MEDIATION IN THE DEVELOPMENT OF PEDAGOGICAL ARCHITECTURE FOR AUTONOMY

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ABSTRACT

The main objective of this research is to describe the mediation process during the construction of a pedagogical architecture to expand learning autonomy through the exercise of dialogue, seeking the association of different points of view, bringing to light skills and competencies that accentuate the student's autonomous profile and enhancing cooperation in the educational process. The paradigm of pedagogical architectures was evoked, in which learning structures occur from the confluence of different components. The methodology provides subsidies for a dynamic pedagogy, centered on creativity, in a perspective of construction of knowledge to be explored by students that transcends the transmission of contents, is based on a qualitative approach and is a pedagogical intervention that accentuated the students' autonomy profile throughout the collaborative dynamics and provided greater interaction through the process of dialogicity.

Keywords: Pedagogical Architecture. Mediation. Teaching.

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INTRODUCTION

Pedagogical architectures are collaborative dynamics associated with the technological support that can be used in teaching, enabling a teaching/learning process mediated by technology

In the midst of digital culture, the technological component should permeate the entire pedagogical proposal that must be considered throughout the pedagogical architecture and assert itself in educational processes where the teacher reinvents himself, in this process and assumes the role of mediator and this mediation is assumed by the In the midst of digital culture, the technological component must permeate the entire pedagogical proposal that must be considered throughout the pedagogical architecture and assert itself in educational processes where the teacher reinvents himself, in this process and assumes the role of mediator and this mediation is assumed by the teacher researcher and begins to be structured through the confluent relationship of students with technology.

The uses of technologies in the present architecture provide dynamism for teaching and the production of new scientific and cultural knowledge that are strongly related to language and are structured through dialogue that are seen as important components of this pedagogical architecture [1], we can think about the inclusion of technologies in contributing to improvements in the quality of teaching and learning. Basic Education teachers, digitally included, are able to learn in collaborative networks, develop autonomy and exercise authorship of their own professional career [2]. In addition, they motivate themselves and awaken the motivation of others with regard to teaching and learning in times of cyberculture.

The possibilities offered by new technologies applied to teaching are responsible for new skills demanded of teachers and the figure of mediation becomes indispensable for teachers and school to assume new roles, which meet the reflection and approximation of the student. To this end, it is essential to offer continuous training cycles to education professionals to ensure mastery of the tools and performance as a mediator in the use of digital technologies in redesigning teaching and learning processes.

PEDAGOGICAL ARCHITECTURE (PA)

Pedagogical architectures are, above all, learning structures made from the confluence of different components: pedagogical approach, educational software, internet,

artificial intelligence, Distance Education, conception of time and space. The character of a pedagogical architecture is to think of learning as an artisanal work, built on the experience of experiences and on the demand for action, interaction and meta-reflection of the subject on facts, objects and the socio-ecological environment [3]. Its curricular assumptions comprise open pedagogies capable of welcoming flexible, malleable didactics, adaptable to different thematic approaches.

The assumptions of pedagogical architectures consist of collaborative dynamics associated with computational support that can be elaborated or adapt a tool that meets the expectations outlined since the conception of the project[4]. We can highlight that the assumptions assumed by the present work articulate a triad (teacher training, opportunity for the student's speech and technological elements) that aim to contribute to the active participation of the associated students.

Reference [6] proposes that the open, adaptive and intelligent pedagogical architecture for the construction of knowledge in a collaborative way, which favors network interaction, cooperation, reflection and peer review. The experience of using this AP, through a prototype using the PBWorks tool and other external tools. This use case aimed to validate the effectiveness of the proposed PA, allowing us to understand the evolution of learning, the construction of knowledge, and the challenges and problems faced by students and teachers.

The theme of Pedagogical Architecture has a large flow of publications in the Congress of Informatics in Education and the works published in the years 2016 to 2019 that have interfaces with the present work were analyzed, in which we can highlight; the construction of a pedagogical architecture based on the active methodology of Peer Review was the strategy chosen by [7], to reduce the learning difficulty in modeling systems with Unified Modeling Language (UML) diagrams. The main results of that work were the exposure of errors and new ways of conducting the modeling approach through a more attractive way to students and was marked by the change in the teacher's posture that in these proposals manages to bring the student to the center of the learning process.

In the work [8] in qualitative analyses of the work with fifth-grade students of a municipal public school, the researchers seek to prove the effectiveness of the creation of collaborative environments as promoters of meaningful and autonomous learning. Aiming at the exploration of a constructivist-interactionist methodology, it was possible to verify the development of autonomy in students, this autonomy is evidenced by the levels of student

interactions. The study made it possible to show that students became more cooperative and understood the appropriate use of research works and the use of technologies as a learning tool, these strategies have been gaining strength in recent years and stand out for their great contribution to numerous works.

The use of pedagogical architectures in the studies [1], allowed us to verify that makerspaces are a constant space of imbalance and constitute important learning environments, the projects developed in this context offer rich physical and logical mathematical experiences, which seek to constitute the essence of human development and the establishment of new schemes of action. The exploration of the ideas of interindividual interaction and distributed mediation for network learning serve as a basis for the analysis of the interactions of a group of students in the experience of the pedagogical architecture of the Thesis Debate. The results show that the creation of a structuring space for debates favored the problematization of students' knowledge, the confrontation of ideas that destabilize them and offered conditions for the reconstruction of the forms of appropriation of the contents.

It can be assured that the works are related to the present project, as they revisit the traditional classroom proposing something that effectively marks the teacher-student relationship, as a structuring basis of the activities built throughout the process with the opening of the space for democratic discussion, being a relevant strategy for mobilization in the awakening of attitudinal typologies that will be deepened in the discussions of this project, which aims to build a Pedagogical Architecture that brings the student at the center of the educational process and seeks to expand the autonomy of students in dynamics and spaces for debate, in addition to having integration and technology in communication systems and recording of impressions. It is worth mentioning that the option for a specific (unique) type of pedagogical architecture will not be made. This work is intended to build an active and reflective model in cooperation with students.

CONSTRUCTION OF KNOWLEDGE

Reference [11] the approximation of Freire and Piaget can be recognized under the aspect of formal knowledge, where the education that problematizes, raises awareness and, more recently, described in the works the "pedagogy of the oppressed" and "pedagogy of autonomy" are carried out by a dialogical relationship and materialized by the Paulo Freire method that dialectically unites action and reflection in an educational

praxis that can only be understood as based on the action of both the educator and the educator. as in the student, presupposes the construction of formal thought in the sense of Piaget.

The learning contents [12] are classified as: factual contents, concepts and principles, procedural and attitudinal contents. Especially the attitudinal contents are xxxxxx, among the interactions that enable the development of attitudes the dialogue is xxxxxxx (problematization, criticality, call Paulo Freire), so

The present work seeks to present the mediation strategies for the learning of attitudinal contents, which have as characteristics the active component acting in a decisive way in the development oftheir learning, making the teaching activities of these contents much more complex and that can be grouped into values, attitudes and norms

We can highlight that the assumptions assumed by the present work articulate a triad (teacher training, opportunity for the student's speech and technological elements) that aim to contribute to the active participation of the associated students.

Thus, it is necessary to articulate a change in the teacher's professional practice and the articulation of a new classroom model that is open to information technology and technological supports.

Next, the theoretical assumptions that mirrored the didactic actions are exposed.

Fig. 1. Assumptions of pedagogical architecture and mediation proposal.
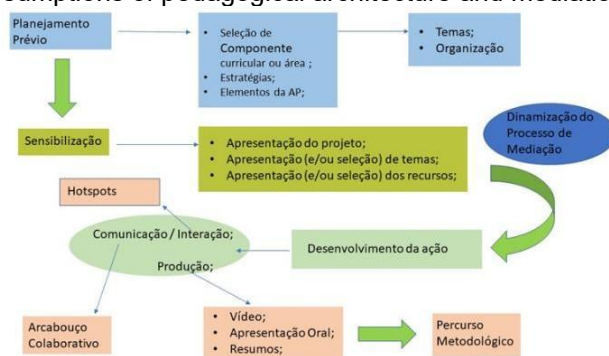
METHODOLOGICAL PATH

The work consists of the application of a construct based on the Paradigm of Pedagogical Architectures, long advocated and synthesized in the Pedagogy of Autonomy [13], which evokes educational strategies as dynamics, discussions and integration of didactic and technological tools without support in interdisciplinary curricular theories that have repercussions on teacher training and consequently on the change of school practices, according to the studies of [4].

Starting from broad questions that become clear in the course of the investigation, the research is characterized as qualitative exploratory can, however, be conducted through different paths. As for the objectives, it is characterized as exploratory because it promotes greater familiarity with the theme [14].

The process was mediated by the interactions of 35 adolescents living in a peripheral neighborhood of the city of Manaus, aged 16 to 20 years, who are attending the third grade of high school in a school unit inserted in a neighborhood of Compensa – AM.

The mediation of learning relies on the contribution of descriptive elements (which elements? Could they be related to figure 1?) to support the application of Pedagogical Architecture where the action of planning as a possibility of making predictions related to the coordination of objectives and pedagogical activities.

Among the organizational elements of the pedagogical architecture (PA) are all those intrinsically involved in the elaboration of the pedagogical proposal and its culmination.

In the creative process of the validated pedagogical architecture, thinking about the strategy that explored the development of skills that culminated in the decision-making that accentuated the autonomous profile, as shown in the following figure.

Fig. 2. Proposal for mapping the Hotspots, areas that allowed greater contribution by students, which will provide opportunities for the accentuation of autonomy, ensuring a space for the exchange of knowledge and fluidity in the discussions.

RESULTS AND DISCUSSION

The collaborative dynamics were previously organized and were interfered with according to the mediation process articulated in Fig. 1. The mediation proposal allowed interferences proposed by the Teacher/Researcher and ensured the advancement of the process and element for self-evaluation and collective evaluation by the students, the analyses were contextual, allowed the definition of the learning objectives and together with the resources adopted contributed to the construction of the pedagogical architecture.

And the following categories are presented into consideration: Opportunity for the student's speech (Dialogue), Technological elements, Teacher training.

It was possible to verify that the pedagogical architecture, through the mediation process, accentuated the autonomous profile of the student, since it provided a greater number of interactions when compared to the traditional classroom. Through the dynamics, there was a strengthening of collaborative work that was responsible for the expansion and discussion of the importance of technological support in the construction of knowledge.

The time of the meetings was defined in simulations of the activities and was ideal for the execution of the activities and the guidelines were administered by the mediator in a process of dialogue with all the actors of the processes

TECHNOLOGICAL ELEMENTS

The technological supports for content organization and content production were categorized into specific groups, presentation, video tools and audio tools of the contents, aiming at exploring all the potential of the adopted platform, it was verified what resources it has, as well as the synchronous and asynchronous communication possibilities. Knowing the platform in advance will help you in the organization. 90% of students do not have a desktop or notebook computer, and access the internet exclusively through their mobile device (cell phone), the information is in line with the 8th edition of the ICT Education 2017 survey, organized by the Regional Center for Studies for the Development of the Information Society (Cetic.br), where 97% of Brazilian students – from public and private schools in urban regions – access the Internet through their cell phones. The number does not change by region. For 18% of students, the smartphone is the exclusive device for accessing the network. Throughout the study, the students were free to use the cell phone, and in no way compromised the analysis of the work.

As much as the natural way in which they use technology is already well discussed, the same does not occur for pedagogical practices, many of the students did not know tools such as applications and others that have pedagogical aspects. During the experiment, a certain difficulty was identified on the part of the students in carrying out activities that are not part of their daily lives. Too much delay was observed to register in the padlet interface and many did not have the passwords to their emails, which reinforces the selective use of technology, often restricted to social networks.

The collaborative framework allowed interactions between all the actors of the process (teachers and students), the base of the framework was built to meet the specificities of the project and in the end it can be seen that the framework admits great customization such as exchange of thematic unit and discipline and even changes in the profile of technological support.

Fig. 3. Collaborative framework that presents the flow of collaboration of the actors of the teaching-learning process throughout the exploitation of work.
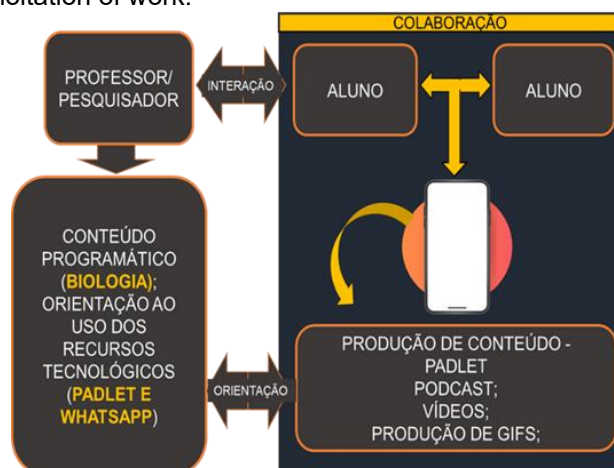
The collaborative framework allows great customization in different scenarios and situations, some proposals should be redesigned, but with the analyses made in this work we can say that easily the structure of concepts throughout the theme of natural sciences would be natural. We can extrapolate this analysis by stating that possibly the design constructed in this work would be an excellent contribution to the most diversified areas of knowledge. At this moment, we see no limitation to the proposal, as it was flexible and integrative, since we could replace even the technological support.

CONCLUSIONS

Following premises from this theoretical model, a pedagogical architecture was proposed, developed and later implemented in the classroom, where it was possible to verify that the development of autonomy took place throughout the collaborative dynamics, where the model presented has a direct relationship with a dynamic and relaxed class where the student will be at the center of the process, which has been constantly analyzed by active learning methodologies and works as a form of association of pedagogical and technological elements. When the student is placed at the center of the educational

process, he develops skills with problem solving and decision-making that accentuate that, according to our investigation, culminate in the accentuation of the autonomous profile.

The collaborative framework enabled the association of technological resources in the teaching of ecology and served as a reflection for changes in teaching practices, presenting high potential for the mediation process.

The construction of the pedagogical architecture in the experience in question made learning individualized, making it possible to observe the contribution of each student to the process of collective construction and this observation favors differentiation by skill levels and it was up to the meter to stimulate participation. In the collaborative works, we highlight that the individualized autonomous profile of each student was reorganized and created a learning path where the mediator decentralized the processes and created an atmosphere of creation with the students.

The mediation process carried out by the teacher/researcher made it possible for the pedagogical architecture built to relate directly to the dialogue and presents the necessary openness and opportunities for interaction for the development of autonomy and establishment of fluid communication.

The pedagogical architecture applied in blended learning depends on clear and efficient communication established by mediation with technological support. Great engagement on the part of the students was identified. We can relate the engagement to the active process that the activities were taught throughout the mediation and the way the dynamics were applied, suggesting personalization.

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