INFORMATION AND COMMUNICATION TECHNOLOGIES IN DISTANCE **EDUCATION FOR THE TRAINING OF PUBLIC SERVANTS**

TECNOLOGIAS DA INFORMAÇÃO E COMUNICAÇÃO NO ENSINO A DISTÂNCIA PARA A CAPACITAÇÃO DE SERVIDORES PÚBLICOS

TECNOLOGÍAS DE INFORMACIÓN Y COMUNICACIÓN EN EDUCACIÓN A DISTANCIA PARA LA FORMACIÓN DE SERVIDORES PÚBLICOS

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ABSTRACT: The objective of this article was to investigate whether the qualification courses made available by the Department of Education and Culture of the Army - DECEx to the servers of the Brazilian Army (EB) through the Distance Education (EaD) modality add personal benefits and professionals to the trainees. To do this, a qualitative methodological approach was used to support the bibliographic and field research. The data collection instrument was the questionnaire with open questions. It was found that the research participants gained significant qualification benefits through expanding access to these professional qualification opportunities. On the other hand, there were also difficulties in achieving the necessary skills for the use of information and communication technologies as pedagogical tools that effectively serve the training of public servants and, consequently, the improvement of public service for the society.

KEYWORDS: Distance education. Federal public institution. Professional qualification.

RESUMO: Neste artigo teve-se como objetivo investigar se os cursos de qualificação disponibilizados pelo Departamento de Educação e Cultura do Exército - DECEx - aos servidores do Exército Brasileiro (EB) por meio da modalidade em Educação a Distância (EaD) agregam beneficios pessoais e profissionais aos cursistas. Para tanto, utilizou-se a abordagem metodológica qualitativa para subsidiar a pesquisa bibliográfica e em campo. O instrumento de coleta de dados foi o questionário com perguntas do tipo abertas. Foi possível constatar que os participantes da pesquisa obtiveram beneficios significativos para a qualificação por meio da ampliação do acesso a essas oportunidades de qualificação profissional. Por outro lado, evidenciou-se, também, dificuldades para o alcance das competências necessárias para a utilização de tecnologias da informação e comunicação como ferramentas pedagógicas efetivamente a serviço da capacitação dos servidores e, consequentemente, na melhoria do serviço público para a sociedade.

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PALAVRAS-CHAVE: Educação a distância. Instituição pública federal. Qualificação profissional.

RESUMEN: El objetivo de este artículo fue investigar si los cursos de calificación puestos a disposición por el Departamento de Educación y Cultura del Ejército - DECEx - a los servidores del Ejército Brasileño (EB) a través de la modalidad Educación a Distancia (EaD) agregan beneficios personales y profesionales a la cursistas. Para ello, se utilizó un enfoque metodológico cualitativo para apoyar la investigación bibliográfica y de campo. El instrumento de recolección de datos fue el cuestionario con preguntas abiertas. Se pudo constatar que los participantes de la investigación obtuvieron importantes beneficios para la calificación a través de la ampliación del acceso a estas oportunidades de calificación profesional. Por otro lado, también hubo dificultades para lograr las habilidades necesarias para el uso de las tecnologías de la información y la comunicación como herramientas pedagógicas que sirvan eficazmente a la formación de los servidores públicos y, en consecuencia, a la mejora del servicio público para la sociedad.

PALABRAS CLAVE: Educación a distancia. Institución Pública Federal. Calificación profesional.

Introduction

We can consider that decades ago the universe of knowledge and work retained different connections and objectives. However, the post-World War II period, knowledge and work ended up having a deeper and even co-dependent relationship. In this scenario, education gained notoriety from decade to decade, being a prevalent theme in debates on public policies and citizenship, appearing in these discussions as a foundation for a better society. However, we have been experiencing difficult times over the years, as more and more Brazilian society has faced government cuts in investments in education, as well as reductions in the scope of educational public policies already implemented (GADELHA, 2017).

In a context similar to that of education, information has also gained considerable space in society, in debates and in the development needs of countries. Thus, education and information, urgently needed technology to be able to be accessible to the population. In this scenario, education and its modalities in line with the technological advent, have been increasingly sought after by economic sectors, governments and society in general.

Therefore, investments in education are often more necessary and should be a priority, not only in Brazilian society, but also in the world, thus realizing a metamorphosis in social, economic and cultural practices. Despite this acclaim for more investments in education, the public educational policies implemented have not been expanded, because, for this, the

formulations of these policies are not enough, but the maintenance and solid and continuous investments (GADELHA, 2017).

Innovative educational projects, the insertion of Digital Information and Communication Technologies and the strong debates about the need for investments and maintenance of funds in these areas, are essential guidelines for the development of a country and its insertion in the global scenario. An education that has priority on the political agenda, where new modalities and methodologies must be adopted to assist in improving educational indicators (ARAÚJO, 2013).

In this scenario, Distance Education, being an education modality according to the National Education Guidelines and Bases Law (LDB) n. 9,394 / 1996, comes to society as one of the feasible alternatives for expanding the educational offer. In this regard, it is important to note that the changes in the world of work arising mainly from technological advances have required the development of qualified professionals. In Brazil, within the scope of public institutions, there has been an increasing number of training courses in order to provide a training space that allows for the expansion of knowledge and technical skills. Thus, this demand has been met with the offer of distance learning courses (RANZINI; BRYAN, 2017).

In a study by Mourão (2009), which aimed to map professional qualification opportunities in both public and private institutions, verifying which of them offer more qualification opportunities, it was observed that in the 1,150 institutions surveyed, about 60% of them provide the opportunity for the qualification of employees, especially institutions located in the South and Southeast regions of Brazil.

Thus, it is noted that the use of educational tools and methodologies combined with information and communication technologies are more present in the training processes, both in public and private institutions. These training spaces aim to offer qualification opportunities to employees, understanding that education is a necessary pillar for professional development. For Ranzini and Bryan (2017, p. 419), "the training and education of public servants is a topic that has been gaining greater expression in Brazil". The expansion of configurations of the State's functions has increasingly demanded improvements in the provision of services, which requires greater qualification of public servants.

The Brazilian Army (EB), as a public institution of the executive power, is part of this process of training and qualifying its servants, paying attention to the use of technologies. EB has a responsibility, not only with the protection of the national territory, but also in carrying out this protection with intelligence, in addition to physiological strength. Among several

444

military and communication departments, this institution has the Army Education and Culture Department (DECEx).

DECEx has, throughout its creation, thrived in pedagogical terms, where one of its principles is to provide continuing education through permanent professional training of its members, using the Distance Education modality for this (BRASIL, 2015).

This federal institution, which cannot be obsolete with regard to technological advances, especially educational and pedagogical technological ones, uses the Distance Education modality to guarantee, according to its own laws and regulations, in the following areas: (1) military education; (2) competency-based teaching standards; (3) people management; (4) evaluation and development of military higher education (BRASIL, 2018).

Thus, for the Brazilian Army, Distance Education appears as an option for offering qualification, using the benefits of distance education. In light of the above, this research aims to investigate whether the qualification courses offered by DECEx in 2019, through Distance Education, brought benefits to course participants and the said public institution. To this end, a bibliographic and field research was carried out using a qualitative approach, in which the questionnaires were applied with the EB servers of the 28th Battalion of Logistics in Dourados-MS.

The training of public servants in the Brazilian Army

Professional qualification is a point sought by both the worker and the company and / or public body. Qualification leads to gains for both. Managing people in the work environment has become an immense challenge today, having to manage not only people, but their time. Some elements such as outsourcing, new ways of management and the advancement of technology have led to significant changes for organizations and work, requiring qualification and constant updates (MOURÃO, 2009).

Aires et al. (2014) highlight that worker qualification increases productivity and the potential of the service offered. The purpose is not only to adapt the worker to the demands of the market, but also to contribute to the provision of services that will bring quality to society.

> Public investments in personnel training have grown since the 1990s, as has a concrete assessment of the results of these resources, in order to prove whether training has in fact added value to the public service [...]. This is because technological advances and the rearrangement of economic and cultural boundaries resulting from globalization have accelerated the degree of change, as well as the complexity installed within organizations, making it necessary to qualify those who participate directly in the functioning of the

State and of those who make decisions and influence them (AIRES et al., 2014, p. 1008, our translation).

In this context, the distance learning modality gains strength in this new educational process of training for job qualification, having been a very recurrent educational modality in the offer of training and qualification of public servants in Brazil.

Since EAD was born from the need to combine work with professional training and qualification, this perception of the need for continued training within the Army comes from the year 1811, where "The Royal Military Academy" was created, seen as a symbol in the history of military education. In this Real Academia, "home studies" already applied, which are indicators of what we now associate with distance education and even remote education (SOUZA; ROCHA, 2017).

Albuquerque (2011), in his research, finds that the beginning of distance education in EB is in the 17th century. In the aforementioned research, the author points out that there was already a didactic material for studies at the residence, whose material was intended to instruct EB in military art and, also, with the knowledge of arithmetic, geometry, artillery, among others. This was one of the training options, in addition to those that took place in the face-to-face model.

From the spread of correspondence education in the twentieth century and, later, of distance learning courses, EB exercised, through this modality, qualification courses for its civil servants. According to Ordinance No. 236-DECEx / 2018, the "Regulatory Instructions for the Army's Higher Education System" were approved. In this document, the entire Military Higher Education System of the Army - SESME is standardized. The immensity of Brazil, the financial limitations and the difficulty of regularity of these public servants in the face-to-face courses, contributed to a greater demand for Distance Education as a teaching modality that offered possibilities more adaptable to the different realities for professional training and qualification.

Brazilian EB has a specific regulation on education in its institution, which is regulated in Law no. 9.786 / 1999, in which article n. 1 on the purpose of Teaching at EB, which corresponds to qualify human resources for the occupation of positions and for the performance of functions foreseen, in peace and war, in your organization (BRASIL, 1999).

In addition, EB has a Department of Education and Culture - DECEx - created by Presidential Decree No. 6,710 / 2008, which is set up in an instance whose task is to plan, organize, direct and control, at the sectorial level, the activities related to educational and cultural issues in EB (BRASIL, 2008). The main functions of this Department are:

- Qualify human resources for the occupation of positions and performance of functions in the Military, Military, Health and Complementary Education Lines;
- Provide continuing education through permanent professional training for members of the Army Education System (SEE);
- Offer preparatory and assistance education in EB seeking to support the military family in the best conditions;
- Modernize and rationalize activities related to education, culture, physical education, sports and scientific research within the Army;
- Expand the integration of the SEE within the scope of its tasks with similar systems;
- Preserve and publicize EB's historical and cultural, material and immaterial heritage;
- Project the image of EB, at national level, from its cultural values;
- Develop the practice of physical activity and sport in the Army;
- Promote actions that provide EB with an outstanding performance in sports competitions, nationally and internationally;
- Develop scientific production in the areas of defense, military science, doctrine and personnel; and
- Contribute to the process of formulating and updating the Terrestrial Military Doctrine System.

To achieve these objectives, DECEx has an Education Portal that is a virtual space with the objective of expanding and improving Military Education. Such objectives were present in the Army's Strategic Planning (PEEx), where goal 12 of "Implement a New Education and Culture System" appears, and the strategy for this objective is the "Update of the Education and Culture System" (BRASIL, 2015).

The Education Portal is the answer to the educational planning of the institution present in the planning instrument entitled "Brazilian Army Education and Culture Directive 2016-2022". This document also defined the EaD guidelines for EB, which comprises two purposes:

I - consolidate Distance Education (EAD) as an educational modality in the Army's Education System (SEE), in line with the Army's Strategic Plan (PEEx 2016-2019) and the Institution's Political-Pedagogical Project; and II - define the areas of responsibility of the bodies involved in the planning of EaD training events (BRASIL, 2015, our translation).

The consolidation of distance education in EB achieves the strategic objective of expanding and consolidating the implementation of the Virtual Environment for Education and Culture in the institution, aiming, in this way:

I - provide members of the EB, serving in Brazil or abroad, with training in areas of interest to the Force and even in areas of individual interest, when convenient for the Institution;

II - provide, to the dependents of EB members, serving in Brazil or abroad, the continuity of study in elementary and high school, in accordance with the legislation in force;

III - to promote the articulation between the on-site and distance training processes, meeting the quality standards of military education;

IV - constituting a pedagogical identity for distance education, through educational actions based on innovative and effective dynamics;

V - promote the provision of short-term training events, whose instrumental or fundamental skills are required for the exercise of the positions or functions provided for in the Army's organizational structure; and

VI - consolidate the Distance Education Center of the Army (CEADEx) as a military organization (OM), with the missions of training human resources to act in the distance learning modality and to coordinate and guide the execution of this modality within the Army (BRASIL, 2015, our translation).

It is evident that EB not only has regulations and planning instruments that deal with its education system, but also a specific department for this purpose, in which it ensures an education portal where its Virtual Learning Platform is hosted, which offers distance and semi-distance courses. This condition allows the institution to establish an educational policy for the training and qualification of its employees.

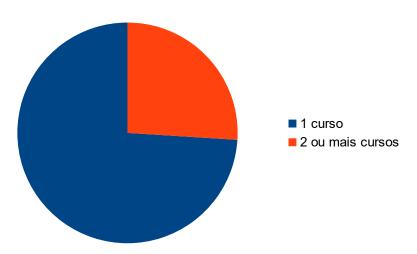
Results

The choice of the 28th Battalion of Dourados-MS as a locus of research is associated with the longevity of EB, as it is one of the oldest in the public service, as well as the institutionalization of an educational training policy that presents specific norms, as well as such as infrastructure and budgets for this purpose.

The field research was carried out through the application of a questionnaire, in which there were four open questions: (1) "Which course did you take in the distance education offered by the Brazilian Army?"; (2) "List the personal and professional benefits that participating in the course has brought you."; (3) "List the difficulties you encountered in taking the course in distance education"; (4) "List the facilities that you identified in taking the course in distance education". The questionnaires were sent to two hundred and one servants.

Of the two hundred and one who received the questionnaire, one hundred and twenty-three employees returned the questionnaire. A valid questionnaire is considered to be those who answered the questions and had no identification or erasures. The questionnaires were applied between August and December 2019. We used as a criterion for the selection of subjects those who had already participated in some training and / or qualification offered by EB through the distance learning modality.

Considering the intention of verifying whether the qualification courses offered by the EB did not benefit public servants, it is identified that of the one hundred and one participants in the research, 74% had already taken an EaD training course, the remaining 26% more than a course in this modality, as shown in graph 1:



Graph 1 - Participants in distance learning courses

Source: Researchers' own elaboration

The new demands on the profile of professionals to meet social demands have imperatively ordered, in terms of knowledge and learning, professionals connected and open to other training possibilities for quality performance with updates and innovations in the use of pedagogical technologies and methodologies (PERRENOUD, 2005). In view of this perspective, it can be seen, according to the data presented in Graph 1, that there is still little adherence to the courses offered by EB. It is observed that the majority took only one course. When asked about the benefits, both professional and personal, the participants answered according to table 1:

Table 1 – Outstanding personal and professional benefits

Personal Benefits	Professional Benefits
Increased taste for reading and learning	In-depth knowledge of the profession
Culture in general	Increased potential to contribute to the Public Institution
Qualification for promotions	Expansion of knowledge, enabling actions in different spaces in the Public Institution
Concentration and focus	Knowledge of specific areas and sectors in the Public Institution
Use of course knowledge in personal life. Example: financial education	Greater knowledge of military affairs
Be more persistent	Improvement in the work offered by the Public Institution
New teaching and learning techniques	Institutional Knowledge
Improved military posture	Participate in missions abroad
Personal organization of time	Increased administrative knowledge of the Public Institution
Ease of learning through Information Technologies	Technical preparation for succession of positions
Update on educational technologies	

Source: Researchers' own elaboration

The demands on the profile of professionals to meet social demands have imperatively ordered, in terms of knowledge and learning, civil servants as training for the use of technologies, leading them to always perform with quality (PERRENOUD, 2005). Professional qualification in distance education is intended to be an educational practice for the improvement and development of the skills needed by the professional.

Despite the fact that the majority of civil servants have taken only one training course in distance education, as shown in Figure 1, the data recorded in Chart 1 indicate the identification of several personal and professional benefits identified by the participants of the course participants.

When asked about the difficulties in carrying out the course, only 17% reported not having any type of difficulty, but for 84% it is possible to point out some type of difficulty, as we can see in Table 2:

Table 2 – Difficulties reported in conducting the distance Course

Dif culdades relatadas na realização do curso EAD	Realização das provas
	Tempo para dedicar aos estudos
	Estudar no computador
	Falta de adequação às novas tecnologias
	Conciliar horas de estudos com at vidades diárias da função na OM
	Pouco tempo para estudo devido função exercida
	Acesso ao tutor para t rar as dúvidas era demorado
	Falta de orientações específicas
	Demora para o esclarecimento das dúvidas
	Plataforma de aprendizagem não intuit va
	Tráf co intenso na realização das provas/mesmo horário todo Brasil
	Internet de baixa velocidade
	Conteúdos extensos e poucas horas para o estudo
	Aprendizado somente teórico

Source: Researchers' own elaboration

We note that both the EB and the military public servant are interested in training. However, as it is in distance education, it is important to note that there are still a significant number of difficulties that must be resolved in order to guarantee the quality of the training process, which were evidenced by the data in Chart 2.

There are limitations in the offer of distance education courses in Brazil. Some technological limitations may occur, such as the low capacity of the computer, the slow access and the lack of flexibility of the program. There are, still, to consider, the abilities of the people to deal with the informatics, with the computer itself, with the methodology of EAD. Another limitation concerns the cultural issue. In Brazil, for example, face-to-face contacts are valued; it is a strongly relational culture. Physically solitary work can then be a limitation. We also have to consider that unclear tasks and the absence of feedback can be factors that bring limitations to distance learning (VERGARA, 2007, p. 4, our translation).

When asked about facilities when taking the course in distance education, only 4% did not find any facilities, while 96% reported several facilities and benefits in conducting the courses, as can be seen in detail in Table 3 below.

Table 3 – Facilities reported in conducting distance courses

Horário f exível **Facilidades** relatadas na realização Horário de estudo do curso Plataforma para t rar dúvidas **EAD** Baixo custo Uso das TI na aprendizagem Poder estudar em casa

Diversidade de locais para estudo com acesso à Internet Poder escolher um ambiente tranquilo Estudo no horário de expediente Aiustar os horários de estudo Excelente material de apoio Apoio da OM para o aluno estudar Excelente Ambiente Virtual de Aprendiagem Ensino descomplicado Interação com outros alunos Provas on-line de múlt pla escolha

Source: Researchers' own elaboration

According to the data in Table 3, we can point out that the six purposes of the Distance Education Directive for the Brazilian Army are being fulfilled. Such a situation is a benefit not only for EB, but also for Brazilian society, where a social return on investments is expected. However, such benefits should be more concrete and disseminated through public policies.

The training of civil servants within the scope of public management is responsible for constantly stimulating the socialization of knowledge and, from there, ensuring the development of professional skills which ensure the improvement of services provided to the population. Therefore, the data show that EB has an institutionalization of training processes, which guarantees specific legal frameworks, structure and budget for this purpose. These are extremely favorable variables for the consolidation of an integrated training and qualification system for its employees. On the other hand, the limits indicated in the training indicate the need for a policy for monitoring and evaluating these courses, which will allow for the planning of actions aimed at overcoming the identified problems.

Final considerations

It was found, through research, that the objectives to which EaD proposes, within the EB, are being reflected in the expansion of the qualification of its servers. In relation to the challenges presented by research participants on distance education, such as: difficulties in using the computer and / or another technological tool; reconciling studies with work and, even, limits on the organization of their study time, demonstrate obstacles that are also present in other training realities of this modality, among them, those aimed at the level of Higher Education.

Considering the difficulties pointed out in the research, we emphasize the need for EB and other public institutions to create instruments for monitoring and evaluating the training offered. These instruments make it possible to identify problems and provide indicators for planning pedagogical practices.

It is also important to consider that qualification courses in distance education do not replace the educational system with its respective levels of education, but it must be understood by public administrations as an alternative of educational possibility for the continuous development of workers. Since, with the advent and popularization of advances in information and communication technologies, this modality has guaranteed the increasing reach of access to training processes.

In this sense, the use of distance education is shown as an important tool for the development of human resources in EB, whether in the process of training / qualification and / or in the continuous process of knowledge. Therefore, it is increasingly necessary that institutional and public policies understand the relevance of this learning space for the constant qualification of civil servants and, consequently, for the improvement of public services provided to Brazilian society.

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