Analysis of distance higher education: perception of teachers in the city of Maricá/RJ with training in distance learning

Análise do ensino superior à distância: percepção de professores da cidade de Maricá/RJ com formação em EAD

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ABSTRACT

This work investigated the quality of distance higher education through a questionnaire applied to basic education professionals in the city of Maricá/RJ. The research involved the participation of 30 volunteers and aimed to evaluate various aspects related to the teaching and learning process, infrastructure, methodologies and interaction between teachers and students. The methodology adopted consisted of applying a questionnaire containing open and closed questions addressing the aspects. The questionnaire was administered online using the Google Forms platform. The results obtained revealed the professionals’ perception of the quality of the distance learning in which they were students. The research concludes that the use of technological tools can significantly contribute to improving distance learning if interactive approaches and quality resources are adopted. Based on the results, it is suggested that institutions focus on personalizing teaching, online interaction, and training teachers to ensure high-quality distance education.

Keywords: Distance Education; Education; University education;
RESUMO

Este trabalho investigou a qualidade do ensino superior à distância por meio de um questionário aplicado a profissionais da educação básica da Cidade de Maricá/RJ. A pesquisa contou com a participação de 30 voluntários e teve como objetivo avaliar diversos aspectos relacionados ao processo de ensino e aprendizagem, infraestrutura, metodologias e interação entre professores e alunos. A metodologia adotada consistiu na aplicação de um questionário contendo perguntas abertas e fechadas abordando os mencionados aspectos. O questionário foi administrado online através da plataforma Google Forms. Os resultados obtidos revelaram a percepção dos profissionais sobre a qualidade do ensino à distância no qual eles foram alunos. A pesquisa conclui que o uso de ferramentas tecnológicas pode contribuir significativamente para a melhoria do ensino à distância, desde que sejam adotadas abordagens interativas e recursos de qualidade. Com base nos resultados, sugere-se que as instituições foquem na personalização do ensino, na interação online e na capacitação dos docentes para garantir uma educação à distância de alta qualidade.

Palavras-chave: Educação à Distância; Educação; Ensino Superior;

INTRODUCTION

Distance Education (EAD) has become a teaching modality widely adopted in Brazil, especially in Higher Education, in response to students' needs for flexibility and accessibility. However, the quality of distance learning is a pressing issue that involves ensuring solid and effective training. The relevance of this topic is emphasized by the need for educational institutions that offer distance learning courses to maintain a quality standard, ensuring that students receive an excellent education. (MISHRA et al., 2020).

The scenario allows us to identify positive and negative aspects, whether for the teacher, student, institution, nation, etc., therefore, the success of distance learning is conditioned on the commitment made by those involved and overcoming difficulties: concentration, management time and tasks, inefficiency or lack of adequate equipment (student’s reality); lack of knowledge, insufficient structural resources, difficulty adapting to distance learning methodology and pedagogy, among others (teacher reality) (FLORES et al., 2021).

Therefore, careful and effective planning for the development and application of remote teaching involves the identification of content, which must be associated with the optimization of different types of interaction (methodological and pedagogical practices) to promote effective learning; From a constructivist perspective, learning is an integral and active part of the social and cognitive process, so much so that the mere transmission of information has become an obsolete practice (HODGES et al., 2020).
The main objective of this research was to investigate the quality of distance higher education, focusing on education professionals who were students at distance learning institutions in the city of Maricá, in the state of Rio de Janeiro. The problem that guides this study consists of understanding the perception of these professionals about the quality of distance learning and identifying the main points that require improvements to guarantee effective education.

The importance of this research is based on the relevance of Distance Education as a teaching alternative, the growing demand for courses in this modality, and the need to ensure that students receive quality training, regardless of the chosen teaching modality. Furthermore, the research seeks to contribute to the improvement of pedagogical practices and the infrastructure of distance higher education institutions, benefiting both students and the institutions themselves.

In this context, the specific objectives of this study were to identify the factors that influence the quality of distance higher education; assess student satisfaction with distance learning; understand the perception of education professionals about the quality of distance learning; identify areas for improvement to improve the quality of distance learning.

By achieving these objectives, we hope to contribute to the discussion about the quality of distance higher education and provide insights that can be used for the continuous improvement of this teaching modality. This research has the potential to benefit not only education professionals, but also students and higher education institutions, ensuring quality and effective distance education.

MATERIALS AND METHODS

The present study adopted a subjectivist approach with a qualitative perspective, aiming to deepen the understanding of the participants' perception of the quality of distance higher education. The research is characterized as descriptive, seeking to explore and interpret the phenomena associated with the experience of teachers trained in distance learning in the city of Maricá/RJ.

The sample was composed of a group of 30 education professionals who completed higher education in the EAD format and who work in the city of Maricá/RJ.

Data collection was carried out using a structured questionnaire, made available online through the Google Forms platform. The questionnaire was prepared with a
combination of open and closed questions, addressing specific aspects related to the experience in distance higher education, infrastructure, teaching methodologies and teacher-student interaction.

Before data collection began, participants were informed about the objectives of the research and the voluntary nature of their participation. Informed consent was obtained electronically before participants responded to the questionnaire.

The collected data was subjected to a qualitative analysis using the categorization method. Responses to open-ended questions were grouped into relevant thematic categories, allowing for a deeper understanding of participants' experiences and perceptions.

The research was conducted in accordance with the ethical criteria established by Resolution No. 466/2012 of the National Health Council. The research protocol was approved by the Research Ethics Committee of the Universidade Federal Fluminense, under number 6,588,914. Respect for the participants' consent and the privacy and confidentiality of the data collected were guaranteed.

PRESENTATION AND DISCUSSION OF RESULTS

Currently, EaD is an effective teaching methodology for combating social exclusion, and equally opportune to promote the economic and social development of a nation, however, it is up to the student to fulfil some requirements: discipline, organisation, dedication and having access to the internet in an easy way (requirement to read numerous contents); about the teacher, the success of distance learning is conditioned by the following aspects: ethical stance; knowledge about the course content; technological skill (oral and written communication), and attitudes, flexibility and ease of interpersonal relationships (MACÊDO et al., 2020).

In this research, the aim was to see from the student's perspective what EAD is, and what its qualities and deficiencies are. In this topic, the questions and answers asked to the participants will be presented, so that the data can be presented and discussed throughout the text. The first question aimed to understand the participants' perception of the quality of distance higher education compared to face-to-face teaching. From the responses obtained, a diversity of opinions can be observed.

Most participants expressed the belief that the quality of distance learning is not comparable to that of face-to-face teaching. They argue that the physical presence of a
teacher in the teaching-learning process is fundamental and that direct interaction with teachers in face-to-face environments provides more in-depth discussions and a more favourable environment for learning.

This result is in line with research by Bertolin (2021), which suggests that the distance learning modality can provide inferior learning compared to the in-person modality. The author carried out performance comparisons between Administration, Social Work and Pedagogy students, and found that, in similar socioeconomic subgroups, face-to-face students performed significantly better than distance students. Even in different socioeconomic subgroups, the face-to-face modality often outweighed the impact of socioeconomic background. This suggests a difference in quality, measured by performance in exams, between face-to-face and distance learning modalities in Brazilian higher education (BERTOLIN, 2021).

However, some participants expressed a more positive outlook towards distance learning. They believe that the quality of distance learning can be comparable to or even superior to that of in-person teaching, citing factors such as the amount of research required, student responsibility, and the availability of online resources.

It is interesting to note that some participants highlighted that the quality of teaching, whether in person or remotely, depends on several factors, such as teacher training, course design, quality of materials and resources, available technical support and institutional culture of valuing teaching and learning. Therefore, the conclusion to be drawn is that the perception of the quality of distance learning is varied and depends on several factors, including the individual experience of each student.

These reports compare with Bertolin (2021) and are in line with the results of Melo (2021), who verified face-to-face teaching versus distance learning: by analyzing the relationships between these two modalities in the UFRN pedagogy course. The research found that the performance rates of students and distance learning courses are minimally different from face-to-face courses. The 2017 ENADE score for the distance Pedagogy course was satisfactory (note 3), and other indicators, such as the Preliminary Course Concept (CPC), were also quite satisfactory, comparable to in-person courses (note 4). This considers several aspects, such as infrastructure, quality of facilities, student performance in ENADE, teaching staff and teaching pedagogical resources.

The authors analyzed different contexts, one of which focused on the study of a Federal University, but with this it is possible to see that there is no unanimity in the research, showing that the context is more complex and depends on several factors.
The second question sought to assess the importance of interaction between teachers and students in the context of distance learning, as perceived by the participants. The responses indicate a clear appreciation of interaction in this teaching environment.

Most participants emphasized the importance of interaction between teachers and students in distance learning. Some recurring terms in the responses include "super important", "paramount", "of paramount importance" and "extremely important". This suggests that participants recognize interaction as a fundamental component of the success of distance learning.

Many participants highlighted that interaction allows the exchange of knowledge, clarification of doubts, support for students and the creation of a more engaging and collaborative academic environment. They also mentioned that interaction helps keep students engaged and motivated, contributing to the continuity of the learning process.

Furthermore, there were mentions of the importance of teachers being available and accessible to students, listening to their needs and creating effective communication channels.

Fernandes, Henn and Kist (2020) are in line with these perceptions. For the authors, the use of virtual environments promotes interaction between course participants, facilitating the construction of knowledge, not only by the teacher-student but also among the students themselves, contributing to an accessible collective memory. Cooperation between students and teachers, as well as between students themselves, creates a collectively constructed knowledge network.

Almeida and Passos (2021) focus on the same issue as they state that, after analyzing interaction and learning with problem-solving in Distance Education, the results indicated that the Problem-solving Solving-Based Learning methodology contributed to increased engagement, interaction, and student learning, in addition to improving the student's ability to create knowledge reflectively and collaboratively. The authors' research shows the importance of interaction in this process.

All of this confirms what Vygotsky (1988) already stated when he said that learning is a process in which the individual acquires access to knowledge and information, incorporating them into their interaction with the environment in which they are inserted, making them part of their repertoire.
In summary, the responses indicate that the interaction between teachers and students is widely considered to be a critical factor in distance learning. This interaction contributes to the quality of the learning experience, helps overcome challenges and keeps students engaged. The conclusion is that interaction plays a fundamental role in the success of distance learning and must be carefully planned and cultivated to obtain positive results.

The third question addressed the participants' perception regarding the technological resources used in their distance learning institutions, assessing whether they were considered adequate. The responses reveal a variety of perspectives on this aspect.

The responses indicate a division of opinions regarding the adequacy and sufficiency of technological resources in distance learning. While some participants are satisfied with the resources available, others point to challenges and deficiencies, including access and maintenance issues.

Alves et al. (2021) state that one of the main challenges of distance learning in Brazil is ensuring that all students have adequate access to technology, which is not the case due to socioeconomic and geographic disparities. Furthermore, educational institutions need to invest in IT infrastructure to ensure the stability of online teaching platforms and the security of student data.

In the text by Machado, Bilessimo and Da Silva (2021), the authors talk about another important challenge, which is teacher training. Many educators are unfamiliar with online teaching best practices and need training to effectively utilize educational technologies. Furthermore, developing high-quality content and promoting interaction between students and teachers is fundamental to the success of distance learning courses, which requires careful planning.

The conclusion is that the quality and adequacy of technological resources in distance learning can vary widely between institutions and students, and institutions must be attentive to student needs and continuous improvements in technological infrastructure to provide a better learning experience effective.

The fourth question sought to assess the participants' perception regarding the quality of the teaching material provided by the distance learning institution. The responses show a predominantly positive assessment of this aspect.

Most participants expressed satisfaction with the teaching material, using words such as "great", "excellent", "very good" and "good" to describe it. They highlighted the
quality of the material in terms of explanation, richness of content and availability of resources, such as video lessons, PDF materials and discussion forums.

Some participants mentioned that the material was placed on the platform, but that they did not make much use of it, as online classes already offered significant support for the class. However, this observation did not necessarily imply a negative evaluation of the material, but rather the way they chose to access it.

There was a minority who rated the material as "fair" or "average", suggesting that there was room for improvement, but they still did not consider it bad. The main conclusion is that, based on the responses provided, the teaching material appears to be an effective aspect of distance learning at the institution in question. However, it is important to highlight that individual perceptions of the quality of the material may vary, and student feedback must be continually considered to improve and adapt the material to students' evolving needs.

Analyzed research shows that quality is not always good. The results of Schneider's (2020) research indicate that the teaching materials analyzed present a standardization in their preparation, although some changes in format and layout were identified. A behaviourist approach is evident, as the material focuses on an exposition of content, using frequent repetitions in a repetitive format.

Question number five sought to analyze the factors considered most relevant to guarantee the quality of distance higher education. Based on the answers to question 5, it is possible to identify some key points:

• Quality Teaching Material: Most interviewees recognize the importance of well-designed teaching material, including videos, and diverse and accessible materials. This indicates that quality content is essential for the success of distance learning.

• Quality Internet Access: The quality of the internet connection was mentioned as a critical factor. Having a good internet connection is essential for accessing online resources and participating in virtual classes.

• Pedagogical Support: Full-time pedagogical support was highlighted as relevant. This suggests that students value ongoing support from tutors and teachers to answer questions and provide guidance.

• Interactivity and Engagement: Interaction between students and teachers, as well as student engagement through discussion forums, conferences, and collaborative activities, were considered essential to ensure the quality of distance learning.
• Ease of Access to the Platform: Ease of access to the distance learning platform and its usability were mentioned as important factors, highlighting the importance of a user-friendly interface.

• Availability of Teachers: The availability of teachers was highlighted as a relevant factor. Students appreciate it when teachers are available to answer questions daily.

• Virtual Class Size: Some respondents prefer smaller virtual classes, indicating that this can promote more effective interaction between students and teachers.

• Content Renewal: Some mentioned the importance of live classes and constant content renewal to keep teaching relevant.

• Clear Communication: Easy-to-understand communication was mentioned as a relevant aspect of the quality of distance learning.

• Student Integration and Participation: The integration of students in the virtual community and their active participation were also considered essential for the success of distance learning.

• Quality of Professionals: The quality of professionals involved in distance learning, including tutors and teachers, was mentioned as a relevant factor.

• Ease of Access to Resources: Having access to educational resources such as videos and objective materials was highlighted as important.

In general, the responses indicate that the quality of distance learning depends on a combination of factors, ranging from technology to pedagogical support, interactivity, and student engagement. Creating an effective virtual learning environment requires attention to multiple aspects to meet student needs and promote academic excellence.

Authors analyzed in this research, such as Flores et al. (2021), Hodges et al. (2020) and Alves et al (2020), make it clear that for distance learning for higher education to be of quality, the technological infrastructure must be reliable, offering access to high-speed internet and stable teaching platforms. Furthermore, adequately training teachers for the online environment is essential, ensuring that they know how to create and deliver effective classes.

Developing high-quality content is also crucial, with an emphasis on interactivity, engagement and adapting to student needs. Fair and authentic assessment of students is also vital, with security measures in place to prevent cheating. Accessibility must also be prioritized, ensuring that all students have equal access, regardless of their special needs. Finally, regular communication between students and
teachers, as well as between students themselves, promotes collaborative learning and the exchange of ideas (MELO, 2021; BERTOLIN, 2021; FERNANDES, HENN, KIST, 2020).

In question number 6, the following was asked: “On a scale of 1 to 5, what is your level of satisfaction with the quality of the distance learning you graduated from?”

Based on the answers to question 6, we can observe the following:

- 52.9% of respondents gave a score of 4, which indicates a satisfactory level of satisfaction with distance learning.
- 23.5% of respondents gave the maximum score of 5, indicating a high level of satisfaction with the quality of distance learning.
- Another 23.5% of respondents gave a score of 3, which suggests an intermediate level of satisfaction.

These results suggest that the majority of students interviewed are satisfied with the quality of the distance learning from which they graduated, with a significant percentage expressing a high level of satisfaction. However, there is also a considerable group that demonstrated an intermediate level of satisfaction. It is important to further investigate the reasons behind these responses and identify specific areas that may need improvement to further improve the quality of distance learning.

In the seventh question, participants expressed their opinions about what affects the quality of distance learning.

The main aspects that affect the quality of distance learning are lack of institutional support; technology and connectivity issues; communication and interaction errors; lack of variety of resources; lack of commitment and responsibility; feedback delay; lack of personalization in classes, etc.

The responses indicate that the quality of distance learning is affected by a combination of factors ranging from institutional support to technology, communication, commitment and personalization. To improve the quality of distance learning, it is important to address these aspects in an integrated and holistic way, ensuring a more effective and satisfactory learning experience for students.

Once again, the answers are in line with what authors such as Flores et al. (2021), Hodges et al. (2020) and Alves et al. (2020) say when they state that the quality of distance learning depends on the technological infrastructure of stable etc.
In question number 8, participants were asked about the areas that they believe need improvement to improve the quality of distance learning.

The responses reveal several areas that participants consider crucial to improving the quality of distance learning. One of the main demands is for more interactive activities, in certain cases replacing recorded classes with live and practical classes. The quality of audiovisual resources is also highlighted as an area for improvement, with the need for more engaging, high-quality videos and classes.

Furthermore, the importance of efficient technical support stands out, as students seek quick solutions to technological problems. A full understanding of the teaching platform and its functionalities is seen as essential to improving the student experience, along with a faster internet connection to avoid interruptions in access.

Keeping the content up to date is seen as important to ensure the relevance of the subjects, as well as the presence of experienced and qualified tutors to guide students. Some participants highlighted that, in some aspects, the quality of distance learning is already good and emphasized the importance of maintaining what already works well. Improving these aspects can contribute to a more effective and satisfying learning experience for students.

The penultimate question asked was about the quality of support offered by educational institutions.

Responses to question 9 reflect a variety of assessments of the quality of support offered by distance learning institutions. The majority of participants appear to be reasonably satisfied with the support, describing it as good, very good, adequate or average. This suggests that, in general, institutions are offering some level of assistance that meets students' needs.

However, there are also some criticisms pointed out. Some students mention the complexity of support, noting that they cannot always communicate at the times offered by the institution. Furthermore, one response highlights that many institution employees are not familiar with the institution's regulations, which can negatively affect the quality of support.

Although most reviews are positive or neutral, there is still room for improvement in the support offered by distance learning institutions. This includes streamlining support processes, and ensuring staff are knowledgeable and available to help students effectively, especially considering the flexible nature of distance learning.
The last question asked to participants was whether they believed that the use of technology contributed to the quality of distance learning.

The answers to question 10 reveal a largely positive perception about the potential of technological tools to improve the quality of distance learning. First, technological tools offer students access to a wide range of educational resources, such as digital books, videos, interactive simulations, and online libraries. This enriches the learning experience, providing different ways of presenting and exploring content.

Furthermore, technology enables the creation of interactive learning environments, in which students can participate in discussion forums, virtual chats, online conferences and collaborative projects. These tools encourage student interaction and engagement, making learning more active and meaningful.

Although there is a consensus on the positive potential of technology in distance education, it is emphasized that the choice and implementation of these tools must be carefully planned and aligned with educational objectives, highlighting technology as an ally that can enrich the learning process and make the most effective and accessible distance learning.

Based on participants' responses to the 10 questions, it is possible to observe a wide variety of perspectives and experiences about distance learning (EAD). The perception of the quality of distance learning varies, with some participants believing that it is comparable to face-to-face teaching, while others highlight the importance of the teacher’s physical presence.

For authors such as Melo (2021), Bertolin (2021) and Fernandes, Henn and Kist (2020), the use of technological tools plays a fundamental role in improving the quality of distance learning. These tools offer significant benefits, such as greater accessibility, interactivity, and multimedia capabilities. They promote flexibility in learning, enable interaction between students and teachers and enrich the content with visual and practical elements. Therefore, technologies play a crucial role in promoting more effective and engaging distance learning.

The interaction between teachers and students is considered fundamental in most responses, with the majority of participants emphasizing the importance of this learning exchange. Furthermore, the quality of technological resources and teaching material provided by distance learning institutions receives varied evaluations.

Participants' overall satisfaction with distance learning is positive, with a significant percentage expressing a high level of satisfaction. However, challenges are
also mentioned, such as lack of practice, internet connection problems and difficulties in accessing resources.

Technological tools are seen to improve distance learning, with emphasis on the diversity of resources, interactivity, personalization of learning and ease of communication. Additionally, participants identify areas that need improvement, including class interactivity, technical support, diversification of teaching materials and adequate communication. The answers reflect the complexity of distance learning, highlighting its strengths and challenges. This information can guide efforts to further improve the quality of distance learning and meet the needs of students in different educational contexts.

**CONCLUSION**

It is possible to conclude that perceptions and experiences about distance learning (EAD) are multifaceted. The proposed objectives were achieved, allowing a more comprehensive understanding of participants opinions about distance learning. The responses highlighted the importance of teacher-student interaction, the relevance of adequate technological resources and general student satisfaction as crucial elements in the quality of distance learning.

Based on the conclusions of this research, some suggestions can be made to improve distance learning. Firstly, interaction between teachers and students must be promoted effectively, using technological tools that facilitate communication and engagement. Furthermore, it is essential to invest in quality and diversified technological resources to enrich students' learning experience.

Personalization of learning and technical support were also highlighted as areas that deserve attention. Flexibility in the curriculum and the creation of more interactive and practical learning environments can significantly improve the quality of distance learning. Additionally, ensuring that students have access to effective technical support can reduce the technological barriers that some face. Based on these conclusions, it is possible to direct efforts to improve distance learning, making it more effective and satisfactory for students.
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