewed studies demonstrate a significant shift in the conceptualization of feedback within higher education. Earlier research primarily viewed feedback as information transmitted from instructors to students following assessment activities. Contemporary scholarship, however, increasingly recognizes feedback as an interactive learning process requiring active learner participation. This transition reflects broader educational changes that emphasize student agency, reflective learning, and continuous improvement rather than passive reception of instructor comments.

Nieminen and Carless (2023) describe feedback literacy as an emerging concept that extends traditional feedback theory by emphasizing learners' capabilities to engage productively with evaluative information. Similarly, Molloy, Boud, and Henderson (2020) argue that feedback should be understood within a learning-centered framework in which students actively construct meaning from feedback rather than simply receiving instructor evaluations. Winstone and Carless (2019) likewise emphasize that effective feedback processes require educational environments that support learners in interpreting, questioning, and utilizing feedback across multiple learning contexts.

The literature further suggests that feedback literacy has become increasingly associated with learner autonomy and sustainable educational development. Rather than treating feedback as isolated comments linked to individual assessments, contemporary perspectives conceptualize feedback literacy as a transferable capability

supporting lifelong learning and continuous professional development. This conceptual evolution positions students as active partners within assessment processes and redefines feedback as an ongoing component of learning rather than a final stage of evaluation.

Frameworks and Core Components of Feedback Literacy

The reviewed literature consistently identifies feedback literacy as a multidimensional capability composed of several interconnected components that enable meaningful engagement with feedback. Rather than representing a single academic competency, feedback literacy integrates cognitive, emotional, and behavioral processes that collectively support effective learning and continuous improvement.

One recurring framework emphasizes four fundamental dimensions: appreciating feedback, making informed judgments, managing affect, and taking action. Molloy, Boud, and Henderson (2020) explain that appreciating feedback enables students to recognize its educational value and approach evaluative information as an opportunity for learning rather than judgment. Yan and Carless (2022) further demonstrate that making informed judgments strengthens students' capacity for self-assessment by encouraging comparison between personal performance and established academic standards.

Managing emotional responses represents another essential component. Chong (2021) argues that students frequently experience emotional reactions that influence how feedback is interpreted and whether it is ultimately used for improvement. Feedback literacy therefore includes the ability to regulate these emotional responses while maintaining constructive engagement with evaluative information. Finally, taking action transforms feedback into meaningful educational practice by encouraging learners to revise their work, modify learning strategies, and apply previous feedback to future academic tasks. Hoo, Deneen, and Boud (2022) found that repeated engagement with self-assessment and peer assessment strengthens students' ability to implement feedback effectively across different learning situations.

These findings indicate that feedback literacy should be understood as an integrated framework in which cognitive understanding, emotional regulation, evaluative judgment, and purposeful action operate together to support effective learning.

Educational Practices Supporting Feedback Literacy

The reviewed studies demonstrate that feedback literacy develops through educational practices that actively involve students in generating, interpreting, and discussing feedback rather than passively receiving instructor comments. Universities increasingly employ collaborative and learner-centered assessment approaches that encourage students to participate in authentic feedback experiences throughout their academic development.

Dialogic feedback emerged as one of the most effective approaches for strengthening feedback literacy. Unlike traditional feedback models emphasizing one-

way communication, dialogic feedback encourages reciprocal interaction between educators and students, allowing learners to clarify expectations, discuss assessment standards, and negotiate strategies for improvement. Er, Dimitriadis, and Gašević (2021) propose that dialogic feedback creates collaborative learning environments in which students develop deeper understanding of evaluative information. Similarly, Wood (2022) found that technology-mediated dialogic peer feedback significantly improves students' feedback uptake and strengthens overall feedback literacy.

Peer assessment and self-assessment also contribute substantially to feedback literacy development. Huisman et al. (2019) demonstrated that formative peer feedback positively influences academic writing and learning performance by strengthening evaluative judgment. Likewise, Simonsmeier et al. (2020) found that peer feedback improves students' academic self-concept while increasing confidence in evaluating both their own work and that of their peers. These findings indicate that educational practices encouraging collaboration, reflection, and active participation provide effective conditions for developing long-term feedback literacy.

Educational Contributions of Feedback Literacy

The reviewed literature consistently demonstrates that feedback literacy contributes to a wide range of educational outcomes extending beyond improved assessment performance. Students who possess strong feedback literacy are better equipped to engage with learning, regulate their academic progress, and apply evaluative information to future learning situations. Rather than viewing feedback as a conclusion to assessment, feedback-literate students perceive it as a continuous resource that supports reflection, improvement, and lifelong learning.

One of the most significant educational contributions is the enhancement of learner autonomy and self-regulated learning. Students who understand how to interpret and use feedback become increasingly capable of monitoring their own learning, identifying performance gaps, and independently planning strategies for improvement. Yan and Carless (2022) argue that feedback literacy strengthens self-assessment by enabling students to integrate external feedback with their own evaluative judgments, thereby promoting greater independence throughout the learning process. Similarly, Han and Xu (2021) found that students with well-developed feedback literacy demonstrate stronger engagement with feedback activities and are more willing to revise their academic work based on evaluative information.

Feedback literacy also supports higher levels of academic confidence and learner engagement. Simonsmeier et al. (2020) reported that participation in peer feedback activities improves students' academic self-concept by increasing confidence in evaluating academic work and responding constructively to feedback. Likewise, Winstone, Mathlin, and Nash (2019) demonstrated that initiatives designed to develop feedback literacy encourage students to engage more actively with feedback while strengthening their understanding of assessment processes. These findings indicate that

feedback literacy enhances not only academic performance but also students' confidence in managing their own learning.

Another important contribution concerns the development of transferable lifelong learning capabilities. Students who repeatedly engage in reflective feedback practices become better prepared to seek, interpret, and utilize evaluative information beyond formal education. Winstone and Carless (2019) emphasize that higher education should cultivate learners who can independently use feedback throughout their professional careers rather than relying solely on instructor guidance during university study. Consequently, feedback literacy contributes to continuous professional development by strengthening reflective practice, critical thinking, and adaptive learning skills applicable across diverse educational and workplace contexts.

Collectively, the reviewed evidence suggests that feedback literacy functions as a foundational capability supporting learner autonomy, self-regulated learning, academic engagement, reflective practice, and lifelong learning. These educational contributions reinforce the importance of embedding feedback literacy within assessment design and instructional practice throughout higher education.

Emerging Research Directions

The reviewed literature indicates that feedback literacy research is expanding beyond traditional assessment practices toward digitally supported, technology-enhanced, and sustainable feedback ecosystems. As higher education increasingly incorporates digital learning environments and artificial intelligence into teaching and assessment, feedback literacy is evolving to address new forms of learner interaction with evaluative information. These developments suggest that future research will focus not only on improving feedback quality but also on strengthening students' capability to engage effectively with increasingly complex feedback systems.

Digital feedback has become an important area of investigation as universities continue expanding online and blended learning. Technology-mediated feedback enables instructors to provide timely, personalized, and accessible responses while offering students greater flexibility in reviewing and applying evaluative information. Ryan, Henderson, and Phillips (2019) found that students' perceptions of digital feedback vary according to feedback format and delivery method, highlighting the importance of designing digital feedback systems that encourage active engagement rather than passive information consumption. Wongvorachan et al. (2022) similarly propose that electronic assessment environments should intentionally foster feedback literacy by supporting students' interpretation, reflection, and application of digital feedback.

Artificial intelligence represents another emerging direction with significant implications for feedback literacy. Automated feedback systems, intelligent tutoring technologies, and large language models increasingly provide immediate responses that can support student learning at scale. Buckingham Shum et al. (2023) argue that effective use of automated feedback depends on both teacher and student feedback

literacy, ensuring that technological recommendations are interpreted critically and integrated into meaningful learning processes. Hooda et al. (2022) further emphasize that AI-supported assessment has considerable potential to enhance student success by delivering adaptive feedback while preserving opportunities for reflective learning. Likewise, Alqahtani et al. (2023) suggest that advances in artificial intelligence and natural language processing will continue reshaping assessment practices, requiring higher education institutions to prepare students for more technology-rich feedback environments.

The literature also highlights sustainable assessment as an important future direction. Rather than emphasizing feedback for immediate assignment improvement alone, sustainable assessment encourages learners to develop long-term evaluative capabilities that remain valuable throughout academic and professional life. This perspective aligns closely with feedback literacy by promoting learner autonomy, reflective practice, and continuous self-improvement beyond individual courses or assessment tasks.

Despite substantial progress, several research gaps remain. Limited evidence exists regarding the long-term development of feedback literacy across disciplines, cultural contexts, and diverse educational systems. Additional investigation is needed to understand how students engage with AI-generated feedback, how digital technologies influence feedback uptake, and how institutional assessment cultures support or hinder the development of feedback literacy. Addressing these issues will contribute to more comprehensive models of feedback that integrate human interaction, educational technology, and sustainable learning.

Overall, the thematic synthesis demonstrates that feedback literacy has evolved into a comprehensive learner capability that extends beyond traditional assessment practices. Future developments are expected to emphasize digital innovation, artificial intelligence, sustainable assessment, and learner-centered educational design, positioning feedback literacy as a critical foundation for continuous learning in higher education.

5. | DISCUSSION

The findings of this review demonstrate that feedback literacy has emerged as a transformative concept within higher education, fundamentally reshaping how feedback is understood and utilized in learning. Rather than defining feedback as information transmitted from instructors to students, contemporary research increasingly conceptualizes feedback as an interactive process in which learners actively interpret, evaluate, and apply evaluative information to improve future performance. This conceptual shift reflects broader changes in higher education that prioritize learner agency, self-regulated learning, and sustainable educational development.

A central insight emerging from this review is that effective feedback depends not only on the quality of instructor comments but also on students' capability to engage

meaningfully with evaluative information. Feedback literacy therefore expands the focus of assessment from improving feedback delivery toward developing learners who can appreciate feedback, make informed judgments, regulate emotional responses, and translate feedback into purposeful action. This learner-centered perspective recognizes students as active partners in assessment and highlights feedback literacy as a critical educational capability rather than an isolated assessment skill.

The review further demonstrates that feedback literacy develops most effectively within collaborative learning environments that encourage dialogue, reflection, and shared responsibility for learning. Educational practices such as dialogic feedback, peer assessment, self-assessment, and reflective activities provide authentic opportunities for students to strengthen evaluative judgment while becoming more confident in using feedback for continuous improvement. Rather than relying exclusively on instructor feedback, these practices encourage students to engage with multiple feedback sources and develop independent learning strategies that remain valuable beyond formal education.

Another important finding concerns the contribution of feedback literacy to learner autonomy and lifelong learning. Students with well-developed feedback literacy become increasingly capable of monitoring their own academic progress, identifying learning needs, and adapting their learning strategies without depending solely on external evaluation. This capability aligns closely with the objectives of higher education, which seek to prepare graduates for continuous professional development and lifelong learning. Consequently, feedback literacy represents an important foundation for developing reflective practitioners who can effectively utilize evaluative information throughout their academic and professional careers.

The review also highlights the growing influence of digital technologies and artificial intelligence on feedback practices. Technology-enhanced feedback systems provide opportunities for timely, personalized, and scalable feedback while simultaneously creating new challenges regarding students' ability to interpret automated feedback critically. Artificial intelligence should therefore be viewed as a tool that complements human interaction rather than replacing the reflective dialogue that remains essential for meaningful learning. Developing digital feedback literacy will become increasingly important as higher education institutions continue integrating AI-supported assessment and learning analytics into teaching and learning processes.

Despite substantial progress, several challenges remain in advancing feedback literacy across higher education. Variations in institutional assessment culture, disciplinary expectations, student readiness, and technological infrastructure continue to influence how feedback literacy develops within different educational contexts. In addition, limited longitudinal research has examined how feedback literacy evolves throughout students' academic journeys or how emerging technologies influence long-term feedback engagement. Addressing these challenges will require continued collaboration among educators, researchers, instructional designers, and institutional

leaders to create assessment environments that consistently support active learner participation.

Overall, the findings suggest that feedback literacy should be regarded as a strategic educational capability that strengthens assessment quality, learner autonomy, and sustainable learning. Embedding feedback literacy within curriculum design, assessment practices, and educational technology will enable higher education institutions to cultivate students who are capable of using feedback as a continuous resource for academic achievement, professional growth, and lifelong learning.

6. | CONCLUSION

This study examined feedback literacy in higher education through a Systematic Literature Review (SLR) using the PRISMA 2020 framework. By synthesizing studies published between 2019 and 2023, the review explored the conceptual evolution of feedback literacy, its core components, educational practices supporting its development, its contributions to student learning, and emerging directions for future research.

The findings indicate that feedback literacy has evolved from a narrow focus on receiving instructor feedback toward a comprehensive learner capability encompassing appreciation of feedback, evaluative judgment, emotional regulation, and purposeful action. Educational practices such as dialogic feedback, peer assessment, self-assessment, and reflective learning play important roles in strengthening students' ability to engage effectively with evaluative information. These capabilities contribute to greater learner autonomy, stronger self-regulated learning, increased academic engagement, improved performance, and the development of lifelong learning skills.

The review also demonstrates that technological innovation is reshaping feedback practices in higher education. Digital feedback systems, learning analytics, and artificial intelligence create new opportunities for delivering timely and personalized feedback while simultaneously requiring students and educators to develop appropriate digital feedback literacy. Future assessment practices should therefore integrate technological innovation with meaningful human interaction to ensure that feedback continues to support reflective and sustainable learning.

Overall, feedback literacy represents a fundamental capability for contemporary higher education because it enables students to become active participants in their own learning rather than passive recipients of assessment information. Higher education institutions should continue embedding feedback literacy into curriculum design, assessment strategies, faculty development, and digital learning environments to strengthen learner agency and promote sustainable educational development. Future research should further investigate cross-cultural implementation, discipline-specific practices, longitudinal development of feedback literacy, and the effective integration of artificial intelligence into learner-centered feedback processes.

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Declaration of Conflicting Interests

The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement

Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement

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

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