EmRede
Revista de Educação a Distância
UniRede

EmRede, v.11. 2024

Hybrid Education in the training of managers: an experiential view of the impacts and challenges

Fernando Silvio Cavalcante Pimentel
Federal University of Alagoas (Ufal), Maceio, Alagoas, Brazil
fernando.pimentel@nees.ufal.br

Luciana Peixoto Santa Rita
Federal University of Alagoas (Ufal), Maceio, Alagoas, Brazil
luciana.santarita@nees.ufal.br

Ibsen Mateus Bittencourt Santana Pinto
Federal University of Alagoas (Ufal), Maceio, Alagoas, Brazil
ibsen.bittencourt@nees.ufal.br

Natalício Batista dos Santos Junior
Fine Arts University Center of Sao Paulo (FEBASP), Sao Paulo, Sao Paulo, Brazil
natalício.junior@nees.ufal.br

Maria Julia Rodrigues Amaro
Federal University of Alagoas (Ufal), Maceio, Alagoas, Brazil
maria.amaro@iqb.ufal,.br

Abstract: This study examines the planning, development and evaluation of a discipline in a specialization course for managers in hybrid education. The aim was to analyze the experience of a curricular component dealing with hybrid education. The methodology is qualitative, with an experiential research approach (Kolb, 1984). The results indicate that the model offers flexibility and expanded access, despite challenges in retaining and engaging participants.

Keywords: Hybrid Education; Management Training, Experiential Research.

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

EmRede
Revista de Educação a Distância
UniRede

Educação Híbrida na formação de gestores: uma visão experiencial dos impactos e desafios

Resumo: Este estudo explora a o planejamento, o desenvolvimento e a avaliação de uma disciplina em um curso de especialização de gestores para a Educação Híbrida. O objetivo foi analisar a experiência de um componente curricular que trata de Educação Híbrida. A metodologia é qualitativa, com uma abordagem da Pesquisa Experiencial (Kolb, 1984). Os resultados indicam que o modelo oferece flexibilidade e acesso ampliado, apesar dos desafios na manutenção e engajamento dos participantes.

Palavras-chave: Educação Híbrida; Formação de Gestores, Pesquisa Experiencial.

La educación híbrida en la formación de gestores: una visión experimental de las repercusiones y los desafíos

Resumen: Este estudio explora la planificación, el desarrollo y la evaluación de una asignatura en un curso de especialización para gestores de Educación Híbrida. El objetivo era analizar la experiencia de un componente curricular relacionado con la Educación Híbrida. La metodología es cualitativa, con un enfoque de Investigación Experiencial (Kolb, 1984). Los resultados indican que el modelo ofrece flexibilidad y acceso ampliado, a pesar de las dificultades para mantener y comprometer a los participantes.

Palabras clave: Educación Híbrida; Formación de Gestores, Investigación Experiencial.

Received on: 2024-08-28

Accepted on: 2024-11-08

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

1 INTRODUCTION

Hybrid education, which at first seems to be limited to combining elements of presential and distance education, has gained prominence as an innovative and flexible approach to education. This educational model aims to integrate the best of both worlds to provide a personalized and accessible learning experience. It involves the intentional and strategic integration of different teaching and learning methods to create a richer and more effective educational experience.

In addition, hybrid education focuses on using emerging technologies to support innovative pedagogies such as project-based learning, collaborative learning, and the use of data to personalize each student's experience (Garrison; Kanuka, 2004). It allows educators to use various tools and resources to meet the diverse needs of students, facilitating active and self-directed learning. According to Gamage, K; Gamage, A. and Dehideniya (2022), hybrid education not only mixes modalities but also transforms the educational approach, promoting a deep integration of resources and methods to maximize learning potential.

The increasing digitization of society and the need to adapt to different educational contexts are driving the implementation of hybrid practices (Garrison; Kanuka, 2004). According to Horn and Staker (2017), hybrid education allows for greater flexibility and autonomy for students and promotes more active and engaged learning. In this sense, the development of contextualized training with practice, discussing and experiencing the foundations and practices of hybrid education, is therefore essential to prepare educators and students for contemporary demands. According to Siemens (2004), connectivity theory highlights the importance of networks and interaction in the construction of knowledge facilitated by digital technologies. Therefore, training teachers to work in this hybrid scenario is crucial for success in the context of digital culture (Pimentel; Nunes; Sales Júnior, 2020).

This article presents the results of empirical research carried out during the development of a discipline on the foundations and practices of hybrid education in the lato sensu specialization course in Public Policy Management for Hybrid Education, of the Hybrid Education Innovation Network (RIEH). It is noteworthy that RIEH was launched in 2022 as a component of the National Policy for Learning Recovery of the Ministry of Education (Brazil, 2022).

This research started from the following guiding question: What are the impacts and challenges

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

faced by the teacher in the development and implementation of a discipline on the principles and practices of hybrid education in a course for managers of public education networks, based on an experiential research approach, using active methodologies and digital technologies?

In this sense, the objective of this article is to present the experiences and difficulties experienced by the teacher in the development and implementation of a discipline on hybrid education in the context of a specialization course for managers of public basic education in Brazil. The research focused on applying active methodologies and digital technologies, exploring the effects and challenges of this innovative approach in higher education, aiming to promote an integrated learning experience.

Data collection in the research was carried out through several techniques, focusing on the teaching actions in the curricular component "Hybrid Education: foundations and practices" of the Specialization Course in Hybrid Education Policy Management, offered by the Federal University of Alagoas (Ufal). The data were obtained from documents produced by the teacher, including lesson plans, teaching materials, and activity records made available in the virtual environment of the course (https://ava.rieh.nees.ufal.br/). A logbook was used to record detailed observations on the development of curricular activities and photographic records.

In the analysis phase, data were systematized and examined using Kolb's (1984) learning cycle, which includes the stages of concrete experience, reflective observation, abstract conceptualization, and active experimentation. First, concrete experiences with the use of active methods and digital technologies were documented and evaluated. Then, teachers' reflections on practice were analyzed to identify challenges and necessary adaptations. Active experimentation involved implementing changes to the curriculum and continuously evaluating their effectiveness, resulting in adaptive adjustments that improved pedagogical practice and student engagement.

2 HYBRID EDUCATION, ACTIVE METHODOLOGIES AND TEACHER TRAINING

Advances in digital technologies, artificial intelligence, media, and mobile networked communication devices are not isolated events limited to the technical and scientific transformations of recent decades (OECD, 2020; Shanmugasundaram; Tamilarasu, 2023). Technological transformations are embedded in broad and complex economic, political, social, and cultural contexts that have determined significant changes in the forms of

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

local and global economic production, in the power relations between subjects, institutions, companies, and states, and, above all, in the sociability, symbolic imagination and cultural creativity of individuals and social groups (Sousa; Moita; Carvalho, 2011; Castells, 2003).

Education, as a constitutive dimension of social, political, and cultural practices, is not oblivious to technologies, and communication transformations, nor to the economic, geographical, and environmental contexts of a given time. The relationship between education and technology is a historical one that, strictly speaking, since modern times has involved the interests of states, expressed in the political and didactic purposes and challenges of the pedagogical project and the planning of educational institutions, both public and private. From this perspective, attention to the continuing education of teachers plays an important role (Borisenkov; Gukalenko; Pustovoitov, 2021) because of the need and challenges of adaptation, training, and reflective attitude of educators in the face of transformations of digital culture (Lévy, 1998; 2003) and networked society (Castells, 1999) and their respective impact on education, specifically on the constitution and participation of subjects (teachers and students) in the teaching-learning processes.

Strictly speaking, teacher training is not limited to the individual actions of teachers or to isolated and specific training programs in educational institutions. Rather, it must be part of the objectives of the State's public policies for education (Gatti, 2016) and is also a relevant condition for the identification, recognition and appreciation of the place and role of education in society.

Teacher training for hybrid education has involved studies and practices, mobilized research and, above all, promoted interdisciplinarity between fields such as education, communication, social sciences and computer science. Among the interests and concerns of educators and researchers are questions about the foundations and evolution of the relationship between education and technology, namely:

a) The theoretical assumptions of technology in Education (Dos Santos; Mortimer, 2000; Valente; De Almeida, 2020);
b) Educational Theories in the face of pedagogical processes and the use of technologies (Moreira; Kramer, 2007);
c) The origins, contexts and conflicts pertinent to the presence of technologies in teaching-learning processes (Valente; Almeida, 2020);
d) Autonomy, creativity, innovation and engagement of teachers and students in the teaching-learning processes (Diesel; Baldez; Martins, 2017); and

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

e) The formation of technical, digital and socio-emotional skills and abilities of teachers and students (Abed, 2016; Loureiro; Meirinhos; Osório, 2020).

In this context, teacher education for hybrid education has been confronted with some approaches that combine the analysis and review of classical pedagogical trends (incremental development, instructionalism, constructivism, and popular education) and deterministic and instrumentalist positions on the use of technology in education.

Despite the many benefits that hybrid education offers students, teachers, and administrators, it also presents challenges that administrators must address. The literature on hybrid education emphasizes the importance of educational administrators planning with technical needs, human resources, students, and families in mind (Şahin, 2022).

The debate has developed from several perspectives. On the one hand, there is the belief that digital and networked technologies could solve educational problems and optimize teaching-learning processes, with technology often being a sign of quality in education. On the other hand, there is suspicion of the leading role of technology in education, pointing to the risks of technologies reproducing relations of domination and oppression.

The fact is that despite the oscillations in views about the relationship between education and technology, attention to the purposes of teacher education in hybrid education concerns the ethical and critical commitment of education and educators to the changes in today's world. Among the many issues raised by this commitment is the identification and understanding of both the expansions and limitations and the emancipatory or manipulative nature of the public and private use of digital technologies in social life and education. Indeed, the virtualization of information and data, as well as advances in connectivity and the means to store, process, and share texts, images, and sounds, make digital culture the current context in which the production, transmission, and reception of knowledge and the work of teachers take place is manifested.

2.1 Hybrid Education: an Innovative Approach to Learning

Hybrid education is emerging as an innovative teaching methodology proposal that seeks to combine the best of in-person education with the advantages of online education (Lencastre, 2013; Oliveira et al., 2024), without limiting itself to this concept,

which can often be misinterpreted.

According to Graham (2013), hybrid education is characterized by the combination of online teaching methods or mediated by digital technologies, to create a more flexible and personalized learning experience for students. This flexibility allows students to learn at different paces and styles, adapting to their needs and preferences. "However, conceptualizing hybrid education only as a combination of online and presidential percentages does not encompass the complexities suggested by the use of this concept" (Lima; Rodrigues; Cruz, 2021, p. 64, translated by us). This integration of different learning environments and methodologies is intended to provide students with a more personalized, flexible, and effective educational experience (Lencastre, 2013).

Lima (2024, p. 14, translated by us) defines hybrid education as "a methodology that combines face-to-face and distance learning and that uses technologies with the same purpose, which is to integrate the same content with different pedagogical approaches and different spaces, with the use of technologies".In other words, hybrid education can be analyzed as a multifaceted and adaptive educational methodology. By using digital technologies, the same content can be approached in different ways, adapting to different contexts and learning spaces. This not only facilitates the personalization of teaching but also promotes flexibility, allowing students to learn at their own pace and access educational resources in a continuous and contextualized way.

The convergence of diverse pedagogical practices through digital technologies reinforces the interactivity, engagement, and effectiveness of the educational process, preparing students for the challenges of an increasingly digitalized and interconnected world.

Scientific literature points out several benefits of Hybrid Education, such as:

- greater student engagement: combining presential and online activities can increase student interest and participation in the learning process (Means *et al.*, 2010);
- better performance: studies show that hybrid education can lead to better student performance compared to traditional education (Bonk; Graham, 2012); and
- development of essential skills: Hybrid education can promote the development of important skills for the 21st century, such as autonomy, collaboration, critical thinking and problem solving (Camargo; Daros, 2021).

However, the implementation of hybrid education, like any other educational project, requires planning and organization. It is essential to define the learning objectives, the methodologies to be

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

used, the technological resources (analog and digital) required and the way in which students will be assessed.

Hybrid education is a promising alternative for the present and future of education, but it is not without its challenges. This integration of hybrid education requires the implementation of public policies that take into account its specific characteristics and needs. Some of the challenges of policy management for hybrid education can be identified, such as:

- Technology Infrastructure: The implementation of hybrid education requires access to high-speed internet, computers and other digital devices for students and teachers. According to the study "The Internet in Brazil", conducted by NIC.br in 2022, 41% of Brazilian households do not have access to fixed Internet. This digital divide can exacerbate social inequalities in education;
- Teacher training: Teachers need to be trained to use digital technologies effectively and to develop hybrid teaching methods that meet the needs of students. It is estimated that only 30% of Brazilian teachers feel prepared to use digital artifacts in their classrooms; however, the challenge of training is more than having the ability to use digital technologies; it involves understanding the importance of using such technologies to enhance and deepen the teaching and learning process.
- Regulation: Brazilian education legislation is not yet fully adapted to the reality of hybrid education. It is necessary to create laws and regulations that define the parameters for the implementation of this teaching modality, such as the minimum face-to-face workload, the evaluation of students and the responsibilities of educational institutions.

But if on one hand we have challenges, it is important to consider the opportunities:

- Personalized Learning: Hybrid education allows students to learn at their own pace and style, according to their needs and interests. This can help improve academic performance and develop essential 21st century skills such as autonomy, collaboration, and critical thinking. However, this element does not mean that collective learning processes do not take place. Collaboration and cooperation are also possibilities;
- Inclusion: hybrid education can be used to promote the inclusion of students with disabilities who may have difficulty keeping up with the pace of traditional classrooms (Albuquerque, 2021); and

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

- Cost reduction: Hybrid education can reduce infrastructure and school transportation costs, which can be especially beneficial for communities with limited resource.

By identifying these opportunities, it is clear that the management of public policies for hybrid education must be guided by a dialogue between the different sectors of society, including governments, universities, schools, businesses and civil society. It is essential that public policies take into account the specific characteristics and needs of the Brazilian context in order to guarantee quality hybrid education for all.

2.2 Active Methodologies and their Intercession with Hybrid Education

As pointed out by Valente, Almeida, and Geraldini (2020), in the Brazilian literature, active methodologies are mainly addressed as pedagogical strategies that reposition the focus of the teaching-learning process on the student, as opposed to the traditional teacher-centered teaching model, where the transmission of information is unidirectional. The term "active" refers to the incorporation of pedagogical practices that promote the direct involvement of students in practical activities in which they assume the role of protagonists of their learning. These practices aim to create learning contexts in which students are encouraged to apply knowledge, reflect on their actions, and construct new understandings based on the activities they have undertaken. In addition, these practices promote the development of cognitive strategies, critical and reflective thinking, as well as social interaction and the exchange of feedback between peers and teachers, allowing for a deeper exploration of personal and social attitudes and values (Berbel, 2012).

While active methodologies are often associated with digital technologies, they do not necessarily depend on these artifacts to be effective. These methodologies focus on the active engagement of students in the learning process and prioritize knowledge construction through active participation, problem solving, and critical reflection, regardless of the medium used (Bacich; Moran, 2018). Classic examples such as group discussions, case studies, and project-based learning illustrate that the essence of active methodologies lies in promoting more meaningful learning, in which the student is the central agent, while the teacher assumes the role of facilitator of the educational process (Rocha; Lemos, 2014).

In hybrid education, active methodologies can be implemented in both digital and face-to-face

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

environments, expanding the possibilities for interaction and personalization of learning (Garrison; Vaughan, 2008). Hybrid education, which combines online and face-to-face activities, provides an opportunity to integrate different pedagogical approaches, allowing active methodologies to be applied in a flexible and adaptable way to meet the needs of students. In this model, the use of digital technologies can enhance active practices, but it is not an essential requirement for the effectiveness of these methodologies (Horn; Staker, 2017). In short, active methodologies and hybrid education are complementary but distinct concepts, with the former not inherently dependent on technology, while the latter benefits from the combination of digital resources and face-to-face interactions.

The incorporation of active methodologies and the integration of hybrid education into the educational context require a profound reassessment of the curricula for the training of teachers and educational managers. This implies the development of skills that go beyond the mastery of specific content, emphasizing the ability to create dynamic and student-centered learning environments, whether in digital or face-to-face contexts (Coll; Monereo, 2010). Curricula must provide training that enables educators to effectively plan and develop active methodologies, regardless of the use of technologies, and to manage the specificities of hybrid education. Thus, future teachers and managers must be prepared not only to use technological tools but also to plan, implement, and evaluate pedagogical practices that promote students' autonomy, collaboration, and critical thinking, adapting to the diverse realities and demands of the contemporary school environment (Ferreira; Pimentel, 2023).

3 METHODOLOGY

Intending to develop an investigation that would meet the requirements of the guiding question indicated in the introduction of this text, and search of the objective, we opted for qualitative research, of a descriptive nature and with the design of an experiential research (Kolb, 1984; Miccoli, 2014). Likewise, we opted for an exploratory design, considering the analysis of a contemporary phenomenon and its real-life context (Flick, 2004). In the field of education, the approach known as experiential research has sought space to facilitate the analysis of the experience of the researcher himself or the participants in their educational contexts, such as teachers and students (Kolb, 1984; Miccoli, 2014).

The data was based on the teaching activities carried out in the curricular component Hybrid

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

Education: foundations and practices, of the Specialization Course in Hybrid Education Policy Management, offered by the Federal University of Alagoas, in the modality of Distance Education (EaD, as it is called in Brazil), for educational managers and teachers from all states of Brazil and the Federal District. The research development period included studies, intervention planning, development of the curricular component, data collection, and data analysis, which occurred between February and August 2024.

The data for this research was carried out through documents prepared by the professor, who was also a researcher in this research, and made available in the virtual environment of the course (https://ava.rieh.nees.ufal.br/); as well as through records in a logbook, with notes on the development of the curricular component, and through photographic records of the hybrid moments carried out at the Innovation Center for Hybrid Education installed at Ufal.

Once collected, the data were processed to systematize the analysis, with the guiding principle of analyzing the experience of a curricular component dealing with hybrid education. We sought to identify how the planning and development of the experience produced new learning on the topic.

As in an experiential research in a learning context, the narrative is considered an important element in data collection (Miccoli, 2014), we seek to use mainly the practical experience and the research object in the development of a teaching-learning experience. The narrative we have adopted in this research is the procedural one, in the order in which the facts were proposed, analyzing the teaching-learning experiences. In this sense, it should be emphasized that this is not an experience report, but an investigation with a delimited problem and a defined research objective.

The data were treated from the perspective of the narrative of the teacher who planned and developed the discipline, and in the data analysis the Kolb Learning Cycle (1984) and experiential learning styles were used, consisting of the following elements:

(a) the sense of immediate and tangible experience (that which can be felt, measured, or gauged); in this initial stage, the data collected are related to the direct and immediate experiences of the teacher-researcher. The analysis focused on the tangible sensations and perceptions that could be felt, measured, or gauged. This step involved the collection of descriptive data about what was experienced, capturing the immediate reactions and feelings related to their experiences.

(b) Reflective observation, which includes perceptions, outcomes of experiences, and new implications arising from observations; after collecting tangible experiences, the data underwent a

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

reflective observation phase. The focus here was on critical and reflective analysis of experiences. The researchers who wrote this study examined the results of the recorded experiences and the new implications that emerged from the observations. This stage involved the identification of patterns, recurring themes, and emerging insights from the classroom narratives of the developed curricular component.

(c) Abstract conceptualization, thinking about and engaging in the abstraction, aggregation, classification, and symbolic representation of experience; the observed and reflected data were transformed into abstract concepts. This stage involved the aggregation, classification, and symbolic representation of experience, allowing the formation of theories or models that explained the observed phenomena. The analysis sought to relate individual experiences to broader theoretical concepts, thus facilitating a deeper and more systematized understanding.

(d) active experimentation, the final phase of the cycle in which the individual has learned from the experience, assimilated the information, and is able to test new behaviors or develop new learning in the external environment in which the experience was lived. The analysis at this stage examined how the new learning was implemented and the results of these new practices in the external environment, evaluating their effectiveness and impact.

4 DATA AND DISCUSSION

In the data analysis process, it was possible to obtain a holistic and dynamic view of the process of developing and implementing the curricular component, highlighting the interactions between theory and practice, and promoting continuous and adaptive reflection on the part of the teacher.

The analysis of the data from this research, based on Kolb's Learning Cycle (1984) and bringing reflective perspectives from (Miccoli, 2014), provides a structured and in-depth view of the experiences and challenges faced by the teacher in the development and implementation of a discipline on hybrid education.

In the **Concrete experience** phase, we observed the application of active methodologies and digital technologies in the discipline. The teacher used tools such as online discussion forums, videocasts, and multimedia resources to engage students. These practices were recorded and analyzed to understand how they were integrated into the curriculum and how they contributed to the teaching-

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

learning process.

In the **Reflective observation** phase, we highlighted the teacher's reflections on his/her practice. It was observed that despite the initial enthusiasm, significant challenges were identified in the students' adaptation to the new tools and methods. The main challenge was the question of the students' time. Many who were already working in management were unable to keep up with the curricular component based on the initial schedule. This difficulty in managing time in online courses is also highlighted in the studies by Yukselturk and Bulut (2007) and Broadbent and Poon (2015). To reverse this situation, the schedule is reviewed and adjusted, including extending the deadlines for the proposed assessment activities, which gives the teacher flexibility and a sensitive view of the reality of the situation.

Since the proposed curricular component was based on active learning, with the need for interaction among students, the lack of time for active participation by educational managers during the training process significantly compromised virtual interactions in forums, dialogues, and collaborations essential for effective learning in hybrid education. This lack of engagement limited the development of a collaborative learning environment and compromised the depth of dialogues and critical discussions.

An analysis of forum posts in each unit revealed that some students experienced technical difficulties and a steep learning curve with digital technologies. Student feedback also indicated that while they appreciated the flexibility of hybrid education, they missed more personal and direct interactions with the teacher.

Moving to the **Abstract conceptualization** phase, the teacher began to develop new theories and pedagogical models based on previous observations and reflections. It was necessary to theorize that the integration of active methodologies with digital technologies requires not only technical familiarization but also continuous support for students. In addition, it is observed that hybrid education can be more effective when combined with regular moments of synchronous interaction, where doubts and immediate feedback can be addressed.

During the **Active experimentation** phase, changes were made to the curricular component based on the newly developed theories and experiences. In other words, the curricular component, even with a prior plan prepared and validated by the course management, required adjustments as it evolved. In this sense, detailed tutorials were provided on digital technologies or the virtual learning

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

environment. Analysis of the subsequent data showed a significant improvement in student satisfaction and performance. They reported feeling more connected and supported, reflected in greater engagement in the proposed activities and a better understanding of the content.

Finally, the learning cycle was completed with **Continuous evaluation** of these new strategies. The instructor continued to collect data and reflect on the effectiveness of the practices implemented, encouraging continuous adjustments to optimize the course. This iterative approach not only improved the quality of the hybrid education offered but also contributed to the professional development of the teacher, consolidating a more adaptive and student-centered pedagogical practice.

The curricular component was offered at the beginning of the course, with the understanding that it was a component with a more concrete theoretical basis. Its syllabus consisted of Hybrid Education: Concepts and Models. Instructional Design for Hybrid Environments. Technologies and Tools for Hybrid Education. Teacher training for hybrid education.

As for the component's objectives, four objectives were outlined, namely:

- discuss the concepts and models of Hybrid Education;
- understand instructional *design* for hybrid environments and its implications for teaching and learning;
- explore digital technologies for Hybrid Education; and
- analyze the relationship between teacher training and Hybrid Education in the current Brazilian context.

The content of the program should address the concept, nature, perspectives and characteristics of hybrid education, as well as the models, epistemological and methodological foundations of learning with hybrid education. A discussion on innovation in educational spaces and in teaching and learning processes with Hybrid Education was also proposed.

Figure 1 - RIEH AVA - Hybrid Education Component: foundations and practices

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

EmRede
Revista de Educação a Distância
UniRede

Source: Available at: https://ava.rieh.nees.ufal.br/.

Complementing the theoretical proposal, the possibilities and limitations of the use of digital technologies in hybrid education were discussed through the proposed activities and readings, as well as the concepts and relationship of interaction and interactivity in hybrid education.

The curricular component was developed based on active methodologies with a participatory perspective. Bi-weekly synchronous meetings (1 per month), in addition to the provision of videocasts (Figures 2 and 3), the indication of reading texts and carrying out activities in the AVA/RIEH, requiring participation and interaction between students, content, tutors, and teacher were elements that were carefully designed. The synchronous moments were preceded by the reading of the texts, and the students had to watch the videocasts that were made available to provide a basis for the topics. Research activities were carried out on the Internet, which included the analysis of experiences and studies dealing with the topic of hybrid education.

The videocasts were planned, requiring the teacher to organize a script that focused on the guests' experiences but aimed to highlight the principles and practices of hybrid education. Two videocasts were planned and developed, broadcast online from the Innovation Center for Hybrid Education at the Federal University of Alagoas.

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

Figure 2 - Broadcast and recording of the 1st *videocast*

Source: Research data (2024).

In each videocast, the teacher responsible for the curricular component received in the studio two guests, selected in advance, who met two requirements: they had to have systematized scientific knowledge and they also had concrete practical experience in the development of hybrid education.

The assessment of the students' learning aimed at a procedural character, carried out throughout the curricular component, taking into account the participation/interaction and the punctuality in carrying out, posting and/or sending the scheduled activities, as well as the presence in the AVA. Each activity in the AVA was presented with the indication/assessment rubric, including the final activity, which consisted of the production and recording of an individual podcast (audio only) for each student, dealing with the theme of hybrid education.

Figure 3 - Broadcasting and recording of the 2nd *videocast*

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

Source: Research data (2024).

Despite the various alternatives and methodologies implemented to promote participant engagement, the study found significant difficulties in the participation of all course participants, especially due to the fact that they are educational managers of public schools with extremely busy schedules. This fact was recognized in the implementation of the curricular component and even required a readjustment of the evaluation deadlines. The intense routine of these professionals limits the time available to dedicate to a lato sensu specialization, resulting in irregular participation in activities essential for the full use of the course. This time limitation highlights the need to further adapt pedagogical strategies and hybrid education models to meet the specific needs of professionals who balance multiple responsibilities.

CONSIDERATIONS

The conclusions of the study on the planning, development, and evaluation of a discipline in a specialization course for managers in hybrid education highlight the importance of the flexibility and expanded access that the hybrid model offers to participants. The research, based on qualitative methodology and an experiential research approach, showed that managers in training were able to benefit from a learning environment that combined the best of presential and digital formats, allowing

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

for greater adaptability to their routines and individual needs.

For the teacher who carried out the planning and led the implementation of the curricular component, the evaluation of the experiences was significant, given the reality of a course that serves such a diverse reality, with students distributed throughout Brazil. The learning of the teacher responsible for the curricular component was enhanced by the use of a specific research methodology, with the perspective of learning from one's own experience, following the methodological assumptions of Kolb (1984). It is worth noting that the videocast model, with synchronous transmissions with professionals who theorize and use hybrid education in practice, were relevant moments of discovery of a much more engaging methodology, as opposed to a "class" with a teacher transmitting content.

However, the study also revealed significant challenges, especially when it comes to keeping participants engaged throughout the course. Continuous and active interaction is essential for successful learning in hybrid environments, and the study found that a lack of specific strategies to foster this interaction can result in decreased student engagement.

The need for clear communication, combined with active methodologies that encourage participation, is seen as a crucial aspect of meeting this challenge. However, it is observed that the mere inclusion of an active methodology perspective is not enough. This leads us to consider that the effective participation of managers in specialization courses requires administrative measures that allow these managers more time to study and participate in asynchronous and synchronous activities. It is essential that managers (in this case, training secretaries) develop training programs and personal development plans for employees. The lack of time dedicated to study and qualification shows a deficiency in organizational management, which has a negative impact on the achievement of educational goals and objectives. A relevant recommendation is that educational systems adopt the Human Resources Development Plan established by Decree No. 9,991 /2019, which regulates aspects of Law No. 8,112/1990. This measure aims to structure and strengthen professional development, align skills with organizational needs, and promote a culture of continuous learning.

Future research could explore the long-term impact of blended learning on the professional practice of public school administrators in Brazil, develop and test interventions to improve the engagement of students with busy schedules, adapt blended learning strategies to different student profiles, and compare the effectiveness of different blended learning models. In addition, studying the role of active methodologies in blended learning and developing ongoing training programs to

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

improve the digital skills of administrators and teachers would be valuable areas to complement the study, providing insights to improve the implementation of blended learning in different educational contexts.

Finally, the study concludes that, despite the difficulties, the hybrid education model can be highly effective in developing leaders, as long as it is well structured and supported. The experiences reported underscore the importance of careful planning, including continuous adaptation of teaching materials and methods, as well as the development of strategies to keep students motivated and engaged. The combination of these approaches can maximize the benefits of hybrid education, making it a viable and effective option for developing leaders in an educational context.

REFERENCES

ABED, A. L. Z. O desenvolvimento das habilidades socioemocionais como caminho para a aprendizagem e o sucesso escolar de alunos da educação básica. **Constr. psicopedag.**, v. 24, n. 25, p. 8-27, 2016. Available at: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1415-69542016000100002&lng=pt&nrm=iso. Accessed on: Nov. 4, 2024.

ALBUQUERQUE, A. C. P. F. C. D. Inclusão escolar no ensino híbrido: estratégias de acessibilidade para estudantes com o transtorno do espectro autista. In: XV Colóquio Internacional Educação e Contemporaneidade. **Anais[...].** 2021. DOI: 10.29380/2021.15.02.23. Available at: https://coloquioeducon.com/org_trabalhos/adm/exportar_trabalho_pdf.php?id_trabalho=305. Accessed on: Jun. 20, 2024.

BACICH, L; MORAN, J. (Orgs.). **Metodologias ativas para uma educação inovadora:** uma abordagem téorico-prática [recurso eletrônico]. Porto Alegre: Penso, 2018.

BERBEL, N. A. N. As metodologias ativas e a promoção da autonomia de estudantes. **Semina: Ciências Sociais E Humanas,** v. 32, n. 1, p. 25-40, 2012. DOI: 10.5433/1679-0383.2011v32n1p25. Available at: https://ojs.uel.br/revistas/uel/index.php/seminasoc/article/view/10326. Accessed on: Jun. 20, 2024.

BONK, C. J.; GRAHAM, C. R. **The handbook of blended learning**: Global perspectives, local designs. John Wiley & Sons, 2012.

BORISENKOV, V; GUKALENKO, O; PUSTOVOITOV, V. Digitalization of education: trends in teacher training. *E3S Web Conf.*, 273 (2021) 12075. Available at: https://www.e3s-conferences.org/articles/e3sconf/abs/2021/49/e3sconf_interagromash2021_12075/e3sconf_interagromash2021_12075.html. Accessed on: Jun. 10, 2024.

BRASIL, Ministério da Educação. **Portaria nº 865, de 8 de novembro de 2022**. Institui a Rede de Inovação para a Educação Híbrida. Diário Oficial da União. Brasília, publicado em: 10/11/2022. Edição: 213. Seção: 1. Página: 132. Available at:

https://www.in.gov.br/en/web/dou/-/portaria-n-865-de-8-de-novembro-de-2022-443021071. Accessed on: Jun. 20, 2024.

BRASIL. Portal do Servidor Governo Federal. **Decreto nº 9.991, de 28 de agosto de 2019**. Dispõe sobre a Política Nacional de Desenvolvimento de Pessoas da administração pública Federal direta, autárquica e fundacional, e regulamenta dispositivos da Lei nº 8.112, de 11 de dezembro de 1990, quanto a licenças e afastamentos para ações de desenvolvimento. Diário Oficial da União, Brasília, publicado em 29 ago. 2019. Available at: http://www.planalto.gov.br/ccivil_03/_Ato2019-2022/2019/Decreto/D9991.htm. Accessed on: Sep. 20, 2024.

BROADBENT, J.; POON, W. L. Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. **The Internet and Higher Education**, v. 27, p. 1-13, 2015. DOI: 10.1016/j.iheduc.2015.04.007. Available at: https://linkinghub.elsevier.com/retrieve/pii/S1096751615000251. Accessed on: May 17, 2024.

CAMARGO, F.; DAROS, T. **A sala de aula digital:** estratégias pedagógicas para fomentar o aprendizado ativo, on-line e híbrido. Porto Alegre: Penso Editora, 2021.

CASTELLS, M. **A galáxia da internet:** reflexões sobre a Internet, os negócios e a sociedade. Rio de Janeiro: Zahar, 2003.

CASTELLS, M. **A Sociedade em rede.** 6 ed. São Paulo: ed. Paz & Terra, 1999, v. 1.

COLL, C.; MONEREO, C. **Psicologia da educação virtual:** Aprender e ensinar com as tecnologias da informação e da comunicação. Porto Alegre: Artmed, 2010.

DIESEL, A.; BALDEZ, A. L. S; MARTINS, S. N. Os princípios das metodologias ativas de ensino: uma abordagem teórica. **Revista Thema**, v. 14, n. 1, p. 268-288, 2017. Available at: https://periodicos.ifsul.edu.br/index.php/thema/article/view/404. Accessed on: Jun. 2, 2024.

DOS SANTOS, W. L. P.; MORTIMER, E. F. Uma análise de pressupostos teóricos da abordagem C-T-S (Ciência-Tecnologia-Sociedade) no contexto da educação brasileira. **Ensaio Pesquisa em Educação em Ciências**, v. 2, n. 2, p. 110-132, 2000. Available at: https://www.scielo.br/j/epec/a/QtH9SrxpZwXMwbpfpp5jqRL#. Accessed on: Feb. 23, 2024.

FERREIRA, L. F. S.; PIMENTEL, F. S. C. Formação de professores para incorporação das tecnologias digitais na educação superior. **Cadernos de Pesquisa,** v. 30, n. 2, p. 303-321, 2023. DOI: 10.18764/2178-2229v30n2.2023.31. Available at: https://periodicoseletronicos.ufma.br/index.php/cadernosdepesquisa/article/view/17061. Accessed on: Jun. 19, 2024.

FLICK, U. **The SAGE handbook of qualitative research** (5th ed.). Sage publications, 2014.

GAMAGE, K. A. A.; GAMAGE, A.; DEHIDENIYA, S. C. P. Online and Hybrid Teaching and Learning: Enhance Effective Student Engagement and Experience. **Educ. Sci.**, v. 12, n. 10, p. 1-13, 2022. DOI: 10.3390/educsci12100651. Available at: https://www.mdpi.com/2227-7102/12/10/651. Accessed on: Nov. 2, 2024.

GARRISON, D. R.; KANUKA, H. Blended learning: Uncovering its transformative potencial in

higher education. **The Internet and Higher Education**, v. 7, n. 2, p. 95-105, 2004. Available at: https://www.sciencedirect.com/science/article/pii/S1096751604000156. Accessed on: Feb. 23, 2024

GARRISON, D. R.; VAUGHAN, N. D. **Blended Learning in Higher Education:** Framework, Principles, and Guidelines. John Wiley & Sons, 2008.

GATTI, B. A. Formação de professores: condições e problemas. **Revista Internacional de Formação de Professores**, Itapetininga, v. 1, n. 2, p. 161–171, 2022. Available at: https://periodicoscientificos.itp.ifsp.edu.br/index.php/rifp/article/view/716. Accessed on: May 2, 2024.

GRAHAM, C. R. **Blended learning:** The new normal for education. Corwin Press, 2013.

HORN, M. B.; STAKER, H. **Blended:** Using disruptive innovation to improve schools. John Wiley & Sons, 2017.

KOLB, D. **Experiential learning**. Englewood Cliffs, New Jersey: Prentice Hall, 1984.

LENCASTRE, J. A. Blended Learning: a evolução de um conceito. In: MONTEIRO, A.; MOREIRA, J. A.; ALMEIDA, A. C.; LENCASTRE, J. A. (coords.). **Blended learning em contexto educativo***:* perspectivas teóricas e práticas de investigação. 2.ed. Santo Tirso, Portugal: De Facto Editores, 2013. p. 19-32.

LÉVY, P. **A inteligência coletiva**: por uma antropologia do ciberespaço. 4ª ed. São Paulo: Loyola, 2003.

LÉVY, P. **A máquina universo:** criação, cognição e cultura informática. Porto Alegre: Ed. Artmed, 1998.

LIMA, D. C. B. P. Regulamentação da educação a distância e híbrida no Brasil: desafios e contradições: Regulation of distance and hybrid education in Brazil: challenges and contradictions. **Revista Cocar**, *[S. l.]*, n. 27, 2024. Available at: https://periodicos.uepa.br/index.php/cocar/article/view/9093. Accessed on: Nov. 7, 2024.

LIMA, D. C. B. P.; RODRIGUES, M. C. M.; CRUZ, J. R. Educação Semipresencial e Híbrida no Brasil: descortinando conceitos e regulamentação. **Revista EducaOnline**, v. 15, n. 1, p. 59-76, 2021. Available at: https://revistaeducaonline.eba.ufrj.br/edi%C3%A7%C3%B5es-anteriores/2021-1/educa%C3%A7%C3%A3o-semipresencial-e-h%C3%ADbrida-no-brasil-descortinando-conceitos-e-regul. Accessed on: Aug. 2, 2024.

LOUREIRO, A. C; MEIRINHOS, M.; OSÓRIO, A. J. Competência digital docente: linhas de orientação dos referenciais. **Texto Livre: Linguagem e Tecnologia**, v. 13, n. 2, p. 163-181, 2020. Available at: https://periodicos.ufmg.br/index.php/textolivre/article/view/24401. Accessed on: Jun. 12, 2024.

MEANS, B.; TOYAMA, Y.; MURPHY, R.; BAKIA, M.; JONES, K. Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. U.S. Department of Education, Office of Planning, **Evaluation and Policy Development**. 2010. Available at: https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf. Accessed on: Aug.

DOI: http://doi.org/10.53628/emrede.v11i.1080 ISSN 2359-6082

2, 2024.

MICCOLI, L. (org). **Pesquisa experiencial em contextos de aprendizagem**: uma abordagem em evolução. Campinas: Pontes, 2014, p. 17-75.

MOREIRA, A. F. B; KRAMER, S. Contemporaneidade, educação e tecnologia. **Educação & Sociedade** [online]. v. 28, n. 100. p. 1037-1057, 2007. DOI: 10.1590/S0101-73302007000300019. Available at: https://www.scielo.br/j/es/a/KS6FVdMKj4D9hzbGG9dfcps/?lang=pt. Accessed on: Nov. 4, 2024.

OECD. Organisation for Economic Co-Operation and Development. **The Digitalisation of Science, Technology and Innovation:** Key Developments and Policies, OECD Publishing, Paris, 2020. Available at: https://www.oecd-ilibrary.org/science-and-technology/the-digitalisation-of-science-technology-and-innovation_b9e4a2c0-en. Accessed on: Jun. 2, 2024.

OLIVEIRA, A. M. A; BITTENCOURT, I. M; PAIVA, R. O. A; FONTES, A. I. R. Ensino híbrido: novas perspectivas para a educação. **Anais CIET: Horizonte**, São Carlos-SP, v. 7, n. 1, 2024. Available at: https://ciet.ufscar.br/submissao/index.php/ciet/article/view/2745. Accessed on: Aug. 13, 2024.

PIMENTEL, F. S. C.; NUNES, A. K. F.; SALES JÚNIOR, V. B. D. Formação de professores na cultura digital por meio da gamificação. **Educar Em Revista,** v. 36, p. e76125, 2020. DOI: 10.1590/0104-4060.76125 Available at: https://www.scielo.br/j/er/a/bg7mqHXSF673hLBB8fVxXjq/?lang=pt#. Accessed on: May 13, 2024.

ROCHA, H. M.; LEMOS, W. D. M. Metodologias ativas: do que estamos falando? Base conceitual e relato de pesquisa em andamento. In: IX Simpósio Pedagógico e Pesquisas em Comunicação. Resende, Brazil: Associação Educacional Dom Boston, 12. **Anais[...]**. 2014. Available at: https://www.aedb.br/wp-content/uploads/2015/05/41321569.pdf. Accessed on: Jun. 2, 2024.

ŞAHIN, M, The Problems and Opportunities of Hybrid Education for School Management. **Education Quarterly Reviews**, Vol.5 No.4. October 23, 2022. Available at: https://ssrn.com/abstract=4256048. Accessed on: 10 fev. 2024.

SHANMUGASUNDARAM. M; TAMILARASU. A. The impact of digital technology, social media, and artificial intelligence on cognitive functions: a review. **Front. Cognit.** v. 2, p. 1-11, 2023. Available at: https://www.frontiersin.org/journals/cognition/articles/10.3389/fcogn.2023.1203077/full. Accessed on: Nov. 2, 2024.

SIEMENS, G. Connectivism: A Learning Theory for the Digital Age. **International Journal of Instructional Technology and Distance Learning**, 2. (2004). Available at: https://www.edtechpolicy.org/AAASGW/Session2/siemens_article.pdf. Accessed on: Dec. 10, 2020.

SOUSA, R. P.; MOITA, F. M. C. S. C.; CARVALHO, A. B. G. (orgs). **Tecnologias digitais na educação** [online]. Campina Grande: EDUEPB, 2011.

VALENTE, J. A.; ALMEIDA, M. E. B.; GERALDINI, A. F. S. Metodologias ativas: das

concepções às práticas em distintos níveis de ensino. **Revista Diálogo Educacional,** v. 17, n. 52, p. 455-478, 2020. DOI: 10.7213/1981-416x.17.052.ds07. Available at: https://periodicos.pucpr.br/dialogoeducacional/article/view/9900. Accessed on: Feb. 4, 2024.

VALENTE, J. A.; DE ALMEIDA, M. E. B. Políticas de tecnologia na educação no Brasil: visão histórica e lições aprendidas. **Education Policy Analysis Archives**, v. 28, n. 94, p. 1-35, 2020. Available at: https://epaa.asu.edu/index.php/epaa/article/download/4295/2460/22789. Accessed on: Jan. 23, 2024.

YUKSELTURK, E.; BULUT, S. Predictors for student success in an online course. **Educational Technology & Society,** v. 10, n. 2, p. 71-83, 2007.