

## **BLENDED LEARNING AND DISTANCE LEARNING: DEVELOPMENT OF COMPETENCES IN TEACHER EDUCATION IN BRAZIL**

*BLENDED LEARNING E EDUCAÇÃO A DISTÂNCIA, DESENVOLVIMENTO DE COMPETÊNCIAS NA FORMAÇÃO DE PROFESSORES NO BRASIL*

Luís Paulo Leopoldo Mercado – Universidade Federal de Alagoas

[luispaulomercado@gmail.com](mailto:luispaulomercado@gmail.com)

**Abstract.** This paper presents the current perspectives of teacher training in Brazilian higher education. It presents the spaces for teacher training in higher education: curricular components with a pedagogical bias offered in Postgraduate Programs; teaching practice and activities involving training actions focused on the use of teaching strategies with digital technologies emphasizing the flipped classroom, hybrid and online education; institutional programs of continuing teacher training implemented in university institutions. The methodology involved bibliographic and documentary research with mapping of training spaces for teaching in higher education. The results indicate the possibility of the coexistence of several training spaces in university institutions in addition to postgraduate studies, a space provided for in Brazilian educational legislation.

**Keywords:** Teacher training; Higher education; Information and communication technologies; Hybrid education.

**Resumo.** Este trabalho apresenta as perspectivas atuais da formação de professores no ensino superior brasileiro. Apresenta os espaços de formação docente no ensino superior: componentes curriculares com viés pedagógico oferecidos em Programas de Pós-Graduação; , prática docente e atividades envolvendo ações de formação voltadas para o uso de estratégias didáticas com tecnologias digitais enfatizando a sala de aula invertida, educação híbrida e online; programas institucionais de formação continuada de professores implementados em instituições universitárias. A metodologia envolveu pesquisa bibliográfica e documental com mapeamento dos espaços formativos para a docência no ensino superior. Os resultados apontam a possibilidade da coexistência de vários espaços formativos nas instituições universitárias além da pós-graduação, espaço previsto na legislação educacional brasileira.

**Palavras-chave:** Formação de professores; Ensino superior; Tecnologias de informação e comunicação; Educação híbrida.

### **1 Introduction**

In this paper, we will present the current perspectives of teacher training in Brazilian higher education. It presents the spaces for teacher training in higher education: curricular components with a pedagogical bias offered in Postgraduate Programs; teaching practice and activities involving training actions focused on the use of teaching strategies with digital technologies emphasizing the flipped classroom, hybrid and online education; institutional programs for continuing teacher training implemented in university institutions.

## 2 Higher education in a changing society

The process of expansion and internalization of university institutions in recent years has been fundamental for the expansion of teaching careers, some of which are recent masters or doctors. These beginning teachers seek opportunities for professionalization in their teaching careers, as they completed their masters and doctorate courses learning about research and, in general, delved into a topic of study vertically, in a progressive process of specialization, often without teaching in these courses.

Teacher training for the university context (Almeida, 2012; Bassos, 2016; Favero and Tauchen, 2013; Felkeecher, 2016; Gatti, 2016; Masetto, 1998 and 2020; Ramos, 2010; Pimenta, 2009; Mendonça, 2013; Prigol and Behrens, 2014; Santos et al, 2020) is highlighted and valued in the constant changes in society, through technological innovations that provide teaching with the need for innovation in methodologies and teaching materials and involve new curricular designs with differentiated work by university professors. Thus, they constitute new challenges and demands of the digital and globalized society reflected in teaching in higher education.

Teacher training increasingly demands a set of knowledge ranging from knowledge of the pedagogical field to specific knowledge and is considered one of the fundamental factors for the quality of universities. The new demands placed on the training of future teachers result in the need for a profound renewal in the context of the classroom and teaching methodologies, which requires the development of new skills in teachers in their training work.

The training of university professors is an area omitted in Brazilian educational legislation, which requires only technical competence, which highlights the absence of a policy directly aimed at the training of these teachers. The legislation is silent on the scope of this training and does not conceive of the training process for university teaching as such, but only as preparation for the exercise of basic education, indicating that training for teaching at the higher level occurs in postgraduate studies. The pedagogical training of university professors was left to the responsibility of the regulations of each university, which is responsible for offering postgraduate courses, which indicates the belief that offering this training is unnecessary.

The training of university professors includes the training processes, multidisciplinarity, the knowledge necessary for professional practice, experiences, life trajectories, the way the professor teaches, how he organizes content, procedures, and how he deals with students. From the valorization of knowledge, experience emerges that validates the way the professor acts when making certain decisions and positioning himself in the face of everyday problems (Pimenta; Anastasiou, 2010).

There is a growing interest in the professionalization of university professors and their training, as evidenced by the training and innovation programs created in some university institutions and in publications related to higher education, professors, the role of teaching innovation and experimentation with new forms of curricular organization. In addition, it explores and develops new methodologies with the aim of improving the quality of higher education.

Continuing education actions in permanent service are gaining space within university institutions and in online contexts, such as MOOCs and repositories of free courses and video classes on institutional YouTube channels. They range from specific courses, aimed at teachers in projects or institutional policies with the promotion of training practices for higher education, to training in virtual learning environments and other online spaces beyond the institution.

Higher education institutions cannot shirk their role in the process of pedagogical training of their teachers. Postgraduate courses have offered this training in curricular components in which pedagogical knowledge is considered a body of instrumental technical knowledge, capable of presenting recipes for teaching situations. This training period is not sufficient to professionalize any professional, including the professionalization of teachers. Technical knowledge is prioritized in

areas such as Natural Sciences and Engineering, in which there is no culture for pedagogical training. Postgraduate courses rarely offer curricular components that significantly contribute to the teaching practice of bachelor's degree graduates, such as Supervised Teaching Internship, Didactics, Teaching Practice, Teaching in Higher Education, and Teacher Training.

The context of digital culture and the need to use digital technologies (Bates, 2016; Coll and Monereo, 2010; Mercado, 2015; Padilha, 2016; Perez-Gomez, 2015; Spanhol et al, 2020) challenge universities to seek alternatives to traditional teaching and to focus on more participatory and integrated learning, with face-to-face moments and others with online activities, in which teachers and students interact virtually and also maintain personal and emotional ties.

Teacher training and qualification programs are not sufficient to meet the needs of developing skills linked to the responsible and committed use of different technologies in the educational context (Gatti, 2013). The post-COVID-19 pandemic context required the creation of training and teacher training spaces in which teachers can develop the skills necessary to prepare students to work in the professional world. For this reason, active teachers, considering their social role as educators of these and new generations, need to develop skills that enable them to provide students with learning opportunities through the use of different digital technologies, incorporating them into their teaching practice.

In universities, online education (Araújo and Peixoto, 2010; Moreira et al, 2020) and the use of digital technologies in face-to-face courses have triggered most teacher training actions in recent years. Currently, there is a need to explore active methodologies, didactic designs such as flipped classrooms (Almeida et al, 2020; Santos and Mercado, 2021), augmented reality, hybrid classes (Moreira, 2020; Santos et al, 2020; Mercado and Santos, 2021; Mercado et al, 2020), and the construction of differentiated didactic proposals such as interdisciplinary bachelor's degrees and curricula integrated into thematic axes.

The post-COVID-19 pandemic context will no longer divide education into face-to-face and online modalities; these will be integrated into hybrid spaces and new possibilities. Networked digital technologies are incorporated into subjects and their practical actions reverberate their uses according to their needs and emergencies.

Teacher training actions related to the use of digital technologies are crucial in these times and involve training in the specific domain of content in the use of these technologies in face-to-face and hybrid classes and in the virtual learning environment for online education. In addition, these trainings should focus on knowledge of the fundamentals of online education, tutorial practice models, pedagogical mediation processes and training of educational managers.

### **3 Teacher formation in posgraduate studies**

In the context of Brazilian postgraduate studies, teachers have been trained for research and not necessarily for teaching, and when they start teaching, they need specific training for this. Teacher training in postgraduate courses is provided through the curricular components of Higher Education Methodology and Teaching Internship, in addition to specialization courses. Master's and doctoral courses end up becoming the only space available for training these teachers, albeit in a secondary way, since the emphasis continues to be on developing competence in scientific research to the detriment of pedagogical competence. Postgraduate studies are organized to develop and deepen the training acquired in undergraduate studies, prioritizing the training of researchers who are specialists in a given area of study, thus reinforcing the principle of technical

rationality in which having a certain amount of formal knowledge includes the ability to teach it. Postgraduate studies continue their mission of training researchers and developing research in the country without getting involved in teacher training (Masetto, 2008).

Master's and doctoral courses are academic training spaces that are based on research, and their objective is to train researchers in education. They offer curricular components related to teaching or higher education methodology, constituting a locus of training for knowledge and understanding of theoretical-methodological references related to the phenomenon of education, teaching and learning in contemporary society, among other training.

This curricular component explores the constituent elements of teaching action, such as planning, class organization, methodologies and teaching strategies, assessment, peculiarities of learning and teacher-student interaction. They also explore active methodologies for the use of digital technologies in in-person, hybrid and online education and their inclusion in teacher training courses, in addition to working with interactive teaching materials and renewed pedagogical practices.

The contents of the curricular components involve teaching and learning methodologies; knowledge of the educational reality of students, with which the teacher will work; digital technologies; management of hybrid or online classes, planning and evaluation, interdisciplinarity and teaching working conditions.

Another training space in the context of postgraduate studies is the Teaching Internship, which aims to develop pedagogical training for postgraduate students, who will have as their professional activity the exercise of teaching in higher education. The internship in undergraduate studies can be one semester in the master's degree and two semesters in the doctorate and is supervised by the master's/doctoral student's advisor.

The Teaching Internship is an important moment in the construction of professional identity. In the context of postgraduate studies, it is a space for the development or improvement of teaching skills, as it allows the master's/doctoral student to accompany a university professor in the professional exercise of undergraduate courses, promotes learning and can constitute a teaching experience that will help in the formation of future university professors.

The teaching practice developed in the Teaching Internship allows the intern to learn from observation and participation in the classroom in interactions with peers, professors and advisors and in the development of skills throughout the training and effective pedagogical practice with students.

The third educational space present in postgraduate studies are specialization courses, which are characterized by a process of continuing education aimed at improving professionals in scientific training, in the construction or reconstruction of specific knowledge, updating, improvement, constant review of practice, exchange of experience and consequent development of teaching knowledge and skills (Masetto, 2008).

In the educational activities carried out in postgraduate studies, participants discuss and practice procedures and strategies appropriate to higher education; they learn about and discuss pedagogical proposals that focus on the interrelationship of areas of knowledge and teaching and learning processes.

## **4 Face-to-face, hybrid and online institutional formation programs for teaching**

Due to the rapid expansion of hybrid and online education in the current context, new possibilities for teaching have emerged (Silva, 2015). However, these new possibilities require new knowledge

related to the use and interaction through digital technologies, which are not part of the initial training of teachers, but are constructed during the experience in these contexts.

In education mediated by digital technologies, especially through the virtual learning environment, the online teacher needs to know how to plan in detail how all teaching moments will be; welcome the student so that they feel part of the process; pay attention to the process of communicating information, especially with regard to content and interaction; be available to work in a team; be able to understand and act in different phases of the process of organizing courses mediated by digital technologies, in addition to knowing how to teach and evaluate in hybrid and online contexts.

It is up to universities to create permanent teacher training actions within the institutional scope as a whole, encouraging postgraduate courses and undergraduate courses to do so, or even valuing and expanding good practices such as pedagogical support groups. They must allow teacher training to go beyond the limits of developing practical skills, seeking to integrate teaching and research activities with moments of reflection and action.

The need for university teacher training has led university institutions to implement programs and actions for the continued training of their teachers to meet their necessary didactic-pedagogical training (Bacich and Moran, 2018; Camargo and Daros, 2018; Santos et al, 2020). This leads to flexibility in time and space for carrying out training activities, given that these professionals are immersed in the most diverse academic tasks. The need to institutionalize research centers and pedagogical support within universities has led some institutions to create teacher training programs, such as the University Pedagogy Course for the Continuing Professional Development of Teachers (University of São Paulo), the Higher Education Teaching Program (State University of Ponta Grossa), the Open Classroom Program – Higher Education Teaching (Federal University of Ouro Preto), the Teacher Training Program - Proford (Federal University of Alagoas) and the Pedagogical Training Program Didactic Workshop (Federal University of Bahia).

One of the alternatives that contribute to making training processes viable is the use of different training loci, characterized by in-person, hybrid and online teaching. In this sense, the virtual learning environment stands out as one of the scenarios in which multiple pedagogical possibilities can be mobilized in teacher training in a hybrid teaching model.

As an example, we have Proford, from the Federal University of Alagoas (<http://www.ufal.br>), which emphasizes the work focused on teacher training and offers training and updating of teachers in the use of digital technologies in face-to-face, hybrid and online courses. The objective of the Program is to train and update teachers on the theoretical and practical aspects related to the use of digital technologies in the teaching/learning processes. It involves several training actions, such as the production of educational content and teaching materials; the use of the virtual learning environment, the use of digital technology resources; the construction of teaching materials relevant to the execution of curricular components developed in hybrid and online contexts. In addition, it develops innovative didactic-pedagogical proposals for the design of teaching materials and encourages the collective authorship of this design.

The training of teachers by Proford aims to guarantee skills that provide conditions for the development of new learning mediated by digital technologies by increasing the demand for undergraduate, graduate and extension courses in hybrid and online formats. It also proposes to expand the knowledge and need of teachers and tutors to work with online education and the development of methodologies for preparing teaching materials that involve the use of digital technologies and virtual learning environments on different platforms and online learning spaces.

To this end, it is necessary to develop pedagogical proposals for teacher training so that teachers and others involved in this construction process are prepared for an educational culture centered on the student.

The courses offered aim to promote teacher training through the use of digital technologies for the inclusion and implementation of innovative methodological practices in undergraduate courses, using the virtual learning environment to facilitate projects and experiments carried out by teachers. This training will take place in specific actions in the curricular components, during the academic semester; in the experimentation of methodological alternatives using technologies to optimize teaching content and practices; in the development of skills for the use of virtual learning environments that cover the domain of content, digital technology resources and pedagogy in online education.

In addition, it will disseminate new knowledge for the exercise of teaching and encourage the development of projects that allow the use of the workload in the online education modality in face-to-face courses provided for in Brazilian legislation. Finally, there will be a presentation and proposal for enabling the use of digital technologies in pedagogical practices for innovation and experimentation in face-to-face curricular components, which allows for completing learning activities in the face-to-face classroom with online activities, supervised by teachers. The combination of face-to-face meetings with the flexibility of virtual learning allows for the characterization of hybrid education.

Teacher training actions focused on online education meet the challenges of this modality in universities and require those involved to have environments that allow authorship in online education, interaction, pedagogical mediation and collaborative knowledge production proposed in the innovative course "Teacher Training for Online Teaching" (<http://saladeaulainterativa.pro.br/moodle/course/view.php?id=11>). This training program brought together several postgraduate courses from different Brazilian universities and was carried out in the Moodle virtual learning environment. Its purpose was to research the construction of a 360-hour online teaching and learning course.

Incentives for the use of digital technologies integrated into teaching practices require methodologies appropriate to the area of knowledge, allowing for interdisciplinary innovations. Many digital technologies are not part of teacher training processes, nor are they included in curricula, but are understood as resources that allow old pedagogical practices to be transposed to new learning contexts when they are present.

The valorization of the use of digital technologies and virtual learning environments as teaching support resources aims to favor the institutionalization of teaching-learning methods and practices that promote integration and convergence between in-person and online education modalities.

Continuing education programs for teachers at universities involve training policies in the construction of teaching identity and professionalization, since continuing education enables the exchange of experiences and opportunities to reflect on training, challenges and new configurations required for higher education. Continuing education also establishes the interrelationship between teaching, research and extension by providing teachers with training actions aimed at reflecting on teaching practice and academic management.

The current challenges in education, with the growing demand for teacher training in universities, combined with the need to prepare teachers to work as a team with autonomy to seek information and solve problems, require an expansion of the range of proposals for the use of new learning spaces in higher education. This expansion will enable paradigm shifts and the development of innovative teaching, research, extension and management activities, integrating training practices that involve discussions with teachers about the social role of the university institution, in addition to the teaching-learning process and planning in higher education. Furthermore, it will enable the study of different pedagogical approaches and procedures in university teaching, meaningful

learning and the articulation between theory and practice for the use of different teaching and learning methodologies in the hybrid or online classroom.

## 4 Conclusion

Teacher training events are effective to the extent that they enable the construction and reconstruction of new knowledge and pedagogical practices, the appropriation of new resources and strategies for teaching, and the establishment of closer and more cooperative relationships between teachers and students, as well as greater knowledge and understanding of the community in which the university is located.

Therefore, it is necessary to rethink the curricula of teacher training programs or actions and postgraduate courses in order to implement actions to value and encourage teacher training with a focus on the pedagogical use of digital technologies in online education, which is one of the challenges faced by university institutions, which need to invest in ongoing teacher training with digital technologies. This is because these technologies today directly affect the teaching modality, methodologies, the way of accessing the internet and acquiring knowledge, the resources used, and the mutual interaction between students and teachers.

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