Pedagogy in Higher Education: Paradigmatic Reinvention of Learning Processes

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Abstract
In a context of major transformations affecting higher education, it is important to (re)think about pedagogical environments that enable students to reflect critically and autonomously on their learning processes, in the context of their initial training. This study is an opportunity to identify students' perceptions of the methodologies implemented by a group of initial teacher training teachers at the University of Madeira (UMa). The research methodology is a qualitative approach, a case study with a class of students from the Masters in Pre-School Education and Teaching of the 1st Cycle of Basic Education (MEPEE1CEB). Their answers to a survey were subject to a content analysis and a triangulation between the theory and the representations of the research subjects. It is concluded that the students' representations show that the course teachers still use traditional practices, but there are already revealing indications of more decentralized practices based on the empowerment of students (Freire, 2014) by some teachers, which motivated them to learn, with positive consequences on their academic results. Contemporary pedagogical thinking points to the imperative need to transform higher education, aiming at the creation of true learning environments, and spaces for creativity and pedagogical innovation, respecting the diversity and individuality of each student, through "pedagogical strategies beyond the traditional lecture and the current transmission model" (UNESCO, 2022, p. 58). It is important to reimagine new pedagogical approaches, giving the student a prominent role in the learning processes, which thus become the driving force of this system.

Keywords: Pedagogy, Higher Education, Learning Processes

Introduction

In this research, we reflect on Pedagogy in Higher Education (HE) and the paradigmatic reinvention of learning processes, in a context of major transformations and reforms, resulting from international policies, marked by the global economy. In recent decades, the large influx of students with diverse paths and trajectories, the policies and guidelines resulting from the Bologna Process (PB) with implications for curricular and pedagogical practices, have placed HE under great pressure, demanding "a role increasingly diverse, open and committed to society" (Guerreiro, 2022, p. 1).

In Europe, the implementation of PB resulted in the redefinition of lines of action and the implementation of new practices that focus on the student and their diversity, improving the quality and variety of the training offer and guiding students with a view to developing essential skills for an uncertain and changing job market (European Higher Education Area, 2009).

From a pedagogical-didactic point of view, the PB discourse frames the paradigm that conceives the student as an active subject in the teaching-learning process, placing "new demands on teachers' modes of pedagogical work" (Leite & Ramos, 2014, p. 75).

And in this way, pedagogy has gained visibility, and teaching work traditionally based on traditional practices has been questioned. "Discreetly," the discussion around learning, that attributes a new status to the student, has supported other pedagogical approaches and the implementation of new teaching and learning methodologies, as well as the reference of other requirements associated with pedagogy.

New spaces for discussion are opening and the quality discourse that breaks with the teaching paradigm, replacing it with that of learning (Decree-Law n.º 74/2006) gains visibility. In other words, as Leite and Ramos (2014) recognize, teachers began to live with the tension between the search for teaching practice, in which the student is the subject of the teaching-learning process and the difficulties of implementing this teaching while meeting the demands competitiveness, arising from market logic.

It was within the framework of these major transformations that affect HE, that we dared to reflect the pedagogy in the pedagogical spaces of initial teacher training and the paradigmatic reinvention of learning processes, which "timidly" is being spread in the discourse on the quality of HE.

Based on this issue, we present the narrative of a study carried out at the University of Madeira that aimed to study pedagogical environments in initial teacher training, based on the perceptions of a group of students about the learning processes implemented, regarding the methodologies used in the initial training of teachers at University of Madeira.

The article presents an analysis of pedagogy in ES based on an empirical study that involved initial teacher training students at this University.

The narrative text that presents the study is organized around 5 thematic dimensions: i) Pedagogy in Higher Education; ii) The learning environments in initial teacher training that support the practices implemented with students; iii) The methodological options adopted; iv) Presentation and discussion of results; v) The conclusion.

Pedagogy in Higher Education

The interest in university as a space for making training decisions is, according to Zabalza (2002), very recent, as it was only from the 90s onwards that studies on pedagogy in ES were consolidated through quantity and increasing quality (Esteves, 2008).

For the author, talking about HE pedagogy means talking about science about teaching and learning, and about science about teaching and learning. However, the evidence emerging from the evaluation reports points to knowledge contained in manuals, which is presented to students, as opposed to "knowledge to ask based on pertinent questions and the search for valid answers, anchored in true communities of learning made up of teachers and students that, strictly speaking, all higher education institutions should be" (Esteves, 2008, p. 103).

The massification of HE validated "the training of merely executive staff who act in accordance with established knowledge" (Esteves, 2008, p. 103), as opposed to the training of creative staff with critical thinking and problem-solving skills. Gradually, some increasingly sophisticated assessment systems are identifying as centers of excellence that focus on training for the development of emancipatory skills oriented towards a critical perspective (Freire, 2014), promoting student autonomy.

In another study promoted by the European Forum for Enhanced Collaboration in Teaching (USA, 2019), cited by Almeida et. al (2022, p. 7),

> a set of guiding principles for pedagogical practices is explained, highlighting the centrality of the student and their characteristics and needs, and academic training not limited to the technical and scientific aspects, which includes critical, creative and resolution thinking skills of problems, diversity and complementarity of strategies with a view to expected learning results, cooperative learning and work in teams or learning communities.

The emergence of new learning scenarios in ES seems inevitable, legitimizing the reconfiguration of pedagogical practices and the promotion of the development of specific disciplinary skills and transversal skills, within the framework of reflective, dialogic approaches, guided by values of a humanistic and democratic nature.

However, fragmented curricula and teaching practices proliferate that do not involve students in the construction of knowledge and the development of lifelong learning skills. Despite advances, "institutional structures and mechanisms to support innovation in teaching are relatively scarce, as are opportunities for pedagogical training for teachers" (Almeida et. Al 2022, p. 8). It is therefore urgent to promote a culture of Pedagogical Innovation, already referenced as a quality parameter for institutions.

Learning Environments in Initial Teacher Training

Postmodernity requires Higher Education Institutions (HEIs) to renounce old pedagogies and "think and act outside the box" (Pereira & Fraga, 2024). Globally, "innovative environments are called for, simultaneously disruptive, capable of reimagining current pedagogical approaches, recognizing the student and the learning processes as the driving force of the system" (p. 2).

Nevertheless, the creation of these new learning environments is an arduous task, in which, in the disruptive framework that is envisioned, the idea of the emergence of pedagogical innovation as a context for educational change gains some consistency. The creation of innovative learning environments is everyone's responsibility and can take different formats that revolutionize pedagogical intervention spaces. According to Freeman et al. (2017):

> Pedagogical approaches that Shift the paradigm from passive to active learning help students to develop original ideas, improve information retention, and build higher order thinking skills. These approaches include problem-based learning, project-based learning, challenge-based learning, and inquiry-based learning, which encourage creative problem-solving and actively implementing solutions. (p. 10)

Also Toffler (1998) reimagining educational institutions with varied arrangements, namely, "(…) Rooms with several teachers and a single student; rooms with several teachers and a group of students; students organized into task forces and project teams; students moving from work groups to individual or independent work" (p. 328), anticipates the emerging break in the current paradigm and the need to respect the pace of each learner, their interests and motivations, as well as respect for diversity . UNESCO also confirms special attention to this need:

> (...) reorienting education so that it gives everyone the opportunity to acquire the Knowledge, skills, attitudes and values needed to contribute to sustainable development. This requires substancial changes in what is taught and how it is taught. ESD (Education for Sustainable Development) entails integrating into the curriculum critical issues such as climate change, biodiversity, disaster risk reduction and sustainable development agenda. (UNESCO, 2014, p. 47)

Assuming the urgency of building innovative learning environments, the future of HE renewal involves recognizing how humans learn and implementing "pedagogical strategies beyond the traditional lecture class and the current transmission model" (UNESCO, 2022, p. 58). In fact,

> Cooperative work between students, the development of research projects, problem solving, individual study, seminar dialogue, field study, writing, action research, community projects – these and many other pedagogical forms – must be present in higher education. To bring pedagogy back to the forefront, it is necessary to give greater value to the teaching work of teachers and support their pedagogical learning and growth. (UNESCO, 2022, p. 58)

This reorganization proposal converges towards a vision of emancipatory pedagogical innovation, contrary to the traditional approach, which is extremely regulatory of all pedagogical action, and which foresees structural changes in the reconstruction, organization and systematization of knowledge, which lead subjects to transformative and emancipatory learning (Freire, 2014).

Founded on ethics, respect for the dignity and autonomy of students, through a horizontal relationship that promotes curiosity and critical capacity, Freire's proposal induces subjects to learn that transforms themselves, their educational and community spaces and consequent emancipation (Macedo et al., 2001).

In the work Pedagogy of Autonomy Freire (2014) highlights the positivity of an inclusive education, supported by pedagogical autonomy and respect for the knowledge of students and relegates all teaching and the act of teaching, linked to the training of technical skills of neoliberal inspiration.

Methodology

In this investigation, we opted for qualitative research, as it was the one that best suited the research objectives, and because of the possibility of describing, clarifying the meanings and meanings of the subjects: students of the master's degree in Pre-School Education and Teaching of the 1st Cycle of Education Basic (MEPEE1CEB).

The research participants are 16 MEPEE1CEB students at UMa. An online form was created on the Google Forms platform with the Questionnaire Survey questions, which reached the subjects via email. Of the questionnaires sent, 16 were answered.

Based on a case study (Yin, 2003), we look at the phenomenon under study in its natural context, seeking to identify the various interactive processes related to the place of Pedagogy in ES to understand its phenomenology.

The data collection technique was the questionnaire survey. This technique was considered due to the need to access the largest number of students and to refine the pedagogical models and practices implemented in the context of initial training provided by UMa's MEPEE1CEB.

The content analysis carried out allowed us to reveal the representations of the research participants regarding the learning processes present in the pedagogical contexts of initial training.

The content analysis of the data collected, according to Bardin (1995), allowed the refinement of the representations of those involved and the alignment of predominant conceptions about the place of pedagogy in the HE institution where the research took place.

Presentation and Discussion of Results

A group of 20 students from the master's degree in Pre-School Education were asked 5 questions and answered 16.

The research methodology consists of a qualitative approach, in a case study with a class of 16 students from the Masters in Pre-School Education and Teaching of the 1st Cycle of Basic Education (MEPEE1CEB). They responded to a survey and their responses were subject to content analysis and data triangulation.

1 - *How do you characterize methodologies operationalized by teachers who teach the Curricular Units (CU) that make up the study plan of your course?*

Of the 16 responses obtained, 8 students stated that the methodologies implemented by teachers were appropriate and positive. Each of these students had another opinion about them, resulting in these ideas: "varied, adapted to the needs of students, logical, supportive of the internship, based on independent study and combining ideas, thoughts, knowledge,

encouragement of reflection critical of students, link theory with practice, use active approaches and develop in learning communities" (e.g. collaborative work and case studies).

One of these students admitted that some teachers continue to implement traditional methodologies, and another student said: "Although the course offers a solid theoretical basis, there are important gaps in practical training, which limits our preparation to face the real challenges of practice."

On the other hand, 8 students expressed a different opinion, stating that the methodologies used are "traditional, expository, don't make sense" (teachers give classes, where they tell you to do the opposite of what they do), are based on presentations and use of documents and "are not adjusted to the interests of students." They suggest "more collaborative methodologies, diversification of approaches," incorporating interactive activities, "such as practical projects to promote more engaging and effective learning."

However, one of these students states that she notices "some changes that promote more engaging and traditional learning."

2 - *Do the learning scenarios of the UCs you attended or are attending on your course use a traditional or innovative approach? Justify.*

6 students responded that most scenarios are traditional, although there are attempts at innovation, 5 stated that they were innovative, mainly in the master's degree than in the undergraduate degree, although of these, 2 recognized that not all of them are. 4 stated that there is a balance, that is, around half of the teachers seek to innovate, but others still create traditional scenarios.

3 - *Give examples of the most common class structures, in line with the methodologies previously reported*.

Half of these students (8) responded that classes are based on PowerPoint presentations, presentations of theoretical content, practical exercises and planning, taking into account the theory presented, written work, theoretical tests. 4 students highlighted other more active and practical approaches, such as: group work, research, debates, to enable "active participation, critical reflection and the application of knowledge" However, 2 of these students mentioned that part of the class is expository and the other part consists of collaborative work, practical moments, studies and case studies, based on more active dynamics. 2 students highlighted the challenges of carrying out research projects.

4 - *Do teachers usually encourage critical reflection and active participation during classes? Give examples of concrete actions implemented by teachers*.

All students said that some teachers encourage critical reflection, as they ask for their opinion and seek to awaken interest and motivation, asking questions about real situations and other subjects. "I have a teacher who asks our opinion, using what's called popcorn, which makes us participate and pay close attention" "promote group discussions or debates on topics (…) and challenges to reflect on real cases." 7 of these students recognized that not all teachers call for critical reflection and one of them stated that it happens more in the master's degree.

5 - *During your academic career, in Higher Education, can you identify UC where student autonomy, the development of critical thinking and the student's active role were provided? Explain the dynamics of this*.

Mathematics didactics (6), internships (5) and the curricular unit on technology and pedagogical innovation (4) were the CUs most mentioned by students. “In mathematics teaching, we had an active role and critical thinking. The discoveries came from us until we reached conclusions.” In most UCs related to pedagogical practice, an attempt was made to promote student autonomy through the creation of plans and debates on various topics.” “The curricular unit on technology and pedagogical innovation was based on the creation of a weekly weblog.”

Other curricular units were also mentioned: mathematics VI; curricular development in the 1st cycle of basic education; mathematics I; mathematics V; specific didactics of mathematics; specific didactics of Portuguese; specific didactics of the study of the medium; theory and curricular development; Plastic expression; expressions seminar; specific didactics of expressions; dramatic expression; musical expression; Portuguese IV.

From the answers obtained, it is possible to see that half of the students consider pedagogical work environments to be traditional and the other half believe that there are innovative environments. This process of change is not simple. In fact, more than a place to acquire techniques and knowledge, teacher training is the key moment in teacher socialization and respective professional configuration (Nóvoa, 1991).

It’s important to (re)thinking the pedagogical environments that promote new perspectives on learning processes, reflective practices, critical thinking and new forms of autonomous work among students in the context of initial training.

Higher Education (HE) is not at the mercy of the acceleration that is going through contemporary societies. It has consequences for teaching and learning processes, whose pedagogical intervention strategies must respond to the needs of an increasingly mass and heterogeneous public (Pedrosa, 2001).

Some ground has already been covered towards new pedagogical practices, but there is still a long way to go, because changing paradigms is a slow and complex process. As recognized by the CNE (2022):

> Exploring contexts where learning is meaningful, with impact and quality, constitutes a challenge for pedagogy. There is consensus on the need to evolve towards a model of student autonomy, abandoning the expository, passive model, based on the deep-rooted dependence on retaining only what is presented. Students are required to have new skills: filtering information, interpreting, identifying false ideas, having critical sense and creativity and a sense of personal agency that drives action. To achieve this, students need new teaching models, with an understanding of phenomena and articulation of knowledge, which provide constant feedback and spaces for collaboration and reflection. (p. 97)

Conclusion

This article analyzed pedagogy in ES based on an empirical study involving initial teacher training students at the University of Madeira and the conclusion is that the echoes of contemporary pedagogical thought point to a learner who is the subject of his learning, an active participant in the construction of a curriculum tailored to his needs, with respect for diversity and individuality, hoping for the transformation of the school and the university, which become the to be places of dialogue and critical reflection, a habitat for creativity and pedagogical innovation.

However, this process is complex and requires time and hard work for teachers to appropriate the new principles that should guide their practices and the need to transform them to place the student at the center. Therefore, the pedagogical training of HE teachers is urgent, "which is intended to be current, cohesive and competitive" (Marques & Pinto, 2012, p. 130).

In fact, teacher training is one of the possible answers to make professional renewal possible. However, it is also essential that teachers can understand the reasons for this change and believe in its possibilities.

Pedagogy is a significant area of focus for higher education teachers who need to rethink their methodologies. The lecture, tests and theoretical classes are still an accepted teaching approach, and many students still spend their class hours passively taking notes while the teacher presents theory. Pedagogy allows teachers to understand how students learn and apply more active approaches, giving the main role to students. In this sense, pedagogy can make a difference in promoting meaningful and golden learning. It is about focusing attention on each student's ways of learning to adapt strategies to enable learning and see themselves as a facilitator and guide rather than a transmitter of knowledge.

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