

Exploring Emotional Regulation and Metaevaluation through Student Reflections on Feedback in Higher Education

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Abstract

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It is a widely acknowledged fact that higher education students are required to manage a multitude of challenging situations, including emotionally charged scenarios, academic stress, and personal growth. However, it is equally important to recognise that these students often lack sufficient tools with which to regulate their emotions and cognitive processes. The concept of emotion regulation is broad, encompassing all extrinsic and intrinsic processes that are responsible for the monitoring, evaluation, and modification of emotional reactions. This theory posits that changes occur not only in the intensity or duration of primary emotions, but also in related psychological processes such as memory and social interaction. In addition, regulation can target secondary emotions that reflect an individual's reactions to primary emotional experiences. The field of emotional education research in higher education has identified emotional intelligence as a pivotal factor in attaining professional success, academic achievement, and self-knowledge. It is needed to note that emotional regulation strategies must be adapted to individuals' characteristics and motivations, with regulatory processes becoming more intrinsic and deliberate as individuals mature. Recent studies have indicated that students often experience a wide range of emotions in evaluative and feedback situations, including exams and performance reviews. The emotional episodes that characterise this condition necessitate regulatory strategies that are often unconscious but nevertheless essential for effective feedback processing. The present study posits the hypothesis that reflective journaling can facilitate purposeful, internal emotional regulation, thereby supporting emotional intelligence and academic well-being. The study further proposes that feedback and evaluation methods should be emotionally conscious, and regulation oriented.

1. Introduction

Emotion regulation involves employing behavioral and cognitive strategies to alter the nature, intensity, duration, or expression of an emotional response (Baumeister et al., 2007). Emotion regulation refers to the internal and external mechanisms individuals use to monitor, assess, and adjust their emotional responses—particularly in terms of intensity, duration, and recovery—in ways that support personal goals and adaptive functioning (Thomas et al., 2019). These processes are essential for navigating complex social and academic environments, especially when individuals face emotionally charged situations such as receiving feedback, experiencing failure, or managing performance pressure.

From a theoretical perspective, emotion regulation acts as a bridge between individual motivations and broader social influences. It reflects not only a person's psychological goals but also the effects of parental modeling, cultural norms, social values, and

environmental expectations (Thompson & Virmani, 2012). These regulatory patterns shape the ways individuals express emotion and interpret emotional cues, contributing to both their uniqueness and their shared emotional experiences within specific cultural or social groups (López González et al., 2025).

On a practical level, understanding how emotion regulation develops and functions is necessary in the design of effective interventions. Difficulties in emotional regulation have been consistently linked to a range of psychological and interpersonal challenges—including depression, anxiety, impulsivity, aggression, and difficulties in building healthy relationships (Kanwal & Kazmi, 2022). Thus, by promoting emotional awareness and teaching context-sensitive regulation strategies, educators and mental health professionals can support resilience, wellbeing, and self-efficacy from childhood through adulthood (Muenchhausen et al., 2021).



In the context of higher education, this has immediate relevance. Students are often required to navigate high-stress environments, cope with complex feedback, and regulate emotional responses to academic setbacks or interpersonal dynamics (Abdelrahman et al., 2025). Helping students develop flexible emotion regulation skills—rooted in self-awareness and social understanding (Flores-Kanter et al., 2021)—can enhance not only their academic performance but also their mental health, motivation, and long-term personal development (Baghdadi & Haghighat, 2024).

2. Emotional Regulation in Academic Contexts

Academic engagement in higher education is a contextually embedded and dynamic construct, influenced by a complex interplay of personal, institutional, and socio-cultural factors (Hiver et al., 2024). While students' engagement may fluctuate across different learning stages, university learners face unique challenges and opportunities that shape their academic involvement. Engagement is not a static trait—it evolves in response to developmental trajectories, learning environments, peer interactions, task design, and institutional culture (Appleton et al., 2008).

Research (Fredricks et al., 2004) emphasizes that optimal academic engagement arises when both intrapersonal resources (such as self-regulation, emotional resilience, and motivation) and supportive contextual conditions (such as meaningful feedback, instructor presence, and academic autonomy) are in place. However, prior findings have noted that engagement can decline over time, particularly as learners transition between educational levels and encounter increased academic pressure, cognitive demands, and a perceived drop-in individualized support (Wang & Hofkens, 2020).

Recent studies challenge this narrative by suggesting that higher education students may display stronger engagement patterns than their high school counterparts, particularly when learning becomes more self-directed and aligned with personal interests (Tantrarungroj & Suwannathachote, 2012). This could be linked to students' growing capacity for emotional regulation, strategic learning, and their increasing ability to reflect on feedback—especially in environments that value formative assessment and reflective practices (Santos & Castro, 2021).

Emotional regulation has been demonstrated to play a pivotal role in shaping how students experience, respond to, and ultimately succeed in academic

environments. Within the domain of higher education, students are routinely confronted with a multitude of stressors. These include pressure to perform, constraints on time, the phenomenon of peer comparison, and frequent exposure to evaluation and feedback. These challenges demand not only cognitive skills, but also affective flexibility, defined as the ability to monitor, manage, and adapt emotional responses in real-time to support goal-directed behaviour.

Drawing on Gross and Thompson's (2007) framework to explore the concept of emotional regulation, which is defined as the process of modifying the intensity, duration, or expression of emotional experiences through internal (e.g. self-talk, reappraisal, or mindfulness) and external (e.g. seeking social support or adjusting the learning environment) processes. In academic settings, such regulatory measures have been demonstrated to exert a substantial influence on students' motivation levels, their capacity for perseverance, and their aptitude for learning from both triumph and defeat.

Emotional regulation is defined as the range of internal and external processes that individuals employ to influence their emotional experiences in order to achieve desired outcomes. It is evident that internal strategies may encompass practices such as self-talk (Muenchhausen et al., 2021), which facilitates a more constructive reinterpretation of challenges ("I can learn from this mistake" rather than "I always fail"), cognitive reappraisal, whereby students modify their perception of a stressful academic event (e.g., viewing a poor grade as a temporary setback rather than a personal failure), and mindfulness, which fosters non-judgemental awareness of emotional states and cultivates acceptance and focus (Davis, 2017). These techniques have been shown to assist students in the management of emotions, particularly during periods of heightened pressure within the academic environment, such as during examinations, group presentations, or the receipt of evaluative feedback (Aedo & Millafilo, 2022).

Concurrently, *external strategies*, such as seeking social support from peers or instructors, utilising academic resources, or adapting physical or social learning environments (e.g., opting for quieter study spaces or participating in collaborative learning) (Biasutti, 2018) play an equally relevant role in emotional regulation. These strategies enable students to mitigate the emotional repercussions of academic

stressors by modifying their surroundings or interpersonal contexts (Skinner et al., 2016). This modification can offer emotional reassurance, practical assistance, or even novel perspectives.

It is a commonly held view that university students frequently encounter intricate emotional landscapes, characterised by the juxtaposition of sentiments such as elation regarding autonomy and trepidation concerning performance. Concurrently, their intellectual curiosity may be thwarted by apprehension regarding judgement. Consequently, emotional regulation encompasses not only the reduction of negative affect, but also the constructive harnessing of emotions to enhance engagement and cultivate resilience. For instance, the ability to reframe a critical piece of feedback as an opportunity for growth, rather than as a threat to self-worth, is a powerful skill that supports both academic and personal development.

Within the domain of higher education, where students are expected to demonstrate considerable levels of independence, adaptability, and cognitive stamina, the capacity to regulate emotions effectively emerges as a pivotal factor in attaining academic success. The influence of motivation is evident in the ability to sustain focus and aspiration, even in the face of adversity. Furthermore, the efficacy of this approach extends to the cultivation of persistence, enabling individuals to overcome challenges rather than succumbing to withdrawal or procrastination. It is imperative to acknowledge the pivotal role that students' emotional regulation plays in shaping their interpretation and response to academic feedback. Those who possess strong emotional regulation skills are better equipped to transform critical feedback into a catalyst for growth, rather than perceiving it as a threat to their self-worth or competence.

Also, emotional regulation has been demonstrated to facilitate the capacity to learn from both success and failure (Jackson & Bridgstock, 2018). It has been demonstrated that students who are able to moderate their emotional responses, whether positive or negative, are more likely to engage in reflective thinking, make well-informed decisions, and maintain concentration in a variety of academic settings (Wang & Hofkens, 2020). In the absence of such regulation, strong emotional reactions – such as anxiety, shame, or overconfidence – have the potential to distort perception, reduce cognitive flexibility, and ultimately impair learning (Baumeister et al., 2007).

Furthermore, emotional regulation is closely intertwined with metacognitive and self-regulatory

competencies (May et al., 2020). When students engage in reflection on their emotional responses, particularly in the context of academic setbacks, they cultivate a heightened awareness of their emotions (Baghdadi & Haghghat, 2024). This, in turn, facilitates the identification of triggers, the selection of suitable strategies, and the adaptation of their behaviours accordingly. This is especially pertinent in environments where feedback is plentiful, as emotional responses can either facilitate or impede learning. Research has demonstrated that students who are able to regulate their emotions are more likely to engage in deep learning strategies, maintain academic motivation, and experience lower levels of burnout (Murray & Cannon, 2021). Emotional regulation is not a fixed trait; rather, it is a malleable skill that can be cultivated through intentional training (Baghdadi & Haghghat, 2024). Such training can be provided through mindfulness-based interventions, self-reflection exercises, and structured opportunities for metaevaluation (Stufflebeam, 2001).

3. Types of Feedback, Emotional Responses, and Coping in Higher Education

Within the domain of higher education, feedback assumes a significance that extends beyond its role in assessment; rather, it constitutes a pivotal component of the learning process, steering students towards enhancement of their learning and the attainment of a more profound comprehension. Nevertheless, feedback has been demonstrated to function as an emotional catalyst, capable of eliciting a broad spectrum of responses contingent on its form, tone, timing, and clarity. For a considerable number of students, particularly those encountering augmented autonomy and academic pressure, feedback has the capacity to influence not only academic performance but also self-perception, motivation, and emotional well-being.

Feedback in higher education can be categorised broadly as *formative* or *summative*. Each of these serves distinct yet complementary purposes in the learning process.

Formative feedback is typically characterised by its ongoing and developmental nature and is provided during the learning experience with the primary aim of enhancing student understanding and guiding improvement. The objective of the programme is to provide students with information regarding their academic progress, to clarify expectations, and to suggest actionable steps that they can take to improve their performance. This form of feedback is frequently

characterised by its dialogic nature and personalisation, aiding students in the identification of their strengths, the correction of misunderstandings, and the cultivation of confidence through constructive support (Zhang et al., 2022; Zhang & He, 2024). Examples of such feedback mechanisms include comments on drafts, peer feedback sessions, and in-class formative assessments.

Alternatively, *summative feedback* is typically issued at the conclusion of an instructional period or unit, with the purpose of evaluating the extent to which learning objectives have been achieved. This evaluation is typically more subjective in nature, often manifesting as grades, scores, or final remarks, and contributes to the overall assessment of student achievement. While summative feedback can motivate students by signalling accomplishment or areas needing further development, it can also provoke anxiety or disengagement if not framed with clarity and fairness (Truax, 2018).

In higher education, the balance and integration of both formative and summative feedback is significant to advancing not only academic success but also emotional resilience and self-regulated learning. When employed effectively, these two forms of feedback do not operate in isolation but rather complement each other. Formative feedback promotes learning for assessment, while summative feedback reflects learning as assessment.

Within the context of higher education, where students may already be subject to considerable academic pressure and self-comparisons, substandard feedback has the potential to exacerbate feelings of failure or impostor syndrome (Chandra et al., 2019; Chatterjee, 2024; LaDonna et al., 2023). Equally, well-timed, respectful feedback that acknowledges effort while suggesting pathways for growth can act as an emotional regulator, reinforcing resilience and autonomy (López González et al., 2025).

In response to emotionally charged feedback, students utilise a variety of coping strategies. These responses may be classified as either adaptive or maladaptive. Adaptive responses may include reflection, planning, or seeking clarification, while maladaptive responses may involve avoidance, self-blaming, or minimising the value of the feedback. It is important to note that emotional coping is closely associated with emotion regulation skills. For instance:

- A student who engages in cognitive reappraisal may interpret critical feedback as an opportunity for

personal growth rather than perceiving it as a personal failure (Zhu et al., 2024).

- Mindfulness-based strategies have been shown to facilitate students' observation of their emotional reactions without judgement, thereby reducing the likelihood of reactive disengagement (Jentsch & Wolf, 2020).

- The seeking of assistance, for example through the discussion of feedback with a professor or peers, has been demonstrated to engender perspective and social support (Jefferies et al., 2023).

These emotion regulation strategies play a critical role in transforming feedback into learning fuel rather than emotional friction. However, there is often a paucity of instruction regarding the processing of feedback and the management of the emotions it engenders. This lacuna has the potential to compromise the formative capacity of assessment in higher education.

4. Metaevaluation: Assessment of the Assessment

Scriven (2009) proposed meta-evaluation as a distinct specialty of evaluation, the purpose of which is to assess evaluation in order to support its benefits. Accordingly, meta-evaluation is expected to provide a valid procedure that seeks to highlight especially important and questionable results (Eugenio-Gozalbo et al., 2022).

Metaevaluation is a pertinent tool for the assessment of teacher evaluation programmes, as it facilitates a comprehensive understanding of the quality of the evaluations and enables a more profound exploration of their development (Harnar et al., 2020). It is important to note that the notion of meta-evaluation is not a recent innovation; however, the application of meta-evaluation processes to teacher evaluation programs is a recent development. The publication of meta-evaluation designs is limited due to the scarcity of detailed analyses of the actual challenges encountered in the evaluation of teaching practice, as well as due to the absence of organised explanations of the available procedures and tools for meta-evaluation. In this line, there is a necessity to generate and examine studies that contribute to the consolidation of scientific knowledge on meta-evaluation processes in teaching evaluation in higher education.

From a theoretical perspective, metaevaluation aligns closely with constructivist and experiential learning models (e.g., Dewey, Kolb), which emphasise the importance of reflecting on one's experiences to generate deeper understanding. In a similar manner,

students profit from metacognitive strategies that enable them to monitor and adjust their own learning. Likewise, educators and institutions benefit from critically examining the structures and processes of assessment to ensure that these are meaningful, equitable, and conducive to student growth. In practical terms, metaevaluation plays a necessary role in enhancing the transparency, fairness, and formative value of assessment systems (Panadero & Jonsson, 2013). It is intended to encourage institutions and instructors to interrogate questions such as:

- *Are our assessments aligned with intended learning outcomes?*
- *Do students understand the criteria and feel that feedback supports their development?*
- *Are grading practices consistent and free from bias?*
- *How do students emotionally and cognitively respond to assessment feedback?*

Metaevaluation establishes a valuable space for student voice and agency, particularly when embedded in reflective learning environments where learners are encouraged to think deeply about their learning processes. By inviting students to evaluate their own performance and the relevance, clarity, and impact of the feedback they receive, educators can affect a shift in the power dynamics of assessment. It is evident that students are no longer considered passive recipients of evaluation; instead, they are regarded as active participants who contribute to the shaping of the assessment discourse itself. This shift is closely aligned with the development of self-reflection, a metacognitive skill that enables students to examine their thoughts, feelings, and learning strategies in relation to academic tasks. It is suggested that students should be provided with structured opportunities to reflect, for example in the form of learning journals, feedback logs or self-evaluation forms (Alam, 2022). Such opportunities will allow students to begin to connect their emotional responses to feedback with their broader learning trajectories (Al-Abyadh & Abdel Azeem, 2022). For instance, they may contemplate the underlying reasons why a particular piece of feedback evoked feelings of frustration or motivation, or how their interpretation of the assessment criteria influenced the level of effort they invested in each task.

5. Research methodology

The study was based on qualitative analysis of responses written by students in a reflective journal

format, collected over a determined period. The data were analyzed through inductive thematic coding, which allowed the identification of emergent categories of learning and experiences authentically expressed by the participants.

The present study was conducted among a group of 33 students, from various academic fields, who participated in a sustained reflective journaling exercise. The purpose of this activity was to develop self-reflection, self-knowledge, integration of experiential learning and strengthening psychological and relational well-being.

Through narrative analysis of the journals, we aimed to understand what types of learning emerge from the activity of daily personal reflection and how these manifests themselves academically, emotionally and relationally.

6. Results

The analysis of the 126 journal entries allowed the organization of reflective learning into the following thematic categories (merging categories of learning and personal reflections):

6.1. Emotional and relational awareness

Students expressed a high degree of awareness of the emotional impact that interpersonal relationships have on their well-being:

- *The importance of constructive discussions:* "I noticed the positive impact of discussions with my colleagues... positive social interactions play an essential role in my mental state."
- *Empathy and active listening:* "The presence of a calm person next to an anxious person makes a difference. This taught me to keep my balance."
- *Support and belonging:* "A simple outing with my girlfriend made me feel seen and balanced."
- *Acceptance of others' boundaries:* "I understood that the right moment is different for everyone."

6.2. Personal development and self-knowledge

Personal reflections brought to the forefront the need for balance, organization, and the valorization of one's own resources:

- *Valorization of time and rest:* "I remembered the importance of rest so that I don't burn out." / "I learned how precious time is and how good it is to spend it with loved ones."

- *Acceptance of one's own limits:* "I can't create a drawing... I'm glad that technology exists!" / "Cleaning makes me feel productive."
- *The power of personal decisions:* "I realized that I just have to get to work and with the right environment I can achieve a lot."
- *The role of music in regulating emotions:* "Musical rhythms help me in different ways: for intellectual activities I prefer the piano."

6.3. Academic Reflections and Knowledge Integration

Students clearly articulated aspects of formal learning and the application of knowledge to everyday life:

- *Recognizing academic progress:* "The seminars helped me improve my critical thinking and better understand the legal process."
- *Integrating knowledge from personal experiences:* "I learned about sleep patterns and how they influence the hormones ghrelin and leptin."
- *Understanding complex processes:* "Relapses are part of the recovery process for addiction – they don't mean failure, they're part of the process."
- *Connecting learning to personal life:* "I learned more about mining engineering from my uncle... and I realized how lucky I am to have an involved family."

6.4. Values, Gratitude, and Personal Ethics

Students often reflected on the values that guide their lives:

- *Patience and balance:* "You have to be patient with all things... everything has its time."
- *The importance of parents and gratitude:* "I learned to appreciate my parents' care and efforts more."
- *Appreciation of simplicity and authentic moments:* "I learned that simple activities, like cooking or music, can be valuable refuges."
- *Cooperation and collective responsibility:* "I learned how important cooperation is for an event to go well – like Christmas."

6.5. Self-confidence and incremental progress

Several reflections focused on small achievements and constant progress:

- *Autonomy and personal fulfillment:* "I made the pretzel recipe by myself – now I can add it to my list."

- *Game and experiential learning:* "Playing my favourite game made me better every day – it was a small personal victory."

Validation of effort: "I don't know if I learned anything new today, but I know I enjoyed meeting someone dear."

7. Conclusions

By focusing on the formative dimension, it highlights the potential of feedback to guide future learning and foster reflective practices. Students come to see feedback not as a final verdict but as a constructive tool that supports their continuous improvement.

When students are invited to reflect on the clarity, usefulness, and impact of feedback, educators gain valuable insights into how their evaluation practices are received. This reflective loop enables instructors to adjust teaching strategies and interventions, making instruction more responsive and aligned with learner needs.

A significant finding was the inconsistency in students' understanding of when and how to apply emotion regulation strategies, emphasizing the need for a more dynamic and contextual approach. The data also underscored a general lack of metaevaluative awareness; students often engaged with feedback passively, without reflecting on the evaluation process itself or their role within it.

The findings suggest that reflective journaling is not only a pedagogical instrument, but also a significant conduit for self-knowledge, personal validation, and the integration of learning in a genuine and human manner. It was evident that students had the capacity to establish a correlation between their daily experiences and the values, emotions, and academic knowledge they had acquired, thereby contributing to a holistic learning process.

Educational implications:

- The promotion of systematic reflection as a recurring practice within the university curriculum is of paramount importance.
- The utilisation of journals as a medium for fostering metacognition, emotional balance, and social cohesion.
- The integration of personal and professional learning is a pedagogical approach that aims to cultivate autonomous and conscious students.

By ensuring transparency, respect, and fairness, it builds trust in the evaluation process. Students are more likely to engage meaningfully with feedback when they feel respected and included in the process.

Meta-evaluation in higher education is more than an academic exercise—it is a commitment to reflective, student-centered, and ethically sound education. By turning assessment back on itself and opening space for dialogue and co-construction, it transforms evaluation into a process of learning, growth, and shared accountability. In doing so, it not only improves the quality of assessment but also enriches the entire educational experience.

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