



Double Blind Peer Review

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ABSTRACT

The risk society demands adaptive competencies grounded in the development of balanced evaluative habits. Within this framework, rigorous and reflective assessment—understood as a formative tool—may help regulate both learning and teaching. Feedback becomes a key dispositive for enhancing performance and fostering self-regulation, thereby supporting Deweyan adaptation. The promotion of self-, peer-, and internal feedback may contribute to improved learning outcomes and overall well-being.

La società del rischio richiede competenze adattive fondate sullo sviluppo di abitudini valutative equilibrate. Una valutazione rigorosa e riflessiva – intesa come strumento formativo – potrebbe dunque regolare sia l'apprendimento sia l'insegnamento. Il feedback è un dispositivo chiave per migliorare la performance e promuovere l'autoregolazione, sostenendo l'adattamento di matrice deweyana. Promuovere il feedback autovalutativo, tra pari e interno, potrebbe favorire apprendimento e benessere.

KEYWORDS

Risk society, adaptive competences, assessment, guidance, feedback
Società del rischio, competenze adattive, valutazione, orientamento, feedback

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If students generate feedback by making comparisons against comments, why should comments be the only comparator? (Nicol, 2020)

Introduction

In liquid modernity, the indeterminacy of experience seems to be increasing. It is not difficult to imagine the shadow of Thanatos stretching over the individual, over nations, and over the human species as a whole. A new equilibrium between the human being and their environment - both natural and social - appears to be an inescapable necessity

With perhaps an excess of (pragmatist) optimism, we may attempt to assign such weight to adaptive competence: “the ability to apply meaningfully learned knowledge and skills flexibly and creatively in a variety of contexts” (de Corte, 2012, p. 33). A linguistic formulation that echoes the tenor of our own Key Competences for Lifelong Learning. Within this framework, once independence from subjugating scholastic dispositives has been attained, assessment might acquire substantive meaning and become vital. As a constitutive element of adaptive competence, we may conceive of it as a necessary - though by no means sufficient - instrument through which the human being might strive to establish a new equilibrium with their environment.

On one front, indeed, it contributes to the autonomous regulation of any plan of action. Once the material means have been arranged in accordance with an end-in-view, evaluation enables the governance of processes with the necessary flexibility, thereby increasing the likelihood of bringing the course of action to a fruitful conclusion.

On the other front, a complex set of evaluations likely precedes the decision to act. Within these acts, cognitive and emotional components appear to transact. This intricate dynamic enables individuals to ascribe a positive or negative meaning to the task, to perceive themselves as either equal or unequal to the challenge, and to estimate the likelihood of future success in light of past experience. These processes are likely to exert an influence on an individual’s motivation to engage in action.

Evaluative acts, therefore, seem to pervade both self-determination and self-regulation processes.

Formal learning contexts - such as schooling, vocational training, and certain adult education services - can contribute significantly to the development of this evaluative capacity. Their impact will be effective to the extent that the evaluative act is rendered independent of the administrative necessity to assign a grade. In other words, to the extent that assessment is primarily regarded as a means of regulating teaching and learning processes. The interpretive framework we adopt is, therefore, that of *formative assessment*, which Black and Wiliam (1998, p. 140) define in the following terms: «We use the general term assessment to refer to all those activities undertaken by teachers - and by their students in assessing themselves - that provide information to be used as feedback to modify teaching and learning activities» (p. 140).

With the aim of defining more precisely the properties of this assessment dispositive, the Assessment Reform Group (1999) proposed an alternative linguistic formulation that has gained wide acceptance: *assessment for learning*.

Within it, feedback assumes a central role. In its various forms, the average effect it exerts on learning is considerable (the average effect size is 0.54 – Hattie, 2023, p. 320). Our hypothesis is that, within learning processes, the potential of feedback can be fully realised when teachers are familiar with its properties, have identified the conditions that enhance its effectiveness, and adopt as an educational aim the transformation of feedback into an internal disposition.

1. Feedback in the educational relationship: a formative communicative act

1.1. Feedback as a communicative act in the educational relationship

In the contemporary educational context, which is experiencing the need for a shift from a society of risk to a society of responsibility (Beck, 1992), feedback seems to play a central role, going beyond its evaluative function to take shape as a communicative (formative) and relational act. It affects the construction of meaning, the learner's awareness and the quality of the educational relationship. In complex educational environments, marked by multimodality and mobility, it does not seem functional to rely on an implicit didactic contract (Brousseau, 1986) that presupposes a learner capable of decoding teaching and, above all, learning processes and their outcomes by himself.

Feedback should therefore fit into a dynamic network of interactions between teacher, students, and context, going beyond the simple “give/receive feedback” sequence (Grion & Tino, 2018). It is influenced by and modifies the environment in which it takes place, activating generative processes that support knowledge construction and the development of self-regulatory skills (Nicol, 2018).

This systemic view of feedback also considers affordances of the environment (Norman, 1997) and semantic and semiotic constraints (Greimas, 1982), recognizing its multimodal and contextual value (Durand, 2017; Bezemer et al., 2012). In summary, we hypothesize that feedback is configured as a formative dispositive capable of promoting engagement, metacognition, autonomous organization, and deep learning, becoming a fundamental tool for supporting and guiding learner growth (Mannese, 2023; Rossi et al., 2018, Zimbardo & Boyd 2009)

1.2. The probable conditions of effectiveness of feedback

To be effective, it is likely that feedback must take on specific characteristics that make it an integral part of the educational relationship.

Dialogicity, bidirectionality: feedback is not just transmission, but reflective interaction between educator and educand, who co-construct meaning (Nicol, 2010; Grion & Serbati, 2019). When shared in discursive and adaptive contexts, it fosters engagement and the development of self-regulatory strategies.

Contextualization and specificity: to be useful, feedback must relate to concrete tasks, building on the affordances of the environment and avoiding generic judgments. Task- and process-oriented feedback has greater impact than self-centered feedback, which is less effective (Hattie & Timperley, 2007).

Timeliness and continuity: it is most effective when provided in a timely manner, integrated into the training. Impact is greatest when feedback is continuous, not occasional (Bevilacqua, 2023; Hattie, 2023).

Multimodality: leveraging multiple modalities (verbal, written, visual) makes feedback more accessible and meaningful, especially in complex contexts (Bezemer & Kress, 2012).

Adaptability: truly formative feedback must be personalized, responding to learners' needs and characteristics (Grion & Serbati, 2019).

Empathy and management of asymmetry: in asymmetric educational contexts, especially with fragile subjects, feedback must be ethical, sensitive and inclusive, valuing listening and dialogue (Portera, 2013).

Valuing error: error should be interpreted as a generative opportunity, fostering the construction of a positive classroom climate and self-efficacy (Hattie, 2023; Hattie & Clarke, 2019).

In sum, effective feedback is probably not an isolated act, but a systemic, situated and transformative process that supports the personal and professional development of educands, accompanying them on their journey of learning and orientation. Finally, the transformative function of feedback appears to emerge powerfully in cross-cultural or asymmetrical educational contexts. Here, if it is contextualized, relational, and sensitive, it can promote equity, participation, and empowerment (Grion & Tino, 2018; Portera, 2013).

1.3. Error as a generative lever and evaluative thinking

In the educational relationship, error is no longer seen as failure, but as a learning opportunity. Hattie (2023, p. 212) asserts that valuing error is a crucial element in creating a positive, growth-oriented environment: Learners must be able to perceive error as a step toward new understanding, rather than as a judgment on their person—a “MILKSTAKE” (Misunderstanding, Insight, Learning, Knowledge-building, Strategy, Transformation, Application, Katalyst, Evolution), that is, a source of nourishment for their development.

Hattie and Clarke (2019, p. 51) propose strategies to normalize and celebrate error, through practices such as collective analysis of common errors and valuing engagement in cognitive effort. These practices could reinforce self-efficacy, stimulate motivation, and promote a generative classroom climate that somehow paves the way by facilitating learner development (Hattie 2023).

In parallel, evaluative thinking (evaluative thinking) represents a strategic and reflective way of thinking that guides educational action. Hattie (2023, pp. 55-56) defines it as the ability to critically evaluate the impact of educational practices, formulate informed decisions, and continually update strategies based on data and feedback. This reflective approach cannot fail to consider the risks and possibilities of certain effects of the act of evaluating, think of the stereotype effect, Pygmalion, etc. (Hattie, 2023; Benvenuto, 2003).

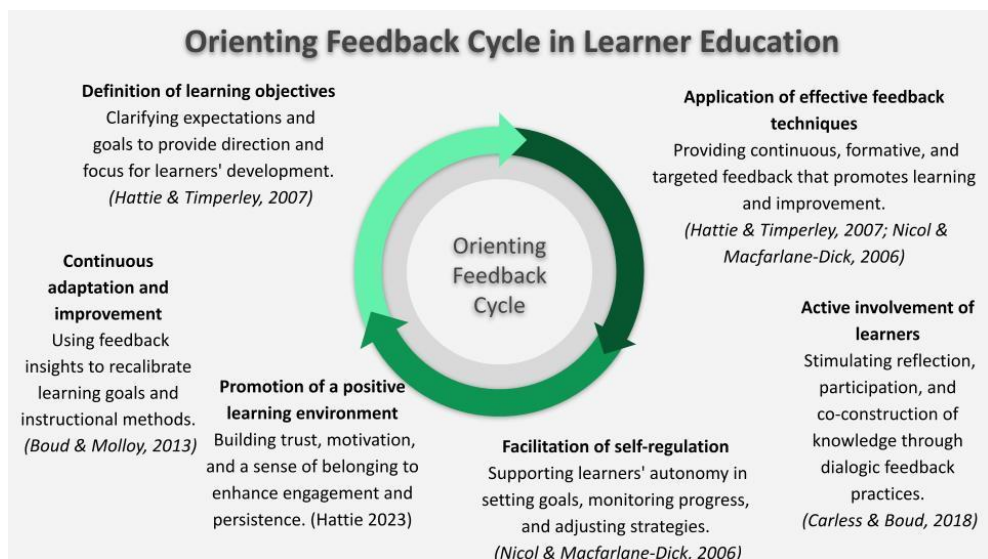


Figure 1. The Circle of Guidance Feedback: A Proposal

Feedback, in this perspective, becomes a tool to promote evaluative thinking, nurturing cycles of continuous improvement (European Commission. 2004). This approach invokes dynamic models of learning, such as:

- the spiral curriculum (Bruner, 1996),
- the generative relationship (Mannese, 2023),
- the inclusive spiral (Unesco, 2021), of learning as a cyclical and progressive process that integrates reflection, adaptation and renegotiation of meanings (Mezirow, 1991).

In this view, feedback is an active part of the process, providing meaningful data for educators, teachers and trainers, and learners, both to assess outcomes and to guide future choices.

In the following, we will analyze the conditions that make feedback orienting and effective, reworking the data also from the perspective of the dimension of Feedback as a temporal lever that connects educational feedback to subjective time management, enhancing engagement, design and narrative identity (Crea, 2016; Pellerey, 2016; Zimbardo, 2012; Savickas, 2015).

1.4. Feedback as an orientational and transformational guide

Orienting feedback could play a crucial function in supporting learning, fostering self-regulation, motivation and personal development. It does not merely correct, but activates reflective, narrative and design processes, helping the learner construct meanings and directions. Orienting strategies therefore, in addition to activating self-regulation, help the learner project into the future, constructing coherent (project) identities and goals. The narrative function of feedback (Savickas, 2015) is shown to be fundamental to existential and vocational orientation.

According to Nicol (2010), effective feedback is not just “given” but co-constructed, through dialogic dynamics that stimulate self-assessment and agency. Dialogic feedback is structured around key questions, “Where am I going?”, “How am I getting there?”, “What is the next step?” (Hattie & Timperley, 2007), offering a map for orientation even in the most complex educational contexts.

In this sense, feedback is:

- task-oriented, not person-oriented (Hattie, 2023);
- timely and specific, to be truly effective (Shute, 2008);
- generative and reflective, capable of activating metacognition (Biagioli, 2019).

In addition, feedback seems to act as a tool for existential orientation, helping learners to connect learnings and experiences to their own life path. As Savickas (2005) notes, feedback contributes to the narrative construction of the self, while Pellerey (2017) highlights its value in personal and professional (long-term) planning. This appears to make it crucial for life project development. Savickas (2015) in this regard points to three possible operational orientations (vocational guidance, career education or life design) referring to orienting activities, depending on the perspective from which we develop our idea of the learning subject, i.e., if we see the subject as an actor, in order to help him or her we will have to put on the shoes of the director who guides toward his or her own vocational choices; if we see the subject as an agent then we will have to act as educators who promote vocational preparation; and finally, if we see the subject as an author it will be appropriate to act as a counselor who accompanies the subject to develop his or her own vocational identity. (Pellerey, 2016).

The orienting function seems to make feedback a formative and dialogic communicative device:

- Formative: because it does not merely correct the error but generates new meaning structures (Grion & Serbati, 2019);
- Dialogic: because it involves an active exchange in which the learner participates in the co-construction of knowledge (Nicol, 2010).
- Orienting: because it connects the past (revisiting and valuing mistakes), the present (reflection and awareness about one's value as expressed in performance), and the future (actions and directions toward life-planning) (Hattie, 2023; Savickas, 2005; Zimbardo, Boyd, 2009). With respect to life-planning, and thus to the choices to be made in the present in order to outline the path one will take in the future, the value judgment that is given to one's past assumes great importance, as well as the ability to project oneself into one's future; in fact, a positive reading (or even rereading) of one's past (bringing out positive experiences) opens up future prospects and revitalizes the present by laying the groundwork for new life choices consequent to the progressive reinterpretation of one's life story, which gives new light to narratives (Zimbardo, Boyd, 2009; Pellerey, 2016).

Zimbardo's temporal theory has also generated a methodology for psychological recovery of people with PTSD (post-traumatic stress disorder) , a syndrome unfortunately often found in the stories of people who are forced to cross the borders of their own country to escape war, violence, injustice or other extreme exclusion and poverty, think also of the setbacks given not infrequently by the so-called Post-Migration Living Difficulties - P. M.L.D (Hollifield et al, 2021; Pellerey, 2016).

Strategies for an integrated educational approach using generative feedback (such as to express its orienting function) accompanies lifelong learning. In this regard, it is worth reporting the contribution of Carless & Boud (2018) and the concept of feedforward, which is fundamental to life planning: the authors focus the article on how students can develop true feedback literacy, that is, in addition to receiving feedback, knowing how to interpret, internalize and transform it into future improvements. They hypothesize that they propose that the most effective feedback comes from opening up a vision about the future - feedforward, not just considering the past (what was done right or wrong) (Carless & Boud,2018).

Hence, feedforward is future-oriented feedback, and, according to the authors, should provide practical and strategic guidance on how to improve so that concrete next steps can be planned. The authors' focus is on continuous improvement, student autonomy and the ability to self-regulate over time. They state that "Feedback is powerful when it enhances self-regulation, reflection and sustainability of learning" (Carless & Boud, 2018, p. 132). Such power of feedback promotes life-long learning and a sense of responsibility in continuous learning.

2. *Learning Spirals*: the internal dynamics of feedback and growth

At this stage of the discussion, it is important to emphasize that current research on feedback should not be confined to evaluating its effects solely within the domain of formative assessment—whether conceptualized as the transmission of information or as a dialogic, communicative framework. A complementary and increasingly significant line of inquiry centers on an alternative perspective: one that conceptualizes feedback as the product of internal cognitive processes. Thus far, the discussion has addressed feedback processes relevant to both adult learners and individuals in earlier developmental stages.

The following section shifts the focus predominantly to research concerning the latter, while maintaining a strong connection to the overarching framework of lifelong learning. From this standpoint, three foundational preconditions appear necessary for the development of a more student-centered, cognitive conception of feedback. First, students must develop familiarity and confidence in engaging with diverse forms of feedback. Second, they should cultivate a positive disposition toward feedback, actively seeking it and recognizing its value. Third, they need to become capable of producing feedback autonomously, both through peer exchange and self-generated reflection. Consequently, it is reasonable to hypothesize that promoting more active engagement among learners—and positioning them as central agents in their own educational trajectories—can foster the development of self-assessment and self-regulation competences that extend across the lifespan (Nicol & Macfarlane-Dick, 2006).

Active participation, particularly among children and adolescents, should extend beyond task execution to deeper engagement through reflection on outcomes, identification of strengths and areas for growth, and development of self-directed learning strategies. As students become more aware of their learning processes,

they may gradually acquire competencies that support increasingly autonomous and intentional learning. These competencies—nurtured through self-assessment and self-regulation—can evolve into enduring internal dispositions that sustain lifelong learning and personal growth.

In this regard, the theoretical framework proposed by Nicol (2018, 2019, 2020), further elaborated by Grion and colleagues (Grion et al., 2021), is particularly salient. Nicol introduces the concept of *generative feedback*—a process that activates an internally driven dynamic of reflection and improvement. Grion (2023, p. 148) describes this as a “learning spiral,” whereby internal feedback enables students to enhance their understanding and performance over time and across contexts within an evolving learning process. The strength of this model lies in its capacity to support a self-sustaining form of education, where feedback functions not only as a daily learning tool but also as a catalyst for ongoing development.

Students are generating feedback all the time

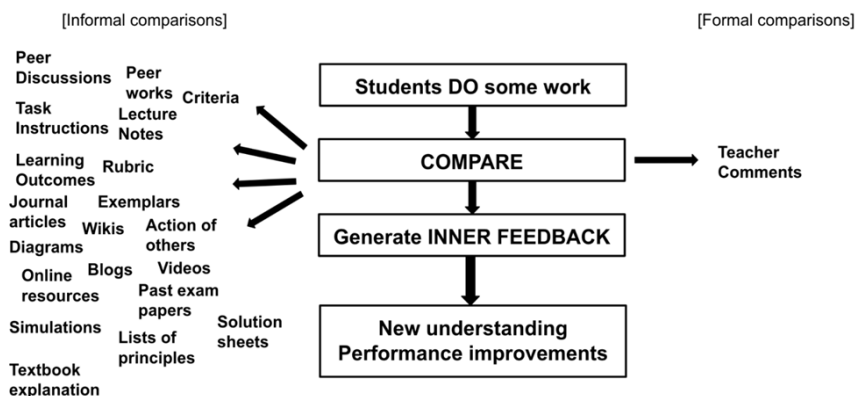


Figure 1. *Generative feedback and internal feedback*. “The conceptual model developed by Nicol (2020), illustrating the comparative process as a mechanism capable of generating internal feedback” (Grion et al., 2021, p. 209).

Generative feedback initiates a reflective process that fosters self-regulated learning. While it involves external components—such as feedback from teachers or peers—it crucially engages the learner in an internal dialogue. This dialogue promotes active engagement with personal work and external resources, driving

improvement through reflection and analysis. Internal feedback refers to the knowledge and insights students construct independently, either consciously or unconsciously, by comparing their current understanding or performance with various reference points.

Unlike external feedback, typically delivered as evaluative comments from teachers, internal feedback emerges from students' own reflective and metacognitive processes. Over time, learners may increasingly assume an active role in planning, monitoring, and evaluating their strategies, supported by continuous comparisons with external stimuli. Internal feedback is vital in this shift, enabling students to analyze competencies, critique performance, make informed comparisons with models or peer outputs, and consciously self-regulate their learning.

First and foremost, *individual engagement* is essential—not only for academic achievement but, more critically, for the development of deep and meaningful learning. When students are motivated to actively participate in their educational journey, the conditions are established for more enduring and transformative learning—learning that extends beyond formal education into lifelong development (Nicol, 2009; Nicol & Pendlebury, 2009). In this context, the learning task—whether it involves producing a performance, completing an assignment, or engaging in discussion—does not need to be finalized before feedback is integrated. A central concept, *the key* term, underpinning this process is *comparison*. Comparison serves as both a cognitive and pedagogical tool and can occur across multiple dimensions: temporal (comparing with past performance), social (comparing with peers), and epistemic (comparing with established criteria or exemplars). Learning, therefore, is embedded in an ecology of interactions, shaped by both the immediate learning environment and the broader availability of resources. Generative feedback does not develop in isolation; it requires rich and diverse external stimuli to be activated. These stimuli might include structured resources aligned with specific learning objectives—such as rubrics, model answers, peer work, or digital tools—as well as more open-ended or unanticipated materials. Such diversity enables learners to engage with a range of perspectives and sources, prompting nuanced and layered reflections. It is crucial that educators intentionally curate and provide access to these resources to support student development. By doing so, they enable learners to identify gaps, adjust learning strategies, and deepen their understanding. Furthermore, encouraging students to

compare their progress with clearly defined standards enhances their ability to recalibrate their learning behaviors. Resources such as rubrics, exemplars, online content, textbooks, lectures, academic articles, and even tools like artificial intelligence can all serve as valuable prompts for internal feedback. These materials help students locate themselves within a broader framework of performance and knowledge, stimulating reflective comparison and continuous improvement (Hattie, 2012; Hattie & Clarke, 2019).

As students work through a task, they may draw on a range of informational sources—some anticipated, others emergent. “Offering students the opportunity for a kaleidoscope of comparative processes, with a variety of resources—both material (e.g., exemplars, documents, artifacts, videos) and dialogic (e.g., peer and teacher feedback)—should maximize internal feedback and, thus, the learning that derives from it” (Grion, 2023, p. 148). Over time, students may learn to initiate these comparisons independently, expanding the materials and experiences they consult beyond those explicitly provided by teachers.

Research suggests that learning effectiveness may be significantly enhanced when students engage in multiple, successive comparisons. The cumulative impact of comparing one’s work with a variety of sources—from past performances to high-quality exemplars or peer outputs—fosters deeper and more efficient knowledge construction (Grion et al., 2021). Moreover, comparisons need not be strictly sequential; some studies propose that simultaneous comparisons can be equally, if not more, effective, broadening learners’ perspectives and promoting richer cognitive integration. Through these layered comparisons, students activate processes of analysis, revision, integration, and reworking of knowledge (Serbati et al., 2019, p. 118), all of which are key to meaningful learning. From an educational standpoint—particularly when considering learning beyond the classroom—it is crucial to recognize the influence of environmental variability. Learners do not operate in a vacuum; their educational experiences are embedded within broader contexts that shape and mediate feedback opportunities. Bronfenbrenner’s ecological model (1979) offers a valuable framework for understanding this dynamic interplay between the learner and environmental systems. Each system—from immediate microsystems like the classroom or family to broader macrosystems such as cultural norms—can function as a *feedback loop*, continuously influencing and being influenced by the learner’s interactions, and shaping the development of internal feedback mechanisms.

Importantly, the impact of these interactions is not uniform. Individual responses to feedback stimuli may vary based on familiarity, accessibility, and personal relevance. Cultural background, for instance, can significantly shape learners' interpretations of success and failure, influencing their motivation, self-efficacy, and engagement with learning tasks. These beliefs often guide how learners make causal attributions about their achievements and setbacks—whether they perceive outcomes as the result of effort, ability, external conditions, or luck (Zimmerman, 2020). These attributions, in turn, shape the nature of the internal feedback generated, potentially reinforcing or hindering learning. Consequently, the process of internalizing feedback is not neutral or linear. It is deeply personal and context-dependent, shaped by learners' dispositions, experiences, and socio-cultural environments. Supporting students in navigating these complexities—by making comparisons intentional, structured, and meaningful—can facilitate the emergence of robust internal feedback practices that promote long-term development. The very process of internalization that follows could, therefore, generate very different internal dispositions.

A critical step in fostering internal feedback development is encouraging students to make their reflections *explicit* (Nicol & Selvairetnam, 2021; Nicol et al., 2021). This can be achieved through writing, group discussions, or other forms of articulation that externalize cognitive processes (Grion et al., 2021). Students must be motivated to articulate “the outputs of this process” (Grion et al., 2021, p. 209). Such practices not only provide valuable insights for teachers into how students think and learn but also help students clarify, refine, and consolidate their understandings. Writing, in particular, holds considerable metacognitive value (Nicol, 2010): it compels learners to structure their ideas coherently, enhancing awareness of strengths and areas for growth. It also enables students to demonstrate their ability to generate feedback (Nicol, 2018, 2019, 2020). Moreover, writing serves as a powerful tool for tracing the evolution of thought. By transforming internal insights into tangible outputs, students engage in an iterative learning process in which feedback is not merely received but generated, interpreted, and reworked. Dialogue with peers and teachers further enriches this process. Comparing interpretations, performances, and reasoning prompts students to reconsider assumptions and strategies, reinforcing internal feedback within a social and collaborative framework. As students critically reflect on their own and others' work, they develop a more nuanced understanding of quality, appropriateness, and relevance. The teacher's role is not to provide all the answers

but to guide students in recognizing and articulating the cognitive processes underpinning their learning. As Nicol proposes, educators should help students formalize the comparisons they make, transforming them into deliberate and structured acts of learning (Nicol, 2020). This involves prompting learners to externalize the criteria they are using, justify their judgments, and explore alternative modalities—all of which serve to deepen their capacity for self-assessment and regulation. Finally, Nicol proposes that teachers value and codify the comparisons students make, transforming them into explicit and structured processes, thus enhancing the learning outcomes that arise from them. Guiding students toward awareness of their processes of comparison and self-regulation, encouraging them to externalize and articulate their reasoning, is a crucial step in fostering their ability to self-assess and improve autonomously (Nicol & Macfarlane-Dick, 2006).

In doing so, students become participants in what Grion et al. (2021, p. 209) describe as a “cyclical, continuous, self-generative process,” one that is sometimes conscious and sometimes unconscious. This process not only reinforces autonomy and critical thinking but also equips learners with tools for lifelong learning. They become increasingly capable of navigating complexity, making informed decisions, and directing their own development with greater agency and responsibility. Thus, students would become the protagonists of their learning, with an active and participatory role in the entire process (Nicol, 2020; Nicol et al., 2021).

DO work individually,
make some COMPARATOR
and make outputs EXPLICIT.

From a pedagogical perspective, fostering internal feedback requires intentional structuring of the learning environment and instructional practices. Educators must help students build strong conceptual, procedural, and metacognitive representations against which external inputs can be meaningfully compared. The more effort students invest in constructing their responses, the richer and more productive the feedback that emerges. Internal feedback thus helps students autonomously recognize gaps and improve their work, enhancing personal agency (Grion et al., 2021). Instructional practices should explicitly incorporate opportunities for comparison, analysis, and feedback generation. Strategies such as using rubrics, exemplars, peer work, and formative assessments—not only for

evaluation but to provoke reflection—are essential. Teachers might co-construct assessment criteria with students, offer checklists, and guide discussions exploring judgments' rationale, fostering ownership over the assessment process (Marzano, 2023). Such practices reposition students as active participants in learning and assessment, co-creators of knowledge who develop deeper disciplinary understanding through evaluative judgment and reflective action (Serbati et al., 2019; Serbati, 2022). With adequate scaffolding, students can transfer these strategies beyond the classroom. Crucially, fostering internal feedback also requires a shift in mindset: teachers must see feedback not as isolated interventions but as embedded, continuous elements of learning. Every learning scenario can be reframed as a potential site for comparison and reflection. The task for educators is to illuminate these moments, helping students engage with them meaningfully. Over time, students may internalize this understanding, independently navigating learning processes guided by self-generated feedback.

Viewed in this light, feedback is not merely corrective or evaluative; it becomes a dispositive for learners to explore their development. Feedback transforms into an emancipatory practice: a dialogue—both internal and interpersonal—that fosters self-determination and personal agency. It offers learners a mirror for recognizing themselves, recalibrating efforts, and charting new paths (Posada Silva, 2022).

However, this vision is not without challenges. Feedback is never entirely neutral; it is shaped by relational, cultural, institutional, and political contexts. It can unintentionally reinforce hierarchies of knowledge and power, promoting conformity rather than transformation (Foucault, 1975). To mitigate this risk, feedback practices must be approached with critical awareness. Educators and students alike must examine the values and assumptions underpinning feedback, fostering a more democratic and inclusive process that empowers learners (Giroux, 2025; McLaren, 2016).

Sustaining a feedback culture that is both rigorous and reflective requires balancing high expectations with genuine dialogue. Feedback should not normalize learners but support their growth. It must serve as a catalyst for continuous learning, self-knowledge, and transformation. Recognizing its ambivalent nature allows feedback to be employed more critically and constructively, promoting self-determination rather than subjectification.

The evolving conceptualization of feedback as a generative, internally mediated process marks a significant shift in educational theory and practice. No longer merely a mechanism of transmission or correction, feedback is increasingly seen as a co-constructed, developmental process driven by engagement, comparison, and reflection (Freire, 1970). Internal feedback is not a derivative of external commentary but a dynamic cognitive function that learners can cultivate throughout their educational journeys.

Pedagogically, this shift opens new possibilities for learner agency. Students who generate, articulate, and act upon feedback develop not only deeper content understanding but also critical dispositions for lifelong learning: autonomy, responsibility, evaluative judgment, and reflective awareness. These capabilities are essential for navigating an increasingly complex world. Yet, as argued throughout this paper, feedback must also be approached critically, recognizing its entanglement with systems of power. Without critical attention, feedback risks becoming a subtle tool of normalization (Foucault, 1975).

Thus, ethical and political awareness must accompany pedagogical innovation. For researchers and practitioners, this expanded view presents a new agenda: emphasizing participation, reflexivity, and emancipation. Feedback is no longer peripheral but central to learning, demanding thoughtful integration into educational design.

By cultivating environments that foster generative feedback, educators can support students in becoming not only better learners but also more self-aware, resilient, and critical individuals—protagonists of their own lifelong growth.

Conclusion

Feedback thus appears to function as a formative and orienting dispositive, likely contributing to self-regulation, the narrative construction of identity, and the design of one's future (Savickas, 2005; Pellerey, 2016; Zimbardo & Boyd, 2009). Serving as a bridge between past, present, and future, it seems to enable the attribution of new meaning to experience, thereby supporting the reorientation of personal, educational, and professional choices (Hattie, 2023; Nicol, 2010).

Feedback may exert a profoundly transformative power across a wide range of learning contexts. In settings marked by relational asymmetries—such as

intercultural environments—it may further serve to promote equity, participation, and empowerment (Grion & Tino, 2018; Portera, 2013). Its potential beneficiaries are therefore numerous, ranging from students to individuals in vulnerable or transitional situations. Its effectiveness appears to depend on multiple interrelated factors, including relational engagement and dialogue, contextualisation, multimodality, empathy, and the constructive valorisation of error (Grion & Serbati, 2019; Hattie & Clarke, 2019; Portera, 2013).

Generative feedback, stimulated through the activation of comparative processes, appears to enhance the educational value of the dispositif by fostering reflection (new understandings) and self-assessment, thereby initiating processes of improvement (Nicol, 2020; Grion et al., 2021). This, in turn, is likely to strengthen orientation-related competence, which enables individuals to make informed decisions, renegotiate goals, and navigate uncertainty within a recursive process of existential and professional life design (Zimmerman, 2000; Nicol & Macfarlane-Dick, 2006; Biagioli, 2019; Savickas, 2015).

Despite its inherent ambivalence, under these assumptions, promoting a critical and intentional use of feedback—as a dialogic, reflective, and future-oriented practice—may foster not only effective learning, but also the development of the capacity to orient oneself, act, and transform throughout the course of life (Freire, 1970; Giroux, 2025; Nicol, 2020).

Author contributions

The content and character of the present chapter were jointly agreed upon by the three authors. However, Sabrina Manuela Emilio wrote up Sections 1 and the concluding remarks; Hassjba Salvadori wrote up Sections 2; while the introduction was drafted by Andrea Giacomantonio.

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