

What feedback do students expect for effective learning?

Francesca Storai*, Ilaria Salvadori***°

Abstract

What do students expect from their teachers' feedback? The article aims to focus on the expectations of a sample of university students regarding the feedback provided by their professors. The topic is addressed taking as a reference Hattie and Timperley's model (2007) consisting of three dimensions: *Feed up*, *Feed back*, *Feed forward*. The questionnaire submitted to a sample of 140 students is intended as an initial test to be validated and administered to a larger sample at a later stage of the research. In this first phase, the results suggest that all the dimensions of the feedback are important, above all, the centrality of the professor's active involvement in the learning process that facilitates the student's self-regulatory and internal learning process.

Keywords: Feedback dimensions and levels; Internal Feedback; student's self-regulatory process.

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1. Introduction

The international and national literature has long since noted the important role of feedback in assessment processes to support learning in a formative direction (Black and Wiliam, 1998; Bloom, 1968; Domenici, 2007; Domenici and Lucisano, 2011; Hattie, 2008; Scriven, 1967; Vertecchi, 1976); theoretical studies and empirical research have continued to enhance its positive increases on pupils' learning outcomes (Cabrera and Mayordomo, 2016).

Assessment practices can have a formative function if taken as an expression of the capacity for reflection on teaching and learning processes, especially in an internal self-evaluative direction (Nicol, 2019), so that «the evidence

* Ricercatrice, INDIRE. E-mail: f.storai@indire.it.

** Ricercatrice, Università degli Studi di Firenze. E-mail: ilaria.salvadori@unifi.it.

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gathered [is] used to adapt teaching to the educational needs of pupils» (Black and William, 1998, p. 140).

Formative feedback (feedback for learning) is one of the main strategies that can promote this kind of assessment for learning (Black *et al.*, 2003; William, 2011), which does not replace but rather accompanies the final summative process and which can contribute to activate an evaluative mindset.

One of the most relevant aspects of this strategy concerns the relational dimension in the form of its bidirectionality, which provides guidelines and adjustments to improve the process (Hattie and Timperley, 2007). But how are such processes articulated? What do students expect from professors' feedback? This paper is intended to undertake a reflection on this issue.

2. Theoretical references

Recent studies on formative assessment (Newton *et al.*, 2019; Rasi and Vuojärvi, 2018; Cruise, 2018) have confirmed, the importance of feedback as an effective tool for student learning in higher education, and although there are still few large-scale investigations on this topic (Morris *et al.*, 2021) the positive premises reported in the literature are comforting about a future and real change in university assessment practices in this direction. Back in 2010, Sadler pointed out how assessment procedures in higher education, which generally focus on summative assessment, are crucial for the student and his or her course of study. In this sense, feedback that informs about the goals to be achieved, assessment criteria and strengths and weaknesses is useful in guiding students' behavior regarding their learning and at the same time shifts the focus to the student, how he or she receives the feedback given and how he or she subsequently processes it, thus opening up new perspectives for research. In this sense, the emphasis that has been placed by many authors on feedback and its functional mechanisms, in fact, has made it possible to analyze in more detail the substantial characteristics that make it up, as well as the elements that facilitate comprehension of the proposed contents. Many authors have analyzed the relationship between teacher and student (Ajjawi and Boud, 2017; Beaumont *et al.*, 2011; Ferguson, 2011) and the communicative exchange that takes place between the two subjects, bringing out interesting elements and providing important information for instructional design and formative evaluation. In the following section we will try to identify some of them, without any claim to exhaustiveness, but only to contribute to the ongoing scientific debate in academia.

2.1 On some aspects of feedback

The first aspect is the already mentioned two-way feedback interaction, which means a focus on the two-way direction of information between teacher and student (Elbra-Ramsay, 2022). It is difficult, in fact, to establish how much the provision of feedback to the student on the topic covered by the teacher, who often tends to have a unidirectional approach (Winstone, 2022; Tan *et al.*, 2018), automatically leads to positive learning outcomes: the two-way exchange in fact involves emotional, cognitive and relational sides. Molloya and colleagues (2019) speak of a real feedback literacy, which students should be equipped with, and identifies certain categories of feedback as an active, emotional and reciprocal process, capable of reusing information for the improvement of the learning process. The effectiveness of feedback is thus determined by several interacting elements, bringing our attention to a second aspect: its contextualisation. The results of the study by Henderson and colleagues (2019) showed how feedback is a complex process on which various factors act, such as feedback practices (e.g., written and oral comments) and certain constraints such as the lack of time to devote to any in-depth analysis and personal skills that would require customisation of the pathways. A third and final aspect that we would like to point out concerns the way in which feedback is given: Steen-Utheim and Hopfenbeck (2019) in their study noted that students preferred oral feedback rather than written feedback, as the latter was poorly understood and more prone to errors and distorted interpretations, thus proving to be completely useless.

In addition, there is the part of the so-called internal feedback that concerns the internalization of the message or comment by the teacher that leads to the self-regulation of learning processes (Nicol, 2019, 20, 22). It is the belief of much literature that received information, as well as peer exchange, are considered as cognitive scaffolding capable of self-regulating the assimilation and acquisition processes that allow students to rework content and thus generate learning (Nicol, 2019, 2020; Yan, 2019; Zhang, and Hyland, 2022; Brown *et al.*, 2016; Grion *et al.*, 2021).

The theoretical model used in this study starts from the latter perspective, revisited by the authors also in the light of the important role played by internal feedback (Nicol, 2019; 2021) in which the learner plays a central role in guiding his/her own learning process, thus in generating and soliciting his/her own feedback (Boud and Molloy, 2013), monitoring and self-regulating learning processes. Hattie and Timperley's (2007) model considers feedback as information used by the learner to make explicit goals, modalities, and strategies, to be articulated in different levels and according to a specific order of succession, as made explicit in the following section.

3. Dimension and levels of feedback

To investigate the meaning that teacher feedback can take on in the academic environment in improving teaching and learning processes and reducing the distance between the learning that has taken place and the objectives set, Hattie and Timperley (2007) developed a feedback model that considers three dimensions and four levels. Let us look at them in detail. The dimensions emerge from the three questions that help direct the actions needed to achieve effective learning in subsequent stages: Feed up - Where am I going to? Feedback - How am I going in this direction? and Feed forward - Where am I going next? The four levels refer to: task, process, self-regulation and subject. The first level focuses on the task and concerns information provided by the professor on whether it was carried out correctly or not (corrective feedback), on errors or appropriate procedures in relation to the activity carried out or to clarify the objectives set. Process-related feedback, the second level, indicates the relationship between what the student did and the quality of his or her performance, as well as providing information on possible more effective strategies employed by the student to solve the task or a problem to achieve the objectives. Feedback for self-regulation relates to the student's ability to self-monitor and self-assess the processes carried out by producing internal feedback to regulate subsequent activities. The last level refers to the subject as a person, to his or her appreciation in the form of praise and verbal acknowledgement and conveys information on the student's characteristics, generally with positive comments on the person, not on the task. For this reason, it was not included in this study due to evidence that it has a negative impact on learning (Dweck, 2007; Hattie, 2008).

According to the relevant authors, only the first three types of feedback have a positive impact on learning and especially the focus on process and self-regulation, as they help to master the task and the process, whereas the teacher's focus on the person does not provide useful indications for effective learning. Because of this aspect, the authors of this article chose to consider only the first three levels in their reworking of the original model.

4. Research questions

One of the starting points of the present research is the consideration that students declare dissatisfaction with the feedback they receive from their professors (Burnett, 2002; Burnett and Mandel, 2010; Hattie *et al.*, 2017; Mag, 2019; Peterson and Irving, 2008).

The literature tells us that good feedback allows learners to bridge the gap between their effective and desired knowledge thus reducing the distance between the acted and the expected by targeting the Vygotskian “zone of proximal development”. In this way, feedback is presented as «a process in which students obtain information about their own work in order to identify similarities and differences between the given standard and the qualities of the work to improve their own product» (Boud and Molloy, 2013, p. 6).

From these considerations, in conjunction with the theoretical framework taken as a reference, the following research questions were formulated:

Q1. What are students’ expectations of university professors’ feedback?

Q2. For which levels of feedback are students’ expectations higher?

The purpose of the questions is to guide the research for improving teaching and learning processes in academia and to offer operational proposals to lecturers for increasing effective formative feedback processes.

5. Research design

The overall design of the research is configured as an explanatory sequential with mixed methodology (Ponce *et al.*, 2015; Creswell *et al.*, 2011; Teddlie and Tashakkori, 2009) and consists of two main phases and some moments that we will describe below. The first quantitative phase aims to understand what students' expectations are with respect to feedback on both the learning process (course lectures) and the final output (examination). This phase involved the construction of a questionnaire derived from the dimensions listed above, which was shared and reviewed with some experts in the field of evaluation. This was followed by the administration of the structured questionnaire with closed and open-ended questions to a small sample of Primary Education 2nd year students. The second phase, on the other hand, envisages a qualitative approach, which intends to investigate the aspects deemed most significant derived from the quantitative analysis, also through the identification of certain clusters.

The study here presents only the first step of the overall research, namely the results of the questionnaire administered to a small sample of students. This action allowed the authors to have, on the one hand, an overall view of the saturation of the feedback dimensions with the indications derived from the analysis of the first questionnaire and, on the other hand, to be able to refine it through its validation.

6. The questionnaire: Internal and external feedback. The expectations of a group of university students

The model used in the present research has been reviewed by other authors following the evolution of perspectives on the subject which, in recent years, have shifted the focus from a transmissive and corrective view of feedback to a socio-constructivist and formative one that has entailed a far greater involvement of students in learning processes.

For this reason, to make the questionnaire to be submitted to a sample of university students, it was decided to use the structure of Hattie and Timperley's (2007) model by identifying indicators designed to answer the research questions, aimed at investigating students' expectations of the type of feedback they receive from their professors. The questionnaire was structured in three sections, the first two constructed based on the reference framework by means of multiple-choice answers and the last one with open-ended questions referring to the participants' personal experience. The contribution only reports the results of the analysis of the first section.

The questionnaire was constructed with statements relating to actions in which feedback can be exercised and the respondents were asked to express their degree of agreement by means of a 6-step Likert scale (1. Strongly disagree; 2. Disagree; 3. Neither agree nor disagree; 4. Agree; 5. Somewhat agree; 6. Strongly agree). The items were then arranged in no order. The following table shows the structure of the tool, the actions to which the indicators refer grouped by thematic area and the number of items related to the levels and dimensions considered (Tab.1).

For each level, possible feedback actions implemented by the teacher were identified as expectations for which the respondent should indicate the degree of agreement. For each action, 37 indicators were identified, 14 of them relating to Feed Up and Feed Back and 9 to Feed Forward processes. For each of the three dimensions a different number of indicators was identified.

In the case of the performance of a specific task or lesson, the student can reflect upon the objectives set by the professor and the expected timing ("From a lesson in the course I expect the lecturer's feedback ..."). In relation to the whole course, he can reflect on his expectations of the implementation of the learning processes to select appropriate strategies ("From the course I expect the professor's feedback ..."). The last level, on the other hand, leads the student to self-assess himself, to reflect on his strengths and weaknesses ("From my reflection on the professors' feedback I expect that...").

The questionnaire "Internal and external feedback. The expectations of a group of university students" was submitted to a sample of $n = 140$ ($F = 132$; $M = 8$) second-year students of Primary Education Sciences at the University

of Florence in September 2022. Non-probabilistic and convenience sampling was used.

Tab. 1 - Levels and dimensions of feedback and number of items in the questionnaire

	Feedback Levels			Total Items
	Task	Process	Self-regulation	
Feedback Dimensions	<i>From a lesson in the course, I expect that the lecturer's feedback ...</i>	<i>From the course I expect that the professor's feedback ...</i>	<i>From my reflection on the professors' feedback, I expect that...</i>	
Feed up (Where am I going to?)	Objectives and expectations related to the specific task Timing	Identifying information Identifying strategies Reworking	Personal reflection Autonomy Evaluation strategies	74
Items	6	4	4	
Feed back (How am I going in this direction?)	Approaches to the task Correctives Timing of corrections	Selecting strategies Monitoring one's own process Understanding the meaning of the process	Understanding the learning process Self-assessment of strengths/weaknesses	74
items	6	5	3	
Feed forward (Where am I going next?)	Using knowledge in follow-up tasks	Selecting transferable skills	Learning motivation	9
items	3	3	3	
Total items	15	12	10	37

7. Data analysis and discussion

The data were analyzed by means of descriptive statistical analysis with SPSS (ver. 24) to calculate the averages of the frequencies of the answers for each grade of the Likert scale in relation to levels and dimensions (Tab. 2). The average of the highest agreement (5.19) is found in relation to the items referring to the entire course for the first two dimensions, which concern, for example, the identification of suitable problem-solving strategies and the understanding of the overall meaning of the learning implemented.

Tab. 2 - Averages of the responses of the dimensions for each level of the questionnaire

		Feedback Levels			Mean of dimensions
		Task	Process	Self-regulation	
Dimensions	Feed Up	4,44	5,19	5,15	4,93
	Feed Back	4,58	5,19	5,13	4,96
	Feed Forward	4,93	5,09	5,10	5,04

In the overall picture of the analysis, as shown in the following table (Tab. 3) the actions that gathered the greatest degree of agreement (point 6 on the Likert scale) refer above all to the need to be “intrigued” and involved (63.57%) in the course, the need for the professor to make clear the objectives he/she intends to pursue (60.71%) within the individual lessons to help students identify the most effective strategies for problem solving in relation to the individual tasks (57.14%) and the entire course (57.14%) and thus achieve positive learning results.

The dimension that returns lower values of agreement concerns the self-regulatory aspect, the ability to self-evaluate, to reflect on the strengths and weaknesses of one’s own learning path.

Tab. 3 - Indicators with the highest degree of agreement

	Items	Strongly agree % (6)
Feed up <i>From a lesson in the course, I expect that the professors' feedback ...</i>	Clarify the objectives and expectations to be achieved (A1)	60,71
	Allow me to identify problem solving strategies (B2)	57,14
	Allow me to perform tasks autonomously (C5)	55,71
Feed back <i>From the course I expect that the professors' feedback ...</i>	Stimulate my curiosity (A4)	63,57
	Allow me to find effective strategies (B3)	57,14
	Allow me to acquire a progressive autonomy of choices (C7)	48,57
Feed forward <i>From my reflection on the professors' feedback, I expect that...</i>	I will be able to cope with a test, audit or final examination (A7)	41,42
	I will be able to acquire skills transferable to other contexts (B12)	50
	I will be able to acquire feedback methodology (C10)	50,71

8. Conclusions and future developments

As we mentioned at the beginning of this article, the focus on feedback as a device for effective teaching interventions/practices has been receiving particular attention recently: all the authors mentioned in the previous paragraphs agree that it is necessary to provide good feedback to students for them to perform better. Even in the case of our small-scale study some elements emerge and provide us with directions to move towards. Although all dimensions of feedback were found to be important, we note that it is up to the professor to set up a learning environment that can provide a cognitive scaffolding that clarifies the objectives to be pursued in the teaching activities and the expectations to be fulfilled so that the students can autonomously find strategies that can support them in the present and future learning processes. These initial results have also stimulated some reflections that will be useful for the next steps of the research described in the section on methodology, in the in-depth study of both more recent models of feedback and the aspects that are most requested by the students.

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