PEDAGOGICAL MODELS FOR DISTANCE EDUCATION USED FOR CONTINUOUS TRAINING: CASE STUDY OF GOVERNMENT SCHOOLS OF THE LABOR COURT IN BRAZIL

MODELOS PEDAGÓGICOS EM EAD PARA FORMAÇÃO CONTINUADA: ESTUDO DE CASO DE ESCOLAS DE GOVERNO DA JUSTIÇA DO TRABALHO NO BRASIL

MODELOS PEDAGÓGICOS EN EDUCACIÓN A DISTANCIA PARA LA EDUCACIÓN CONTINUA: UN ESTUDIO DE CASO DE ESCUELAS DE GOBIERNO DE JUSTICIA LABORAL EN BRASIL

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**ABSTRACT:** This study aims to analyze the pedagogical models for distance education adopted by the Judicial Schools of Labor Court in Brazil. Qualitative research, with a multiple case study approach, data collection was carried out through documentary research and a semi-structured online questionnaire. Data were treated through thematic document analysis and categorical content analysis. The theoretical framework rested on pedagogical models for distance education, interaction in virtual environments, educational technologies and media, and continuous training. The study concluded that a pedagogical model predominates with a cognitive conception of learning, with a prevalence of self-instructional courses and the use of educational technologies with characteristics of: asynchronous communication, rich in communication symbols and mutual and reactive interactions. The model adopted stimulates the self-development of the staff, taking advantage of the potential of digital technology in inducing learning. It is suggested to investigate the impact of the adopted model on organizational culture.

**KEYWORDS:** Pedagogical models. Distance education. Professional training. Educational technologies.

**RESUMO:** Este artigo visa analisar os modelos pedagógicos para EaD utilizados pelas Escolas de Governo da Justiça do Trabalho no Brasil. De natureza qualitativa e com abordagem por estudo de casos múltiplos, a coleta de dados utilizou pesquisa documental e questionário on-line semiestruturado. Os dados foram tratados por análise documental temática e análise de conteúdo categorial. O quadro teórico repousou em modelos pedagógicos para EaD, interação em ambientes virtuais, tecnologias e mídias educacionais e treinamento e desenvolvimento (T&D). O estudo concluiu que predominou modelo pedagógico com concepção de aprendizagem na perspectiva cognitiva, com prevalência de cursos no formato autoinstrucional e utilização de tecnologias educacionais com característica de comunicação assíncrona, rica em símbolos comunicacionais e interações mutua e reativa. Os resultados apontam que o modelo utilizado estimula o autodesenvolvimento do corpo funcional, aproveitando as potencialidades das TDIC na indução de aprendizagem. Sugere-se investigar o impacto do modelo adotado na cultura organizacional.

**PALAVRAS-CHAVE:** Modelo pedagógico. Educação a Distância. Formação profissional. Tecnologias educacionais.

**RESUMEN:** Este artículo tiene como objetivo analizar los modelos pedagógicos de educación a distancia (EaD) utilizados por las Escuelas de Gobierno de Justicia Laboral en Brasil. De carácter cualitativo y con un enfoque de estudio de caso múltiple, la recolección de datos utilizó la investigación documental y un cuestionario semiestructurado en línea. Los datos fueron tratados mediante análisis documental temático y análisis de contenido categórico. El marco teórico se basó en modelos pedagógicos para la educación a distancia, la interacción en entornos virtuales, las tecnologías y medios educativos, y la formación (entrenamiento) y el desarrollo (T&D). El estudio concluyó que existe un predominio de un modelo pedagógico con una concepción del aprendizaje desde una perspectiva cognitiva, con un predominio de cursos en el formato autoinstructural y el uso de tecnologías educativas con la característica de la comunicación asincrónica, rica en símbolos comunicacionales e interacciones mutua y reactiva. Los resultados indican que el modelo utilizado estimula el autodesarrollo del personal, aprovechando el potencial del TDIC en la inducción del aprendizaje. Se sugiere investigar el impacto del modelo adoptado en la cultura organizacional.

**PALABRAS CLAVE:** Modelo pedagógico. Educación a distancia. Formación profesional. Tecnologías educativas.
Introduction

The use of the possibilities of pedagogical mediation brought by TDIC for professional training in the legal space has grown progressively in the international context (CALDEIRA, 2017). In Brazil, the Judiciary is not outside this process. For the Labor Court - whose constitutional competence is to judge legal actions between workers and employers (Art. 114, BRASIL, 1988) - the advances in TDIC are already felt in the context in which the employment relationship occurs through new arrangements productive, blurring the boundaries between the physical, digital and biological spheres (SCHWAB, 2019).

From this perspective, the continued in-service training of personnel working in the Judiciary needs to consider the new context and use TDIC in their training actions, investing in permanent education, which enables professional, personal and life-long training (DELORS, 1996; DURAN, 2017).

This article presents the results of academic research developed in the Postgraduate Program in Mathematics and Technological Education (Edumatec), at the Federal University of Pernambuco, which aimed to study which pedagogical models in EaD predominate in continuing in-service training developed by Schools Judiciary of the Brazilian Labor Court. The importance of the research lies in the scarcity of studies aimed at investigating training and development (T&D) practices carried out in distance learning within the scope of the labor Judiciary.

The article begins by presenting the theoretical framework that supported the research. It continues by presenting the methodological path, the discussion of the data collected and, finally, the results found, scope and limitations.

Methodology

The research was qualitative in nature (CRESWELL, 2014), with a multiple case study approach (LÜDKE; ANDRÉ, 2015; YIN, 2015), seeking to understand human phenomena based on their representations. With descriptive and explanatory objectives, data collection involved bibliographic, documentary and field procedures (GIL, 2010).

In this research, the unit of analysis adopted for the case study was the training actions...
developed in EaD by Judicial Schools of the Labor Court. The collected data was subjected to thematic document analysis (BARDIN, 2016) and categorical content analysis (MORAES, 1999). The analytical categories were extracted from the theoretical framework of the research, namely: (i) conception of learning (MAYES; FREITAS, 2004); (ii) types of interaction in the virtual learning environment (PRIMO, 2003) and (iii) characteristics of the media and educational technologies used (BATES, 2017).

The locus of development of the study was 09 (nine) Government Schools linked to the Labor Judiciary. Three schools of each size of the Court were chosen (small, medium and large), including at least one in each Brazilian geographic region. The research subjects were the EaD managers of each school, who responded to the semi-structured online questionnaire (16 closed and 8 open questions), addressing training actions in EaD; the TDIC used in T&D actions and the organizational and functional structure of the distance learning team.

Data collection took place from May 7th to 20th, 2020, approximately 2 months after the beginning of social isolation imposed by the Covid-19 pandemic, at a time of suspension of in-person activities in all Regional Labor Courts surveyed.

**Theoretical Reference**

**Training and Development (T&D)**

Learning is fundamental to life in society, it happens daily in all social spaces, including at work. In companies, it presents itself as a guarantor of the sustainability of the enterprise, allowing the actions of each worker to be aligned with the organization's objectives. Hence the importance of Training and Development actions in production spaces (T&D).

The actions that induce learning are strongly marked by the technological conception of the mode of production of each era. In the mid-19th century, with the growth of industrialization, the logic was to provide workers with motor skills to faithfully carry out prescribed tasks. In the context of Taylorist/Fordist production – large-scale production, with a serial assembly line – managing the corporation consisted of rigorous control over the production process. During the Second Industrial Revolution, professional training was divided into two processes: training – to develop motor skills for employees; and development, to develop cognitive skills for managerial positions (MALVEZZI, 1999).

The introduction of TDIC in the production scenario presents itself as a third industrial revolution, such is the impact it had on the organization of the production process and
qualification for jobs (BASTOS, 2006). Production modes become more flexible, there is no room for the rigid production of a single product (ANTUNES, 1995). Increasingly qualified workers are required, raising the strategic level of the T&D area in organizations.

As a result, the concept of education applied to organizational learning has evolved significantly, taking on new meanings that go beyond professional training. Continuing education, lifelong education, corporate education are examples of the new reality. The organization invests in qualification because this will result in a competitive advantage in times of flexible production (DEPIERI, 2006).

For the public sector, it is also imperative to go beyond training, establishing a team training policy structured in programs that develop skills for the 21st century. The paradigm is the achievement of the social objective embedded in the actions developed by the State, whenever possible with less financial expenditure (DAGNINO, 2013; SIQUEIRA; MENDES, 2009).

**Distance Education**

Digital technology has made it possible to extend the didactic sequence beyond the classroom, in a pedagogical continuum that articulates formal and informal contexts. In this technological scenario, distance education gains strength by implementing didactic-pedagogical mediation between teachers and students who may be in different spaces and times (MOORE; KEARSLEY, 2008; PRETTI, 2009). In public and private organizations, the use of distance learning in the implementation of T&D policy is a current reality. The advantages of this modality go beyond the good cost-benefit ratio (DURAN, 2017).

In a networked, hyperconnected society, immersed in an information deluge (CASTELLS, 2010; FLORIDI, 2015; LÉVY, 2003), the technical educational model no longer meets the significant changes occurring in the professional training space. Open and distance education systems and lifelong education, all of this has led to the emergence of new pedagogical models oriented mainly towards learning and not content (BEHAR, 2009; VENDRUSCOLO; BEHAR, 2016).

With a synthetic approach that brings together the main learning theories in 3 (three) broad aspects, Mayes and Freitas (2004) present analytical perspectives to study the pedagogical models of distance learning that occur in online environments:

* The associative/empiricist perspective;
* The cognitive perspective;
* The situational perspective;

From the associative perspective, knowledge is understood as an organized accumulation of skills. To this end, learning tasks must be organized in a sequence that goes from the simplest components, as a prerequisite to achieving more complex tasks, always permeated by external stimulus at each stage (feedback).

From a cognitive perspective, understanding is acquired through an active process of creation, through activities that encourage creating hypotheses and building new ways of understanding a concept. For the situational perspective, knowledge is situated in the practices that emerge from communities, with learning being the skill that the individual acquires when participating in these practices.

The authors point out that in courses implemented in virtual environments there will hardly be anchoring in just one learning theory, but the predominance of one of the theories in the chosen instructional design (MAYES; FREITAS, 2004).

**Communication in the Virtual Learning Environment**

Modern studies of learning theory highlight the centrality of communication as an element that triggers interaction. Human knowledge is not a simple copy of reality, and is not completely determined by the subject's mind. It consists of the interaction between the two elements: subject and object, with dialogue as the central element of this process (FREIRE, 2015; PIAGET, 1996; VYGOTSKY, 2001).

In EaD, the interaction developed in the Virtual Learning Environment (VLE) becomes of fundamental importance, referring to communication processes that arise from the mediation carried out by digital artifacts. For Primo (2003), interaction is one of the aspects of the communication process and interactivity is the interaction mediated by the computer, classifying it into two types: mutual interaction and reactive interaction. Mutual interaction takes place between humans, mediated by digital technology, in which each interactant participates effectively in the creation/recreation of messages. Reactive interaction is established in a relationship between man and the technological system, in which human action is limited to choosing responses pre-determined by the system.

The typology proposed by Primo (2003) is based on communication theories, from an interactionist perspective of human cognition, bringing analytical centrality to the relationships...
that are established between interactants – whether human-human or human-machine.

Dealing with communication in a virtual learning environment refers to the brief digression of the presence of technology in the educational process. According to Bates (2017), human speech – orality – was one of the first resources used in education, later passing through writing on paper. With the expansion of TDICs, other communication variants emerge made possible by computers connected in a network (internet) that create new virtual social spaces (social media).

Social media is a subcategory of educational technology, covering a vast and different range. For the educational process, Bates (2017) highlights three fundamental characteristics to analyze educational media and technologies:

* Transmitting (one-way) or communicative (two-way) media;
* Synchronous or asynchronous technology;
* Individual media or rich media;

In terms of the structure of communicative connections (possibilities of interaction between participants), media are categorized into those that allow a communicative process “from one to many” (transmitting media) or “from many to many” (communicative media).

Regarding the space-time separation between teacher and students, media are classified as synchronous (live) and asynchronous (recorded). In synchronous media, everyone must be present at the same time, presenting advantages in the socio-emotional aspect, of affectivity. Asynchronous media allow communication at different times between participants, allowing them to access at the most convenient time. The educational advantage of this media lies in the possibility of numerous accesses by interested parties (BATES, 2017).

The richness of the media refers to the amount of meanings and interpretative skills that are available to transmit the information it brings. The more symbols you can use in the media, the richer it is. For Bates (2017), media characteristics are not discrete, stagnant states, but dimensional patterns that vary depending on the way in which the technology that will support them is designed or used. For the educational process, technologies must be analyzed based on pedagogical emphasis.
Results and discussion

Research context

The Labor Court (JT) in Brazil is made up of 1,587 Labor Courts (VT); 24 Regional Labor Courts (TRT), the Superior Labor Court (TST) and the Superior Labor Justice Council (CSJT). In the states of the federation, there are judicial schools linked to each of the 24 (twenty-four) Regional Labor Courts, with the purpose of implementing the professional qualification policy for civil servants and magistrates at the local level.

The Judiciary's personnel training policy is established by specific regulations, in accordance with constitutional provision (BRASIL, 1988, Art. 103-B, §4º). The regulations reveal a T&D policy with a multidisciplinary profile, privileging technical and humanistic training for the staff (CNJ, 2014; ENAMAT, 2019).

In the data collected by the semi-structured questionnaire, answered by distance learning managers, three formats of distance education courses regularly used by the schools surveyed appear:

* EaD course with active tutoring (Collaborative EaD): developed on a virtual platform, with permanent support from a tutor to clarify doubts, evaluate and encourage student participation.

* EaD course without tutoring (EaD – Self-instructional): developed on a virtual platform, without tutoring and with evaluative activities carried out via questionnaire with automated correction and feedback.

* Blended Course: part of the pedagogical activities developed in distance learning (online activities) and part with face-to-face classes.

In 77.8% of the schools surveyed, there is a predominance of courses in a self-instructional format, mainly related to language themes (foreign language, Portuguese, LIBRAS), socio-environmental responsibility policy and information technology.

Distance learning courses with active tutoring predominate for topics in the legal area (legislation, procedure and judicial routines, etc.) and, less frequently, for administrative-managerial topics. Blended courses appear, to a lesser extent, in the areas of legal, languages and information technology.

The research data report that the self-instructional EaD course is developed with pedagogical mediation essentially taking place through video classes, animations, graphic resources and texts, together with learning retention activities in the form of an evaluative
questionnaire with correction and issuance of automatic feedback, allowing the student more than one attempt.

Graphic elements to motivate the student's progress are included in the course design, such as activity completion tracking, gamification, task sequence interconnection and interactive resources inserted in video classes. Didactic content is presented in a sequential, linear manner, starting from simpler instructions to more complex ones, in an associative approach.

The research data shows a significant predominance of self-instructional courses for topics linked to the development of routine skills, such as computerized systems training, legislative updating and work routines. Depieri (2006), Vargas and Abbad (2006), within the theoretical conception of T&D, point out that in organizational environments, routine skills are developed through instructions and/or training. Instructional learning from a behaviorist perspective, according to Mayes and Freitas (2004), emphasizes active learning-by-doing and with immediate feedback on the success of learning.

The use of the self-instructional format brings gains in scale, allowing the replication of the course to reach a significant number of trainees and, also, for civil servants and magistrates to set up their personal development path, within an open learning system, with self-directed studies made possible by EaD.

Bastos (2006) and Pilati (2006) state that the creation of T&D programs in a personal and individualized way, through an open and self-directed education system, marks the third evolutionary wave of learning induction actions in corporate spaces, which occurred in since 1970. This conception is linked to the idea of using digital technologies to enhance organizational development, as well as enabling better adaptability of the workforce to new production models.

The research data show that the communicational quality present in self-instructional courses is developed in a relationship between man and the technological system, providing reactive interaction (PRIMO, 2003). The student enjoys a certain freedom of action, based on pre-established paths. The chosen virtual environment (Moodle) and the technological tools used effect the construction of human-computer interaction (ARAÚJO, 2019).

Although the self-instructional format presents elements of associativism (individualization of instruction, sequence of learning tasks, immediate feedback), the significant presence of elements of human-computer interaction (ARAÚJO, 2019) of the reactive type (PRIMO, 2003) and through rich and asynchronous media (BATES, 2017)
indicates an evolution of the implemented model, signaling a cognitivist conception (MAYES; FREITAS, 2004).

According to Behar (2009), TDICs enable the construction of a heterarchical pedagogical space, with respect for the student's individual rhythm and autonomy. In this particular, the self-instructional format of distance learning courses plays an important role in the judiciary's training policy, also taking into account this characteristic of the context that encourages autonomous and self-directed training.

For courses implemented in distance learning formats with tutoring and blended learning, the data shows the use of VLE with technological tools that provide student-student and student-tutor interactions, such as online forums. The tutor is the main mediator of learning. For these formats, the conception of learning from a cognitive perspective stands out, through learning strategies that enable the collaborative construction of knowledge. Educational media and technologies are used in these formats that provide two-way communication, asynchronously, rich in communication symbols and with mutual interaction (BATES, 2017; PRIMO, 2003).

Distance learning courses with tutoring, self-instruction and blended learning are not the only formats used by schools. The research data also indicated the use of web conferences, social networks and Google Workspace tools in the training actions developed.

A significant majority of the Judicial Schools surveyed (88.9%) indicated positively the use of webinars (web conferencing) in training actions, with the use of sharing the instructor's presentation; communication between participant and instructor through chat and sharing of video, texts and files. For transmission, there is a broad preference for the YouTube platform (88.9%), followed by Google Meet (66.7%).

For schools that use social networks in training, Facebook and Instagram appear as the main choice (22.2%), followed by WhatsApp and Youtube (11.1%). The data also revealed that the schools surveyed use the Google-Form (88.95), Google-Drive (77.8%) and Google-Documents (22.2%) platforms in their training.

These media and technological tools reveal the possibility of developing training focusing on asynchronous interactions, pedagogical flexibility and centrality of pedagogical actions on the student, depending on the instructional design proposed for the course.

The Moodle platform appears to 100% of those surveyed as the VLE used in distance learning training actions. In a smaller percentage (1%) appear web conferencing platforms (Meet, Zoom, Cisco Webex) and streaming channels (YouTube).
Moodle enables several technological resources for pedagogical mediation – chats, forums, questionnaires with automatic correction, interactive video classes, text files, wikis, etc. This platform presents characteristics of communicative media, as it allows the production and alteration of the message between participants. It also stands out for being rich in communication symbol systems, allowing synchronous and asynchronous interactions (BATES, 2017).

The existence of a political pedagogical project was indicated by 77.8% of schools. For 66.75% of those surveyed, there is no participation of professionals with pedagogical knowledge in the preparation of distance learning courses; this professional exists in 33.3% of schools.

The data collected showed that the participation of professionals with pedagogical knowledge in the development of distance learning courses contributes to expanding the choices of pedagogical models and to innovating the repertoire of educational media and technologies used.

Final remarks

TDIC enable innovative contexts for learning induction practices in corporate environments. In this scenario, distance education presents itself as a very satisfactory possibility for T&D actions.

The present study, which sought to analyze EaD in the Labor Judiciary, concluded that the learning concept of the courses adjusts to the cognitive perspective, with a prevalence of courses in the self-instructional EaD format, using educational media and technologies with a predominant characteristic of communication; asynchronous; rich in communicational symbols and with mutual and reactive interaction.

The results indicate that the implemented model, made up of a mix of formats and pedagogical models, but with a predominance of self-instructional courses, plays a role in the T&D policy of the labor judiciary, encouraging autonomous and self-directed training. The changing nature of the organizational reality of the Judiciary, resulting from the greater complexity of the social fabric, requires the development of skills to learn to learn (self-development), taking advantage of the potential of TDIC to promote induction of learning in productive spaces in a broad way and permeating the most various themes.

As a contribution to future research, despite the limitations of the present study, it is
proposed to investigate whether the hybridity of the model is effectively contributing to changing the organizational culture in the Labor Court (impact assessment).

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CRedit Author Statement

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