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THE CONTRIBUTION OF DISTANCE EDUCATION TO TEACHER TRAINING IN SECONDARY EDUCATION; A CASE STUDY

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1

Abstract: The article aims to reflect on the contribution of distance education in the training of secondary school teachers in the city of Beira, seeking to answer the following problem: What is the contribution of distance education in the training of secondary school teachers in the city of Beira? Its general objective is: to understand the contribution of distance education in the training of secondary education teachers, and its specific objectives: to raise the level of teacher enrollment in distance education; describe the training stage of secondary school teachers and analyze the contribution of distance education in the training of secondary school teachers. And the following questions are: how many teachers in the city of Beira join distance education? What is the training stage for secondary school teachers and what is the contribution of distance education in the training of secondary school teachers? The article is a case study, in which we adopt a qualitative approach with the interpretative paradigm. To collect data, we used a semi-structured interview, where the participants are trainee teachers trained in distance learning, assisting with document and content analysis. The study concluded that distance education contributes to the continuous training of teachers who are later classified according to their area of training.

Keywords: teacher training, continuing training and distance education.

INTRODUCTION

Distance Education (EaD) provides an opportunity to access education for young and adult students, due to the fact that this type of teaching is a modality that welcomes people who live in locations where there are no universities.

The provision of higher education in Mozambique dates back to the post-independence period, even so, our country needs an education that can face the complex moments of the contemporary world, in which social, political, economic and cultural transformations affect educational systems and teaching.

Therefore, taking into consideration, globalization, we intend with this article to highlight "The contribution of distance education in the training of secondary school teachers in the City of Beira", whose central objective is to understand the contribution of distance education in the training of secondary education teachers in the city of Beira, specifically we will carry out an exhaustive survey of the level of teacher intake in distance education; description of the training stage for secondary school teachers and finally we will analyze the contribution of distance education in the training of secondary school teachers.

From the perspective of Lima (2012), Distance Education is a teaching modality that works through a systematic and organized educational process that has as its fundamental characteristic the physical-spatial separation between teachers and students, who interact from different places, through technological means that enable bidirectional interaction.

Therefore, we raise the following problem: What is the contribution of distance education in the training of secondary school teachers in the city of Beira?

Thus, for the materialization of this work we opted for a qualitative approach, of a phenomenological-interpretive nature, which was embodied in a semi-structured interview with five teachers trained in the distance learning modality, aiming to understand the year of their admission, their perception regarding the training offer in Distance Education, the motivation that guided them in choosing this modality, the difficulties faced throughout their training, the advantages of graduating in this modality and, finally, their insertion into the job market after their training.

INITIAL TEACHER TRAINING

Teacher training, according to Flores (2014), has been the main focus of attention in academic debates, researchers, political decisions, and debates on the quality of teaching. The relevance of the theme was also illustrated by authors such as Marcondes and Leite (2014), Wiseman, Imig and Neel (2014), Russell and Martin (2014) and Niklasson (2014) when analyzing teacher training processes in their countries.

From the perspective of Gonçalves (2013), the construction of a teacher's professional career depends, to a large extent, on the knowledge and skills acquired in initial training, which must constantly be improved and given new meanings through continuous training.

In relation to initial training, Nóvoa (2014) explains that the institutions that deal with the initial training of teachers are the main center for training and disseminating knowledge and the profession's system of standards, exercising the function of developing pedagogical knowledge that will guide the common philosophy of knowing how to teach.

Therefore, the effort to improve the quality of teaching must begin by improving the quality of the training process, considering that it is the basis for acquiring professional knowledge.

For this reason, it is important to highlight that when approaching initial training, Sacristán (2014), points out the need to rethink initial teacher training models, which suggests the need to establish a training curriculum that does not focus solely on didactic aspects, but which includes the reflective aspects of teaching practice from the initial moments of training.

In the same line of thought, Esteve (2014) intends to show that teacher training must give the trainee the opportunity to reflect and internalize the methodologies they will use and their effects on student learning, the effective organization of the classroom in for learning and the problems that normally occur in classroom management.

Thus, Russell and Martin (2014), in the study entitled "The importance of pedagogical voice and productive learning in initial teacher training", carried out with future teachers, divided into focus groups, the authors identified the need for teacher training to transform in a productive learning context.

Productive learning is understood as being the set of actions that involve the correct interpretation of the experiences of students and teachers, the learning conditions of students in the classroom context, the way of presenting the learning content, the way in which the teacher poses the questions and interprets the students' responses, through the strategies the teacher uses to identify problems and focuses on solutions.

In the debate on the importance of initial training Mcmahon (2014) in his work entitled "The reform of teacher training in the United Kingdom: different objectives and different routes in England and Scotland?", presents a comparative study on the different approaches to training of teachers in both contexts.

It is worth highlighting that initial training must be seen as the moment in which the trainee (future teacher) learns to immerse himself in the profession and develops skills that will be important in the future, as Bonifácio (2017) argues that, "initial training is inevitably, a crucial time to learn to know, to reflect, to make choices and to choose paths considering the matrix of human encounter that this profession demands from teaching professionals" (p. 167).

In summary, empirical studies highlighted the importance of the reflective and practical component in and during initial training (McMahon, 2014). From this perspective,

it is assumed that this will allow productive learning to be achieved (Russell & Martin, 2014), assuming that the quality of teaching depends on the quality of the teacher, which, in turn, depends on the quality of initial training (Imig, Wiseman & Neel, 2014).

CONTINUOUS TEACHER TRAINING

Initial training is based on the acquisition of theoretical and practical knowledge about the teaching/learning process and ongoing training will seek to develop the knowledge acquired during this training process.

It takes into consideration, the work contexts and concrete learning situations that the teacher faces in the classroom.

However, ongoing training is sometimes imbued with theoretical content in accordance with the needs felt in teaching practice. As Moita (2013) highlights, ongoing training issues are linked to models and strategies, considering the evolution of the teacher's role and the contexts in which they develop their educational practices.

Continuous training can only be associated with the teacher's reflective and investigative work, that is, for him to achieve effective continuous training, which helps his professional development, he needs to be aware of the progress, regression or even stagnation of his teaching activity.

In the same line of thought, Sarmento, Fossatti and Gonçalves (2012) argue that if the teacher aims to be innovative, creative and reflective in his teaching practice, he must follow the line of self-investigation, which requires the ability to reflect on his actions.

In turn, Mesquita (2016) warns that the training process must be dynamic and reflective to help the teacher build their professional autonomy and building this autonomy involves, in fact, an awareness of the challenges of the profession and the possible strategies to adopt. In other words, it can be understood that continuous training not only favors the construction of autonomy but also helps with professionalization because it complements initial training and allows access to higher levels in the professional career (Romanowski & Martins, 2010).

It is important to highlight that continuous training is justified by the studies of several authors who argue that it is disconnected from reality in a school context, such as: Romanowski and Martins (2010), Moita (2013), Esteve (2014), Sacristán (2014), Flores (2014), Russell and Martin (2014), McMahon (2014), Imig, Wiseman and Neel (2014), Niklasson (2014), Estola, Syrjälä and Uitto (2014), Butcher (2014).

Therefore, it is necessary to fill the gaps in initial training through continuous training, which can be in the workplace or in specialized institutions, such as teacher training universities. It turns out that throughout the professional life there are career phases in which they become more involved in the training process.

DISTANCE EDUCATION

The adoption of distance education in Mozambique comes in an attempt to respond to the difficulties of higher education for individuals who want to attend this level and who, for various reasons, are unable to do so due to work and the traditional type of education that exists in Mozambique. "EAD was adopted in Mozambique because it was recognized that its virtues could be used to meet the needs of dispersed masses EEAD (2003)".

Through a graft taken from the Strategic Plan for EAD 2014-2018, we can observe one of the purposes that guide the establishment and massification of this modality in the country, is the need to expand access to education to the most remote areas of the country in order to provide opportunities of education to all Mozambicans.

There are several concepts that we can find for distance education, depending on the case, the different authors present regions of conceptual convergence through the emphasis of certain characteristics of this type of Education, which has been proving to be a fundamental instrument for promoting opportunities for different individuals around the world. across the globe.

For this article, we will list some basic concepts related to distance education, where the first is presented from the perspective of the Mozambican Government, and then by the authors Garcia, Moore and Kersley, and finally Lima.

The Mozambican Government, through its Distance Education Strategic Plan (PEED) (2014-2018), defines distance education as being "the teaching model that is distinguished by the separation between student and teacher, use of technology to mediate learning, two-way communication that allows interaction between students, teachers and tutors and the possibility of face-to-face meetings for tutoring." (PEED, 2013).

In the same vein, Garcia (2014) understands that "it is an educational process that occurs without the presence of the teacher, in which all instructional material was sent by mail and that the student should carry out their studies individually and autonomously, based on the material received, generally printed, which had been prepared especially for that course, with the student subsequently sending lessons or assignments by correspondence" (p. 201).

In turn, Moore and Kearsley (2007, p.02) define distance education as follows: "Distance education is planned learning that normally occurs in a place other than the teaching location, requiring special course creation techniques and of instruction, communication through various technologies, and special organizational and administrative arrangements."

In turn, Lima (2012) defines Distance Education as a teaching modality that works through a systematic and organized educational process that has as its fundamental characteristic the physical-spatial separation between teachers and students, who interact from different places, through of different technological means, which enable bidirectional interaction, that is, a two-way interaction.

Aretio (1994) characterizes EAD as a technological system of two-way mass communication in which the personal teacher/student interaction in the classroom is replaced by a systematic and joint action of teaching resources and tutorial support, encouraging the student's autonomous learning.

For Armengol (1987), distance learning is characterized by having an adult student population, relatively dispersed and massive, in which the methodology uses self-instructional resources, enabling the student to be responsible for learning.

Finally, Distance Education from the perspective of (Preti, 2002 cit. in Pereira, Moraes & Teruya, 2017, p.14) is a multimedia system of two-way communication with the student away from the teaching center and helped by a support organization to serve, in a flexible way, the learning of a massive and dispersed population.

Although there are several concepts for distance learning, it is known that it is a growing education system and that the technology used for it is increasingly advanced, providing quality education to those who cannot attend traditional (in-person) education.

Thus, the thinkers previously listed converge their reasoning when they understand distance education as one that develops independently of physical space, using information and communication technologies as a resource. However, it is important to add that the emergence of some information and communication technologies help to leverage

this type of teaching that has been growing in recent years in Mozambique, which has seen the greatest demand from residents of the city of Beira, where they seek their training in the distance education modality.

Therefore, among the various concepts listed above, we will use as a basis for our article the one listed by the Government of Mozambique, as it better suits our reality when it comes to student-teacher separation, use of Information and Communication Technologies, two-way communication allowing the exchange of content through face-to-face and semi-face-to-face meetings for tutorial sessions.

METHODOLOGICAL DESIGN

At this point we intend to develop the methodological steps used to operationalize our study. Therefore, to achieve the objectives set, we opted for the following methods: bibliographic review, which consisted of using material already prepared (books and scientific articles) to substantiate the reality of the field.

The methodology was based on bibliographical research, taking as reference the literature presented, and the legislation that covers teacher training through distance learning, which served as a foundation and guided this article, providing a broader view of the contribution of distance education in training of secondary school teachers in the city of Beira, within the perspective of distance education, and its implications for the implementation of pedagogical practice in everyday school life.

Regarding the paradigmatic framework, the study adopted by the research is the phenomenological-interpretive one which, according to Rossato and Martínez (2017), is an interpretative paradigm as it seeks to understand phenomena in their natural state, the personal experiences of social actors, trying to elucidate the perceptions of individuals, often emanating from subjectivity.

However, the set of beliefs that guide the researcher's action must also be taken into consideration, recognizing that the researcher has the task of formulating diverse interpretations according to the investigative actions (Aires, 2015).

The research, by adopting the interpretative paradigm, aims to understand the contribution of distance education in the training of secondary school teachers in the City of Beira.

The methodological option follows a qualitative approach, of a phenomenological-interpretive nature according to Rossato and Martínez (2017), considering that the object of study is directed towards understanding the contribution of distance education in the training of secondary school teachers in the City from Beira. Thus, Araújo (2012) highlights that the qualitative approach seeks to achieve in-depth descriptions of the reality under study that enable the interpretation of the phenomenon or situation.

Interviews were used to collect data, considering that it is a recommended technique for qualitative studies as it allows for more in-depth information to be collected. Therefore, Costa (2012) defines the interview as "the process of face-to-face interaction between one or more people (who play the role of interviewer) and a person or group of people (who play the role of interviewee)"; (page 149).

Regarding the type of interview, we opted for the semi-structured interview, since, according to Amado (2014), the semi-structured interview seeks, through a previously established plan, through a question guide, to collect a series of data essential for the interviewer.

The study participants were 5 teachers trained in distance learning who teach in secondary schools in the city of Beira, who

were interviewed after giving their free consent to participate in the study.

The study opted for the data analysis technique of content analysis (Bardin, 2016) since the data was collected through semi-structured interviews.

On the other hand, content analysis helps in systematizing the results collected in

interviews, understanding the observed facts and establishing relationships between the facts studied (Aires, 2015).

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

At this stage of the article we intend to analyze the data collected, both from documentary sources and from interviews submitted to our target group. Meanwhile, we were able to see the enormous contribution that Distance Education brought to higher education in Mozambique, specifically for secondary school teachers in the city of Beira.

In an exhaustive analysis of the number of admissions to EAD, an increase was noted, as a presumption of quality provision based on the basic principles that govern this type of teaching. By way of illustration, we can see at the level of the Institute of Distance Education at the Catholic University of Mozambique, that we can collect some illustrative data from it: in 2014, 4,089 students entered; in 2015 – 3,201; in 2016 – 4,584; 2017 – 6,430; 2018 – 4,200 and finally in 2019 – 5,500 students. (IED Central Academic Register).

The data presented above indicates the general number of students who joined distance education at the Catholic University of Mozambique distributed across the various Resource Centers, namely: Beira; Muanza, Buzi; Marromeu, Chimoio; Gorongosa; Tete; Quelimane; Gurué; Milange; Nampula; Pemba and Maputo.

At the Resource Center of the City of Beira, our research focus, the data below demonstrate the greater demand for initial and continuing teacher training using Distance Education. In 2014, 184 joined; in 2015, 147 joined; in 2016, 346 joined; in 2017, 432 joined; 2018 395 joined; and at the end of 2019, 564 joined.

It is important to highlight that the Beira Resource Center, as it is located in the city of the same name, has the privilege of welcoming students from the province of Sofala and others in the center of the country. Which is why, these numbers indicate that UCM's FDI has made a huge contribution to the training of secondary education teachers in the central provinces in particular, and in the country in general.

These data reveal to us that there is a huge demand for this modality from practicing teachers who wish to increase their academic level. On the one hand, IED offers the possibility of initial training to High School graduates, on the other hand, training continues to teachers already in office. Even so, Gonçalves (2013) argues that the construction of a teacher's professional career depends, to a large extent, on the knowledge and skills acquired in initial training, which must constantly be improved and given new meanings through continuous training.

Regarding motivation, the 5 (five) teachers interviewed regarding the motivation that made them enter the distance education modality, our interviewees unanimously indicated the possibility of studying without interrupting their work process, since the majority of them were not study permits are designed, and the teaching modality allows them to combine their studies and their work activities, as they are teachers assigned to remote areas, where it would be practically impossible for them to integrate into face-to-face teaching. Let's look at some examples:

EE1: "some employees worked in the district and there are no higher education institutions there, and with the existence of IED many improved their level and this is to be praised"

EE2: "Initially I wanted to thank IED, it was an opportune moment for me and other colleagues who came by because this distance learning thing makes it in no way easier for anyone who is an employee and is not close to a higher education institution."

Another no less important fact mentioned by our students is that the Distance Education modality gives them greater autonomy, enabling mediated interaction and interactivity in the teaching and learning process, allowing the flexibility of human interaction with independence in the time and space by organizing your study schedule, notes, self-evaluation work, etc…

Lima (2012) defines "Distance Education as a teaching modality that works through a systematic and organized educational process that has as its fundamental characteristic the physical-spatial separation between teachers and students, who interact from different places, through technological means diverse, which enable a bidirectional interaction, that is, a two-way interaction" (p. 13).

Regarding the degree of perception regarding the Distance Education modality, we noted with great satisfaction among our interviewees that some myths and taboos regarding distance learning tend to disappear, as the level of admissions has been growing year after year and the number of graduates has proven to be satisfactory at the institutional level. For example, in 2014, 1,078 graduates graduated; in 2015 – 1,267; 2016 – 3,189; 2017 – 1,589 and finally in 2018 – 1,068, totaling 8,181 (eight thousand one hundred and eighty-one). Corresponding to students from 2014 to 2018. (IED Central Academic Register)

These numbers reveal the great contribution that the Institute of Distance Education has made in the training of senior staff at national level because, of the graduates, they complete all the courses taught at IED, among which the teaching of Portuguese Language, History, Biology stands out., Mathematics, Geography, Physics, Chemistry, Physical Education and Sport, IT and Drawing.

Graduates after their training acquire skills, abilities and attitudes that enable them to promote curricular learning, disseminating their professional practice in specific knowledge, the result of the production and use of diverse knowledge, namely, knowing how to teach, knowing how to be and knowing how to be/ live together professionally. (Curriculum plan for courses at the Institute of Distance Education)

Regarding the difficulties encountered by our students throughout their training, these refer to the issue of electricity and the internet in remote areas, which leaves a lot to be desired. Since the use of ICT in our teaching modality has proven to be one of the indispensable means for the assimilation of programmed content.

EE3: *"(…) the problem of the system, the system oscillates, the system either returns or establishes itself and has to make the most of it".*

EE4: "(…) we faced some difficulties, which we increasingly overcame. Sometimes systems change, system x to another system, but we always adapted, each system changed, the next came and we adapted."

In this approach, alongside the use of ICT, there is an urgent need for distance learning institutions, specifically linked to teacher training, to analyze and adapt the didactic-pedagogical aspects linked to the most appropriate informational content.

Vieira, (2011) notes that ICT has an extremely important role in educational practice for the subjects involved in the

process, especially in distance education processes, it is clear that ICT has the potential to reduce borders and expand the circulation of information, leading to the construction of knowledge.

Therefore, having consolidated the opinions of those interviewed, we can conclude that distance learning offers numerous advantages when compared to the face-to-face modality. Starting with the financial aspect, distance learning is less expensive than in-person; in the technological component, EAD is the modality that best suits development and globalization, allowing the use of these platforms in teaching; In terms of interaction, it enables the use of tools in interactive activities that lead to greater sharing of teaching materials, knowledge and experiences. Furthermore, relying on multimedia technologies, EAD brought multisensory integration and a change in the educational paradigm, that is, from the transmission of information by the teacher to the construction of knowledge by the user.

CONCLUSION

However, the construction of the article occurred through theoretical analyzes and interpretations and reflections on the contribution of distance education in teacher training, showing that it is not a limited system, and is characterized as a flexible opportunity, where the Knowledge is passed on through virtual platforms, exercises and video classes are made available to learners, so that they can be consumed in different real times. In developing the research, it was possible for us to understand from our interviewees that EaD promoted the inclusion of in-service teachers towards continuous training, as these, according to their geographical location, are unlikely to opt for face-to-face teaching. In this sense, it contributed to reconciling studies and work. However, we realize the enormous challenges that EaD faces today, which range from adapting pedagogical content intended for face-to-face learning to the EaD modality, providing the use of more advanced technological platforms suited to the realities of its users.

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