

Designing embedded assessment in Higher Education workshops. A pilot study with pre-service teachers

Federica Pelizzari*, Maria Cristina Garbui**, Pier Cesare Rivoltella***

Abstract

Assessment is one of the most controversial and difficult topics to deal with in the context of Higher Education. The following contribution aims to present the proposal of Embedded Assessment within the Didactics workshops included in the Degree Course in Primary Education, which are configured as a mediating activity between Courses and Apprenticeship. Starting from the framework of Pellerey's (2004) trifocal perspective, the trajectories of observation and monitoring of the workshop have been rethought based on the triangulated system of objective, subjective and intersubjective dimensions of assessment. From this point of view, our assessment shows the objectives to be achieved and suggests which strategies and operational proposals to put in place to enable students to orchestrate a series of skills and competences and knowledge necessary for the achievement of the envisaged objectives. When this formative focus translates into the constant effort to turn every teaching activity into an opportunity for assessment, we enter the logic of assessment as learning.

Key words: embedded assessment; workshop; simplicity; trifocal perspective; assessment as learning.

First submission: 08/01/2023, accepted: 15/06/2023

Available online: 21/07/2023

1. Introduction

The university lecturers, when approaching the subject of assessment, are challenged; he will have to deploy his best observational, communicative and

* Ph.D. Student, Università Cattolica del Sacro Cuore. E-mail: federica.pelizzari@unicatt.it.

** Ph.D. Student, Università Cattolica del Sacro Cuore. E-mail: mariacristina.garbui@unicatt.it.

*** Professore Ordinario, Università Cattolica del Sacro Cuore. E-mail: piercesare.rivoltella@unicatt.it.

° The contribution was jointly designed by all authors. In the writing and revision stage, Federica Pelizzari developed paragraph 3 and 4, Maria Cristina Garbui developed paragraph 2 and 5, and Pier Cesare Rivoltella developed paragraph 1.

Doi: 10.3280/ess1-2023oa15175

design skills to make this action formative and authentic (Rivoltella and Rossi, 2022).

The view that is traditionally centred on the control of learning outcomes and on the attainment of outcomes in relation to certain standards takes the lead with regard to the issues of assessment in Higher Education. Certainly, teachers and students recognise the necessity and importance of adopting a system of verification of learning outcomes. However, it is often accompanied by feelings of unease on the part of the former, who do not consider the assessment methods adequate, as well as on the part of the latter, who experience the assessment moment with anxiety.

In recent years, the perspective that goes by the name of ‘authentic assessment’ (Wiggins, 1998 in Rivoltella, 2021) is aimed at the overall growth of the student.

Assessment must, therefore, be designed to provide the opportunity to act consciously in the context of the assessment process itself, as it is closely integrated with the cyclical ‘teaching-learning-assessment’ process (Sambell et al., 2012).

2. Conceptual framework

Formative assessment and feedback are fundamental aspects of learning (Hadji, 2017) in Higher Education, and both topics have been investigated with considerable attention in recent years (Gaynor, 2020; Jonsson, 2013; van der Schaaf et al., 2013) thus giving voice to the fact that both should be present within the design and delivery of a course of study in Higher Education (Baughan, 2020; Carless and Winstone, 2019). However, beyond this view, there is a need to explore what approaches and elements are most effective for learning and assessment of students’ skills within Higher Education (Boud and Molloy, 2013; Evans, 2013).

In the present contribution, we intend, therefore, to pursue the latter investigation, starting precisely from analysing the polymorphous nature of the concept of competences themselves, which Pellerey (2004) argues are characterised by the co-presence of multiple dimensions (subjective, objective and intersubjective) to be mobilised in order to address a given situation-problem. This characteristic, when considered together with its situated character (Rivoltella, 2014)¹, prevents the assumption of a single perspective for the observation of the phenomenon. It emerges, therefore, as the need to

¹ Situated character refers to the ability to tackle tasks in specific cultural, social and operational contexts by employing one’s knowledge in concrete situations and in relation to defined purposes (Grimaldi et al., 2022).

give back a coherent and complete image of the subject's competences (Le Boterf, 2008) by integrating several perspectives capable of exercising complementarity.

Precisely for this reason, it is believed that assessment defined as embedded assessment (Wilson and Sloane, 2000), i.e., literally 'embedded', and can become a paradigm for integrated assessment as it produces a more effective promotion of the processes of metabolising meanings and a greater assimilation of experiences (Damiano, 2012, pp. 10-39), in which opportunities to assess students' progress and performance are inherent in the teaching materials and are practically indistinguishable from everyday teaching activities.

Starting from these premises, it is considered that a solid basis on which to set up the challenge of competence assessment is the principle of triangulation (Castoldi, 2018, pp. 154-160), typical of qualitative methodologies that are guided by a process of systematic comparison and investigation of similarities and differences to structure the interpretative process. These result from the activation and comparison of several levels of observation, which aspires to an articulated and multi-perspective reconstruction of the object of analysis. One is called upon to take up the challenge of complexity by implementing vicarious strategies (Berthoz, 2015) that make evaluating competences accessible by simplifying it (Berthoz, 2014). This process proves to be key and essential to cope with the complexity of evaluative action.

How can the complex nature of competences be ascertained? Which analysis tools can be adopted in view of a meaningful formative assessment (Pentucci and Rossi, 2021)?

Evaluating a competence is undeniably challenging. Pellerey proposes adopting a trifocal perspective – an ideal triangulation of observation perspectives –, which has the very idea of competence as its centre of gravity and the three dimensions that compose it at its apices.

The subjective dimension that is linked to the meanings that the individual attributes to learning experience occupies the first vertex: the perception of personal adequacy in facing the assigned task, the mobilisation of personal resources to be deployed and the choice of thought patterns to be activated. It implies a self-evaluative instance linked to the way the individual observes and judges his learning experience and his ability to respond to the tasks required in the context of reality in which he acts.

The intersubjective dimension connected to the social context of belonging occupies the second vertex: it concerns the expectations and judgements expressed by other subjects involved in the assessment process. They observe and express themselves in relation to the subject's ability to respond adequately to the required task. For example, by using a peer-assessment tool, it is possible

to record comments, detect perceptions and share observations regarding the processes activated and the results achieved.

The third vertex is presided over by the objective dimension that implies an empirical instance connected to detection in terms of observable and measurable evidence. The subject in relation to the assigned task and the operational context within which he/she is acting in order to ascertain and document the individual's procedural and procedural acts (Fig. 1) enacts these.

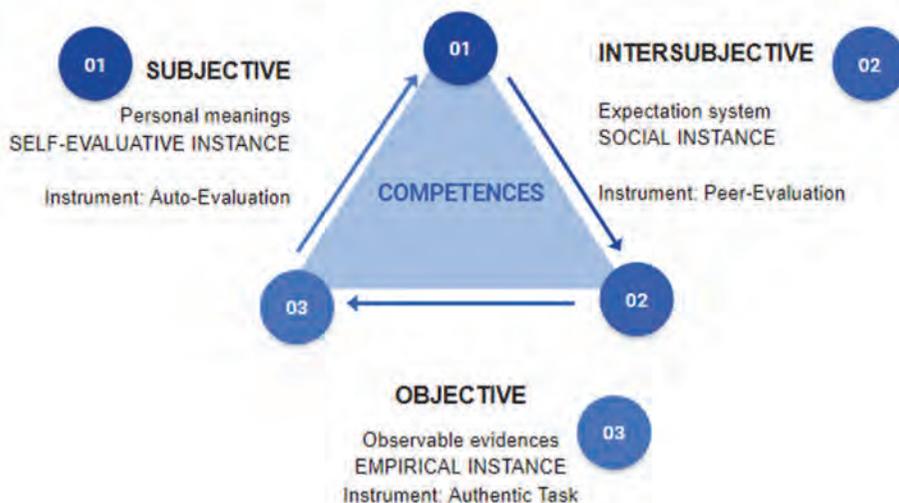


Fig. 1 - Pellerey's trifocal perspective (2004)

In light of the present considerations, the research presented in the following paragraphs shows how it is significant to affirm that only the re-composition of the different dimensions can restore a holistic view of the same on which assessment is based.

3. Methodology and research tools

The aim of this research was to propose a pilot study to a sample of 55 students (3 males and 52 females) in the third year of the Single-Cycle Degree in Primary Education at the Università Cattolica del Sacro Cuore in 2022/2023. Of the sample, 75% are between 20 and 25 years of age and 60% are already working in a school. The students had the opportunity to experience themselves through the Didactics workshops, which are configured as a mediating activity

between the Courses and the Apprenticeship and within which the workshop teachers implemented the trifocal perspective.

The research question that thus guided the pilot study was to deepen the understanding about how students perceive trifocal implementation and whether it can actually be incorporated into workshops.

To answer this, an online questionnaire was administered at the conclusion of the last workshop meeting, divided into the following areas:

- investigation into useful assessment tools;
- investigation on the value of feedback;
- investigation on the instruments part of the trifocal perspective;
- satisfaction with the workshop.

The analysis carried out is descriptive (Colombo, 1991).

4. Results

4.1 *The trifocal perspective implemented in the Didactics workshop*

The Didactics workshop, which comprises five face-to-face meetings for a total of 25 hours, is structured in close synchrony with the teachings whose disciplinary epistemological foundations it shares; at the same time, it establishes suitable conditions for the exchange and certification of professional skills with the traineeship activities. This circularity of intent is part of a continuous complementarity of deliveries carried out both in groups and individually. Along this cognitive circularity, the workshop didactic-disciplinary theory and practice coexist, thereby giving rise to didactic analysis, planning and simulation activities as well as offering teachers in initial training the opportunity to gradually measure themselves against the complexity of teaching within a protected context.

In this case, the workshop aims to develop the skills to analyse and design transposition and adjustment paths complete with steps, times, tools and mediators in the student.

The workshop was developed with the perspective of embedded assessment, and proposed an authentic task to students in order to demonstrate specific mastery in a situated learning context and whose resolution (not obvious and taken for granted) should be recalled in an integrated form after being composed autonomously and comprising several learnings (knowledge, skills, etc.) that they already possess (Tessaro, 2014).

The latter was identified as the small-group design of a lesson plan of up to eight hours in pre-school sections and/or primary school classes.

The assessment tools created for the workshop included three objectives, with a view to assessment as learning (Earl, 2003):

- Stimulating learners' self-assessment skills through an assessment culture that supports peer-assessment and self-assessment as well as through the appropriate use of feedback;
- Constructing appropriate assessment tests based on authentic tasks and using them effectively;
- Understanding the learning gap, i.e., being able to translate test results into teaching actions to meet students' learning needs.

For the hetero-assessment phase envisaged by the trifocal perspective, the creation of a teaching design template (Fig. 2) with guiding questions was envisaged, which would support the working process of the small group and enable the students to remember important passages of the design itself.

DESIGN ELEMENTS with guiding questions		
Cultural object	<i>What topics and learning content? What minimum unit of knowledge is at the heart of the activities? What time of the school year does the activity take place?</i>	
Methods of monitoring and surveying learning and educational intentionality	<i>Indicate the observation, monitoring and evaluation methods and tools planned and used in the various phases (specify each tool where it is inserted and with what timing):</i> <ul style="list-style-type: none"> - logbook - observational grids, checklists - verification of learning - evaluation rubric of the teacher referring to the goals for the development of educational skills/intentionality - self-assessment by children - co-evaluation <i>Is there a documentation phase? How is it managed?</i>	
Ways of work	<i>Identify the working methods for carrying out the hypothesized activities (e.g. individual, in pairs, small or large group, for parallel classes; conversation activities, workshops, field trips, etc.).</i>	
Expected product	<i>What should students produce (artifact, observable behavior...)? What is the product being evaluated?</i>	
Times	<i>Indicate the relative duration for each activity.</i>	
Setting (environments, organization of spaces)	<i>What learning environment do we intend to use? A real, virtual or mixed environment? How you plan to organize the space (classroom, laboratory, outdoor...) and the students. Does the space have requirements or need preparations? If working in a group, what size should the group be? How does technology come into play? To be specified for each proposed activity.</i>	
Actors	Student	Professor
Actions	<i>What actions do we want the student to take? What will his role be? Protagonist of the activities? Collaborator in the class group? Promoter of new initiatives? Do we deem it necessary to involve you in the planning of educational activities?</i>	<i>What does the teacher do in the classroom? Do you manage the class group? Does it transfer knowledge? What attitudes and relationships do you establish with students and colleagues? What skills and abilities does it bring to bear? If deliveries are expected, with what words are they placed?</i>
Didactic mediators used	<i>Which educational mediators did you use? Why? At what point in the lesson?</i>	

Fig. 2 - Lesson Plan

The authentic task also included an assessment rubric (Dawson, 2017), presented to the students together with the template (Fig. 3). The intention was

also to show how the assessment system was integrated and complementary between the various tools proposed.

The various groups to the whole class presented the small group design during the last workshop meeting along with graphic-visual support.

Group design				
Dimensions	ADVANCED LEVEL (A)	INTERMEDIATE LEVEL (B)	BASIC LEVEL (C)	INITIAL LEVEL (D)
Completeness	The group completes the design. the descriptions in the proposed format present defined elements. easy to read and which denote in-depth study and research.	The team completes the design. the descriptions in the proposed format have clear and easy to read elements.	The group compiles the main parts of the design. the descriptions in the proposed format have potential room for development.	The group compiles the main parts of the design. Some module additions/revisions help the reader understand intentionality.
Consistency	The group designs coherently with the stated objectives: the connections between the parts are evident and present elements of reflection and balance between them.	The group designs coherently with the stated objectives: the connections between the parts are evident.	The connections between the project and the stated objectives sometimes need to be made explicit.	The connections between the project and the stated objectives sometimes need additions/revisions and must be made explicit in several parts.
Educational expendability	The group proposes design that can be used in other teaching contexts. with a high degree of transferability: time and context constraints are defined and discussed. The attachments useful for classroom experimentation are easily accessible.	The group proposes design that can be used in other teaching contexts: time and context constraints are defined.	The group proposes a design that can be used in other teaching contexts: it would be necessary to make explicit additional notes and support attachments that help the reader to identify time and context constraints.	The group proposes a planning that needs additional integrations that help the reader to identify time and context constraints: some support materials need revisions.

Fig. 3 - Assessment Rubric

With regard to the self-assessment phase envisaged by the trifocal perspective, an individual metacognitive form was designed (Case and Gunstone, 2002), including two sections (Fig. 4): the first relates to a meta-reflection along with some guiding questions that allow students to bring out their own point of view regarding learning and the progress of the workshop; the second was designed as a checklist on the competences were acquired and/or implemented for professional development based on Perrenoud's (2010) concept of the ten competences. This tool aims to enable students to metarise on what took place in the workshop and what was actually implemented. In addition, the tool allows attention to be paid to the competences that are being developed and how these can change over time, deepening all the time.

This meta-reflection sheet allows for the retrieval of the student's individual point of view regarding the educational process experienced.

1) Laboratory activities

A) Choose an image or metaphor to describe and represent the journey you have taken.

B) Submit a brief reflection (contained within 3000 characters, including spaces) that answers the following questions:

- From the experience of this workshop, what learnings do you feel you have personally gained for your future profession?
- What strengths have you discovered and what questions remain open to you?
- What are the main difficulties you faced (including in groups) in completing the work mandate and how did you overcome them?
- If you were to repeat the same experience, would you change anything in your approach? If so, what?
- What idea did you have about the topic of the General Education workshop before attending this workshop?
- Did this initial idea change and if so how?

2) Skills learned

Competence: organize and animate learning situations	Dimensions:	What did I work on?	What have I improved on?
	Know the learning content	<input type="checkbox"/>	<input type="checkbox"/>
	Design educational paths appropriate to the goals	<input type="checkbox"/>	<input type="checkbox"/>
	Recognize the training needs in relation to the different ages of the pupils	<input type="checkbox"/>	<input type="checkbox"/>
	Recognize the learning environment as an indispensable element in a design	<input type="checkbox"/>	<input type="checkbox"/>

Competence: Observe and evaluate situations and learning levels	Dimensions:	What did I work on?	What have I improved on?
	Use tools of observation of the class and of individual pupils	<input type="checkbox"/>	<input type="checkbox"/>
	Use assessment/self-assessment tools	<input type="checkbox"/>	<input type="checkbox"/>
	Mastering summative assessment	<input type="checkbox"/>	<input type="checkbox"/>
	Master formative assessment	<input type="checkbox"/>	<input type="checkbox"/>

Competence: Work in team with other teachers, actively participate in school management	Dimensions:	What did I work on?	What have I improved on?
	Collaborate in a workgroup	<input type="checkbox"/>	<input type="checkbox"/>
	Manage/coordinate a group	<input type="checkbox"/>	<input type="checkbox"/>
	Manage conflicts	<input type="checkbox"/>	<input type="checkbox"/>
	Dealing with skills other than your own	<input type="checkbox"/>	<input type="checkbox"/>
	Dialogue with parents	<input type="checkbox"/>	<input type="checkbox"/>

Fig. 4 - Self-Assessment.

Peer assessment was proposed to students with digital tools (via the Google Forms application), allowing them to adopt the third perspective: that of a social gaze with which to observe the workshop. This proposal allowed each student, during the presentation of the individual groups, to give feedback on the work

of the others based on a Likert scale (from 1 to 6) that echoes the shared assessment rubric, thus giving overall qualitative feedback (Fig. 5).

Thinking about the presentation of the working group, express an evaluation from 1 (not at all) to 6 (completely) by inserting a reason under the box you have chosen, with respect to the following criteria:						
The design is clear, taking into account context constraints	1 = not at all	2	3	4	5	6 = completely
The project presents a clear description of the various phases of the activity, allowing for easy transferability and use by other colleagues	1 = not at all	2	3	4	5	6 = completely
The project has a real usability in a concrete didactic situation	1 = not at all	2	3	4	5	6 = completely
The final presentation is respectful of the times, concise and organic	1 = not at all	2	3	4	5	6 = completely
The final presentation is engaging and exciting	1 = not at all	2	3	4	5	6 = completely
The graphic support appears effective and well organized	1 = not at all	2	3	4	5	6 = completely

Reply with short notes.

Group n	
1) Mark one thing you learned from this presentation.	
2) Mark one thing this group did really well.	
3) What suggestion would you give them to improve themselves?	
4) Other comments	

Fig. 5 - Peer-Assessment

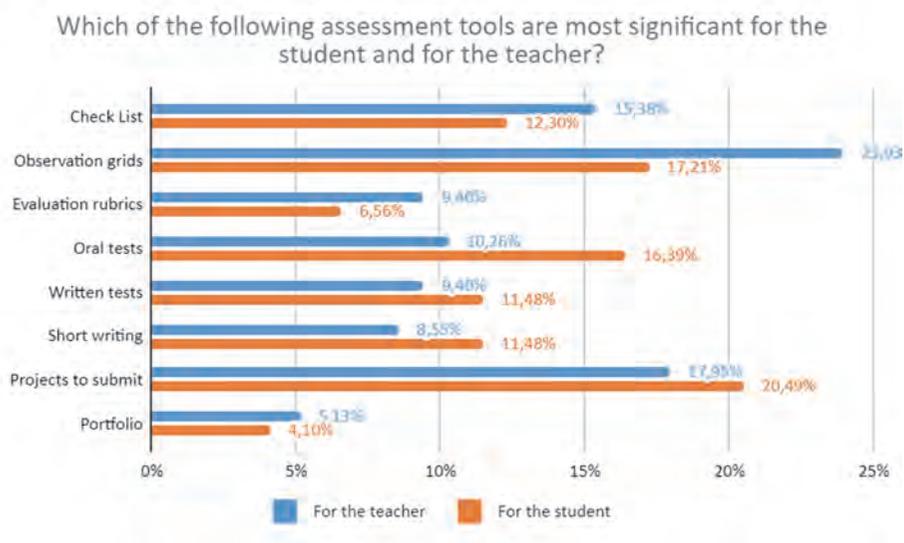
With a view to circularity and complementarity of perspective, feedback of various kinds was given to students throughout the workshop: in itinere and on the lesson plans, leaving targeted comments on the group work and the most functional approach in the various phases of the course both during the workshop meetings and in asynchronous mode; in the final phase, feedback was given on the overall progress and its overall strengths and weaknesses.

This last element made the assessment process totally integrated within the workshop itself, setting itself up precisely as an embedded assessment and thus allowing future teachers a greater assimilation of the experiences and a more effective promotion of the processes of metabolising the meaning of the actions to be carried out in the processes of transposition and regulation.

4.2 Students' voice through the questionnaire

The impact on students of the trifocal perspective and the design implemented within the workshops started from investigating which assessment tools are most meaningful for students as future teachers.

As the graph below shows (Graph 1), there is a clear difference for the students: for the student who will be a teacher, checklists (15%) and observation grids (24%) are more significant, while for the students, oral tests (16%) and projects to be handed in (20%) are more significant.



Graph 1 - Assessment Tools

These data suggest an initial reflection: the goodness and validity of the use of the assessment rubric on both the student and the prospective teacher struggle to emerge significantly, just as the portfolio appears to be less valued. What emerges, however, is how the delivery of the authentic task, envisaged within the trifocal perspective implemented, is useful to the student, perhaps also with a view for professional development. From the point of view of the research presented, the authentic task cannot be separated from the assessment rubric because the possibility of circularity of both process and product assessment would be lacking.

On the value of feedback and its impact on the workshop, students are very positive: 60% of the students state that they used feedback and 72% even that they paid a lot of attention to it. Furthermore, 74% of the students state that feedback was indeed given in a timely manner. This data certainly supports the scientific literature (Najafabadi and Mahrin, 2016) and argues that feedback as a whole is an increasingly necessary element for students to grow and be better guided. The workshop, from this point of view, seems to be a privileged moment as, by having a small number of students, it is possible to actually get to know them and deepen the practices and misconceptions they have at an educational-didactic level instead of just in terms of content.

On the other hand, as regards the presentation of the assessment, in the workshop, assessment methods (63%) and the criteria used for it (70%) were very clear. On the other hand, students report that their understanding of the workshop objectives (see graph below) and the clarity of the learning outcomes (only 42% stated that they were clear) is patchy. These data can lead to two complementary reflections: the first is related to the fact that the trifocal perspective is functional to the rendering of the complexity of the assessment and its criteria; the second is instead related to the fact that perhaps it is precisely the conductor who should make the objectives and learning outcomes clear from the very beginning. Since this is a pilot study, this may also help teachers in the redesign phase to make the initial step in this regard more fluid and systematic.

In the new workshop set-up, it emerges, finally, that it is necessary to work consistently (70%) in circularity with the Internship and Courses, thus fulfilling one of the objectives of the workshop itself.

Tab. 1 – Feedback

	1	2	3	4	5	6
It was necessary to work constantly.	0,00%	0,00%	0,00%	9,30%	20,93%	69,77%
The learning outcomes were clarified from the beginning.	0,00%	2,33%	2,33%	11,63%	41,86%	41,86%

It was often difficult to understand the goals.	13,95%	27,91%	11,63%	18,60%	16,28%	11,63%
Overall, I am satisfied with the quality.	4,65%	0,00%	0,00%	13,95%	25,58%	55,81%
The methods of evaluation have been clearly defined.	0,00%	0,00%	0,00%	9,30%	27,91%	62,79%
The criteria used for the evaluation were explained.	0,00%	0,00%	0,00%	6,98%	23,26%	69,77%
The evaluation was fair.	0,00%	0,00%	0,00%	11,63%	34,88%	53,49%
Feedback on my work has been timely.	0,00%	0,00%	0,00%	2,33%	23,26%	74,42%
The feedback on my work has been comprehensive.	0,00%	0,00%	4,65%	2,33%	34,88%	58,14%
I have paid close attention to the feedback received.	0,00%	0,00%	0,00%	4,65%	23,26%	72,09%
I used the feedback.	2,33%	0,00%	0,00%	2,33%	34,88%	60,47%
The feedback I received prompted me to review the material.	4,65%	0,00%	2,33%	6,98%	34,88%	51,16%

Interesting data also emerges from the survey linked to the significance of the individual assessment tools: the lesson plan is perceived by the students as being highly employable at a professional level (90%) and as being very well integrated into the workshop (88%); self-assessment is also well integrated with the workshop (80%) and is original as a point of view (76%); finally, peer-assessment is perceived as being very interesting (83%) and the same applies to its usefulness (85%). Especially with regard to peer-assessment, which has never been integrated into workshops and apprenticeships, the appreciation of its usefulness is significant. The trifocal perspective implemented thus appears to be effectively positive and functional for the tools designed.

In conclusion, the research tried to understand how the students saw the trifocal perspective in terms of functioning. To the question “Do you think the assessment system comprising the authentic task with the rubric, the self-assessment with the meta-reflection tool and the peer assessment carried out on the presentations of the various groups is adequate for the workshop you have carried out?”, the answers were very positive, placing all the indicators between 5 and 6, as can be seen from the table below. In particular, one can note the emergence of the training character (51%) of the implementation (Tab. 2).

Tab. 2 - Assessment System

	1	2	3	4	5	6
Adequate	0,00%	0,00%	0,00%	13,95%	41,86%	44,19%
Clear	0,00%	0,00%	2,33%	11,63%	46,51%	39,53%
Formative	0,00%	0,00%	2,33%	11,63%	34,88%	51,16%
Supportive	0,00%	0,00%	2,33%	13,95%	53,49%	30,23%

Effective	0,00%	0,00%	2,33%	11,63%	44,19%	41,86%
Deepen	0,00%	0,00%	2,33%	9,30%	51,16%	37,21%
Accurate	0,00%	0,00%	2,33%	13,95%	39,53%	44,19%
Sustainable	0,00%	0,00%	4,65%	11,63%	44,19%	39,53%

From this last table, it is possible to conclude that it is indeed possible to implement embedded assessment within workshops as it proves to be educationally significant for students and is, thanks to modelling and tutoring, also a boost to professional development.

Admittedly, being a pilot study, it certainly has a limitation considering the sample; however, it allows us to bring the assessment issue to the attention of teachers at a global level, considering precisely the circularity that is inherent in the course-workshop-internship system and allows us to rethink in an integrated way a system that is often perceived as fragmentary and difficult to understand (Coggi and Ricchiardi, 2018).

5. Conclusions

Assessment becomes the compass that guides teaching choices when the teaching action is (re)designed. It shows the objectives to be achieved and suggests strategies and operational proposals to put in place (Colarusso and Giancola, 2020) to enable students to orchestrate a series of knowledge, skills and competences necessary for their professional development.

Specifically, a number of aspects can be identified to implement the assessment system in Higher Education:

- the transparency of the criteria and the way in which judgements are made with the students;
- the usefulness of on-going feedback in relation to the monitoring of training activities;
- the coherence and completeness of the learning detection instruments;
- the sharing of assessment practices between different teachers working with the same students.

The new forms of assessment, therefore, place new demands on the teacher and raise some questions: what tips can be adopted to support the teacher in the management of ongoing feedback? Which strategies should be recommended for an embedded assessment intervention? How can this perspective be made usable considering time and contextual constraints in teaching? A possible perspective would lead to an argument about the principle of sustainability and

accountability underlying a trifocal embedded assessment. A challenge, perhaps a need.

References

- Agarwal P. K., Bain, P. M., and Chamberlain R. W. (2012). The value of applied research: Retrieval practice improves classroom learning and recommendations from a teacher, a principal, and a scientist. *Educational Psychology Review*, 24(3): 437-448.
- Baughan P. (2020). *On your marks: Learner-focused feedback practices and feedback literacy*. York: Advance HE. <https://www.advance-he.ac.uk/knowledge-hub/your-marks-learner-focused-feedback-practices-and-feedback-literacy>.
- Berthoz A. (2014). *La semplicità*. Torino: Codice.
- Berthoz A. (2015). *La vicarianza. Il nostro cervello creatore di mondi*. Torino: Codice Edizioni.
- Boud D., and Molloy E. (2013). Rethinking models of feedback for learning: The challenge of design. *Assessment & Evaluation in Higher Education*, 38(6): 698-712.
- Carless D., and Winstone N. (2019). *Designing effective feedback processes in higher education: A learning-focused approach*. London, UK: Routledge.
- Case J., and Gunstone R. (2002). Metacognitive development as a shift in approach to learning: an in-depth study. *Studies in Higher education*, 27(4): 459-470.
- Castoldi M. (2018). *Curricolo per competenze: percorsi e strumenti* (pp. 154-160). Roma: Carocci.
- Coggi C., and Ricchiardi P. (2018). Developing effective teaching in higher education. *Form@ re-Open Journal per la formazione in rete*, 18(1): 23-38.
- Colarusso S., and Giancola O. (2020). *Università e nuove forme di valutazione: Strategie individuali, produzione scientifica, effetti istituzionali* (Vol. 59). Sapienza Università Editrice.
- Colombo M. (1991). La valutazione nella ricerca sociologica: dalla metodologia alla pratica. *Studi di sociologia*, 281-296.
- Damiano E. (2012). Il “senso” della valutazione. Fenomenologia sociale e opzioni epistemologiche. *Education Sciences & Society*, 2(2).
- Dawson P. (2017). Assessment rubrics: towards clearer and more replicable design, research and practice. *Assessment & Evaluation in Higher Education*, 42(3): 347-360.
- Earl L. (2003). *Assessment as Learning. Using Classroom Assessment to Maximize Student learning*. Corwin Press, Thousand Oaks (CA).
- Evans C. (2013). Making sense of assessment feedback in higher education. *Review of Educational Research*, 83(1): 70-120.
- Gaynor J. W. (2020). Peer review in the classroom: Student perceptions, peer feedback quality and the role of assessment. *Assessment & Evaluation in Higher Education*, 45(5): 758-775.

- Grimaldi E., Landri P., and Viteritti A. (2022). Il movimento delle forme dell'educazione. Epistemologie, governo e soggettività. *Scuola democratica*, 13(1): 11-24.
- Hadji C. (2017). *La valutazione delle azioni educative*. Brescia: Morcelliana.
- Jonsson A. (2013). Facilitating productive use of feedback in higher education. *Active Learning in Higher Education*, 14(1): 63-76.
- Le Boterf G. (2008). Des cursus professionnalisants ou par compétences à l'Université: enjeux, craintes et modalités. *Actualité de la formation permanente*, 209: 49-55.
- Najafabadi M. K., and Mahrin M. N. R. (2016). A systematic literature review on the state of research and practice of collaborative filtering technique and implicit feedback. *Artificial intelligence review*, 45(2): 167-201.
- Pellerey M. (2004). *Le competenze individuali e il portfolio*. Milano: La Nuova Italia.
- Perrenoud P. (2002). *Dieci Nuove Competenze per Insegnare. Invito al viaggio*. Roma: Anicia.
- Rivoltella P.C. (2014). *La previsione. Neuroscienze, apprendimento, didattica*. Brescia: La Scuola.
- Rivoltella P.C. (2021). *Apprendere a distanza, teorie e metodi*. Milano: Raffaello Cortina.
- Rivoltella P.C., and Rossi, P. G. (2022). *Nuovo agire didattico*. Brescia: Scholé.
- Pentucci M., and Rossi P. G. (2021). *Progettazione come azione simulata*. Milano: FrancoAngeli (pp. 1-306).
- Sambell K., McDowell L., and Montgomery C. (2012). *Assessment for learning in higher education*. London, UK: Routledge.
- Tessaro F. (2014). Compiti autentici o prove di realtà?. *FORMAZIONE & INSEGNAMENTO. Rivista internazionale di Scienze dell'educazione e della formazione*, 12(3): 77-88.
- Van der Schaaf M., Baartman L., Prins F., Oosterbaan A., and Schaap H. (2013). Feedback dialogues that stimulate students' reflective thinking. *Scandinavian Journal of Educational Research*, 57(3): 227-245.
- Wilson M., and Sloane K. (2000). From principles to practice: An embedded assessment system. *Applied measurement in education*, 13(2): 181-208.