

Project-based pedagogy as a tool for the development of educational practices

Pedagogía por proyectos como herramienta para el desarrollo de las prácticas educativas
A pedagogia baseada em projectos como instrumento para o desenvolvimento de práticas educativas

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Abstract

Introduction: The present research was approached to get the Pedagogy application for academic Projects (PPP) as a source to promote the development of educational practices witness' judgment that key informants offer in their own experience inside the educational ecosystem. **Objective:** To generate theoretical constructs about the Pedagogy application for academic Projects as a source to promote the educational practices development. This process is boarded up on research by a subjectivist grasp. Also, it contains the theoretical use at the time it is based on key informants' experiences, which are made up of four school teachers and two school directive executives from two Public Educational Institutions in Medellín city. **Methodology:** The information gathering technique that was used was the interview in-depth. The instruments' validity was carried out through a professional review by experts. **Conclusion:** From that perspective, it produced a knowledge less encouraging for the Formation Processes Status based on educational practices that do not get into familiar results with PPP, and this also gets separated from what is convenient since the Teachers' practice stages and the holistic development from academic needs that, in reality, presents the human context. In that way, the theorizing was emphasized in authorizing true positive aspects and the real ones taken from PPPs, the same element that could help for the accomplishment of the educational goal, which is translated in the learners' realization under the complexity observation, the constructivism, and the rest of active pedagogical referring in modern times.

Keywords: Pedagogy for academic Projects; Teacher Role; Educational Practices; Education.

Resumen

Introducción: en la presente investigación se abordó la aplicación de la pedagogía por proyectos (PPP) como una herramienta para el desarrollo de las prácticas educativas, desde el juicio testimonial que brindan los informantes clave en su experiencia dentro del ecosistema educativo. **Objetivo:** generar constructos teóricos sobre la aplicación de la Pedagogía por Proyectos como herramienta para el desarrollo de las prácticas educativas. El proceso se enmarca en un estudio de enfoque subjetivista, con el uso de la teoría fundamentada a partir de las vivencias de los informantes clave; conformados por cuatro (4) docentes y dos (2) directivos de dos (2) Instituciones Educativas públicas de la ciudad de Medellín. **Metodología:** La técnica de recolección de información que se utilizó fue la entrevista a profundidad. La validez de los instrumentos se realizó a través de una valoración por parte de expertos. **Conclusión:** desde esta perspectiva, arrojó un conocimiento poco alentador para el estatus de los procesos de formación basados en prácticas educativas que poco tienen que ver con la PPP, y se distancia de lo idóneo, desde la práctica docente y las necesidades de desarrollo holístico, que en la actualidad presenta la humanidad. Así, la teorización estuvo enfatizada en refrendar aspectos positivos, verdaderos y reales de la PPP, elemento que puede servir para el logro de metas educativas traducidas en la realización del educando, bajo la mirada de la complejidad, el constructivismo y demás referentes pedagógicos activos de la actualidad.

Palabras clave: Pedagogía por proyectos; Rol docente; Prácticas educativas; Educación.



Resumo

Introdução: esta investigação abordou a aplicação da pedagogia baseada em projectos (PPP) como um instrumento para o desenvolvimento de práticas educativas, a partir do juízo testemunhal fornecido por informadores-chave na sua experiência no seio do ecossistema educativo. **Objetivo:** gerar construções teóricas sobre a aplicação da Pedagogia de Projecto como instrumento para o desenvolvimento de práticas educativas. O processo é enquadrado num estudo de abordagem subjectivista, com a utilização de uma teoria fundamentada baseada nas experiências dos principais informadores, composta por quatro (4) professores e dois (2) directores de duas (2) instituições públicas de ensino na cidade de Medellín. **Metodologia:** A técnica de recolha de dados utilizada foi a entrevista aprofundada. A validade dos instrumentos foi avaliada por peritos. **Conclusão:** Nesta perspectiva, mostrou um pouco de conhecimento encorajador para o estatuto dos processos de formação baseados em práticas educativas que pouco têm a ver com PPP, e está longe do ideal, da prática pedagógica e das necessidades de desenvolvimento holístico, que actualmente apresenta a humanidade. Assim, a teorização foi enfatizada ao apoiar aspectos positivos, verdadeiros e reais das PPP, um elemento que pode servir para a realização de objectivos educativos traduzidos na realização do aprendente, sob o olhar da complexidade, do construtivismo e de outros referenciais pedagógicos activos de hoje.

Palavras-chave: Pedagogia baseada em projectos; Papel docente; Práticas educativas; Educação.



INTRODUCTION

At the beginning of the 1990s, greater importance was given to the cross-cutting treatment of subjects as an aspect analogous to the disciplinary type of curriculum adopted in different educational systems throughout the world. In this sense, in Colombia, the General Education Law (Law 115, 1994) and the decrees derived from it, generated representative modifications in the organizational processes of private and public educational institutions to strengthen work and human development. In this way, general guidelines for the organization of the educational system in the country were established, proposing a disciplinary curriculum by areas and subjects for formal education in primary, secondary, middle and vocational education.

Thus, the curriculum in Colombia is consolidated as a reference for the operation of educational institutions, in which the disciplinary component is strengthened, taking into account the unavoidable contents per level, which are socially justified. Additionally, it is there where the PPP and the knowledge involved in transversal methodologies for the work between the different areas and subjects of knowledge enter (Vargas et al., 2021).

Today, the processes of globalization, accompanied by the growing presence of new technologies in the various fields of human activity, the vertiginous scientific development and the COVID 19 pandemic, force educational institutions to review the relevance of their pedagogical model, curricula and educational practices. These challenges demand greater coverage, educational quality, as well as, resources that guarantee the access and continuity of students in the institutions, as well as an equitable distribution of training opportunities, as the foundations for the country's development.

The great challenges of the 21st century and the particularities of a world in constant transformation, added to the propagation of information through the Internet, outline the need for a change in the educational paradigm that allows advancing from an education focused on competencies and values, where learning in knowledge, the development of skills, knowledge and attitudes indispensable for living and working in times of permanent transformation are privileged (Tello, 2022). The above demands the development of a comprehensive strategy that responds to the challenges demanded by today's society, given that tasks are increasingly changing and digital, which in turn will have a social impact that will require immediate solutions in the educational field.

Consequently, everything points to the development of new teaching methodologies that contribute to the formation of competent students in all areas of knowledge, capable of undertaking and transforming needs into opportunities for their immediate environment. In this sense, the integrating projects become a curricular strategy that is integrated to the educational processes, generating new possibilities for the development of competencies, thus "every project seeks to address problems in the context, and in that sense it is the most comprehensive strategy for the formation and evaluation of competencies" (Tobón, 2010. p.01).

In this sense, it is now necessary to highlight the PPP, in the understanding that this methodology promotes all these conditions and, in this way, makes possible the acquisition of learning by the student through the application of pedagogical actions based on the incorporation of knowledge, knowing how to be and knowing how to do in an integrated manner in the activities of the projects, as components of the process of solving problems of the context. Therefore, it is relevant to analyze this methodological strategy and in what way it can be applied.



This way it is possible to comply with the criteria usually established in the educational system, taking into account disciplinary contents articulated to the development of capacities and skills in the cognitive, affective, social and problem-solving areas.

Therefore, the PPP methodology is an approach that can transform previous imaginaries and knowledge, confronting the training by competencies, in addition, knowledge is susceptible to a construction mediated by broad and diverse actions, which result from a consensus between teacher and students, involving technological tools and experiential workshops, supported by research, aspects that enable the development of skills and abilities in young people, which in turn allows the traditional scheme of book, chalk and board and the authoritarian vertical forms of control of the class by the teacher to be dismantled. In this same context, the learning acquired in the context of project-based learning becomes an alternative that dynamizes the processes of knowledge construction, modifying the planning, organization and execution of tasks and commitments of both students and the group of teachers involved, opening possibilities for the development of specific skills (Guerrero and Terrones, 2003).

In effect, the -PPP- fosters in classrooms, environments of participation, collective construction of knowledge and decision making, and questions, concerns, arguments, reflections and opinions make sense in order to reach consensus in the final decisions. On the other hand, PPP gives students active roles as interlocutors who contribute from their particular experiences, nurturing the process with their thoughts, doubts and arguments. At the same time, teachers integrate this participation, allowing young people to express themselves in a climate of trust in which they can share their beliefs, needs and interests (Muñoz et al., 2019).

In this sense, the -PPP- breaks with traditional sequences, since its participatory structure becomes dynamic and variable, as it is the result of the interaction among participants, which means that it does not respond to a strict format. Thus, elements such as planning, the selection of activities and topics to be addressed, take on a broader dimension by responding to the agreements of the whole group and not only to the interest or motivation of the teacher (Mora and Travé, 2021; Botella and Ramos, 2020). Therefore, the understanding of new educational practices can allow the possibilities of work to be expanded, making the social construction of knowledge viable through topics of interest, qualifying the process of acquisition of student learning through forms of teaching consistent with the pedagogical model of the Institution.

In addition, it is important to mention that education aims at generating horizontal class moments where teachers and students collectively build knowledge, taking into account situations, interests, demands and needs of the educational community; in this way it is possible to address or respond to current problems of society. Likewise, ICFES (2007) maintains that training processes lead to the revision and reengineering of institutional documents, so that they can be adapted to the real needs of the community in order to develop specific skills such as asking questions, posing and solving problems, working in teams, interpreting and rigorously approaching possible alternative solutions and rationally selecting the most appropriate one. These skills will enable them to use their knowledge creatively to resolve situations in given environments, exchanging knowledge and developing a work ethic that allows them to offer their points of view in a respectful manner, while at the same time being able to assume constructive criticism.



In this sense, it can be inferred that in some educational institutions in Medellín there is uncertainty to involve the entire educational community in participatory processes, which may allow the consolidation of contextualized knowledge in the activities inside and outside the classroom, taking into account the members of the educational community. Therefore, it is necessary to generate theoretical approaches that contribute to open spaces for dialogue of knowledge in order to contextualize curriculum, pedagogical model and educational practices, articulated to the PEI for the benefit of the educational community.

As a symptom of this problem, it is presumed that in the classroom attention is being paid to a vertical development of the contents, attached (probably) to the curricular structures and the guidelines for the development of educational practices, based on educational policies, but taken literally by the teacher, without considering the same sections that the standards and guidelines allude to, as Rodríguez (2013) already found at the time as follows: "the teaching contents constitute the knowledge and values accumulated by humanity and transmitted by the teacher as absolute truths detached from the social and historical context in which the student lives" (p.39), and that are tarnished from the flexibility, contextualization and relevance of the application of teaching from the curricular instances, which leads to a disruption and strict compliance to the standardized knowledge that they want to impart.

Additionally, the problem is inferred from the application of teaching processes where the areas are approached in isolation, each disciplinary knowledge is taught according to the accumulated knowledge that has been generated throughout history, but, in addition, they are treated in a detached way from other areas and from the life of the students themselves. This is the reason why there is a latent traditional and cathedraic tendency that, since Freinet (1974), was already distinguished and criticized for the damage that this causes in the development of harmonious educational practices and, therefore, limited the scope of a suitable and integral teaching, which dragged with it the possible achievement of a transcendental and innovative learning.

Another cause that is estimated to be interfering is the lack of attitude for the development of a PPP, taking into account that teachers' attitudes are fundamental for the development of effective educational practices (Tello, 2022), elements that are unrelated and interfere in the meaning, importance and relevance that can be given to carry out any training process, as can be argued according to Edwards et al. (1992) "Teachers do not know or doubt what is the specific field (conceptual, attitudinal and concrete exercise) in which the profession is developed" (p.20), and, consequently, the priority given to project-based work so that every effort invested is reaped in a suitable and useful training for the student, but which here could be subsumed to simple bureaucratic fulfillment of planning and administrative processes, far from the true meaning of the PPP, therefore, the dissociation of knowledge, disciplines and of the school training versus the real needs of the learner is propitiated.

Similarly, they could also be having an impact on the scope and achievements of the Colombian educational system as can be paraphrased from Jurado (2017), in the formation of human beings for life, and in the adequacy of the school in the new scientific, technological, cultural and social trends, elements that can prolong the state of development of the State, by disassociating the reality of the student from the teaching processes developed in the classroom, and this could be impacting the integral conditions of a context.



Based on the problem posed, it is pertinent now to generate some epistemological questions that guide the course of the researcher to obtain knowledge about the subject selected in the present study, and in particular the following questions are shown: How some theoretical constructs on the application of pedagogy by projects can serve as a tool for the development of educational practices? What are the methodologies applied by teachers in educational practices in Joaquín Vallejo Arbeláez and Héctor Abad Gómez institutions? How is project pedagogy applied as a tool for the development of educational practices? What theoretical foundations on the application of project pedagogy can be structured for the development of educational practices in public institutions in Medellín?

Finally, this type of active methodologies have a positive impact on educational practices, since they become the ideal complement to achieve compliance with the contents of the curriculum, capture the attention of students and positive academic results in internal and external tests of educational institutions.

THEORETICAL FRAMEWORK

Theories underpinning Project-Based Pedagogy

It should be mentioned that the theories presented below are trends that are part of the conception of teaching and learning that is developed in each of the transversal educational interventions by projects, including Project Pedagogy itself, but that in its horizontal nature is based on other conceptions, in order to enhance the eclectic idea that has recently been part of the processes of educational intervention, in order to respond to the individual needs of human beings and their context, in this sense the different theoretical trends that come to support the pedagogy by projects are offered.

The New School

This teaching method emerged as an opposition to traditional behaviorist teaching methods at the beginning of the 20th century. In this regard, there was a strong criticism of teaching styles focused on the encyclopedic, magisterial and passive class. The main exponents and advocates of this theory were Maria Montessori and John Dewey, who claim that students should learn by doing, the meaning of education is the activity itself, and in this case, Lopez (2017) argues that "the action on reality that arises in his educational proposal is not activism, but that the action only becomes educational when it returns to the student through reflection to modify their behavior" (p.2), to the effect, previous knowledge contributes to modify subsequent experiences and teaching becomes an agglomerate of experiences that come together to intertwine knowledge, education itself becomes a life process, experience is the focus of this current.

Consequently, according to Palacios (1984), this methodology emphasized "the transcendence, value and dignity of childhood, by focusing on the spontaneous interests of the learner, to enhance their activity, freedom and autonomy" (p.17), this visualization has allowed great relevance to be given to this active method of education, which has been implemented in much of Colombia, especially in institutions.

rural public schools. In general terms, the main conceptions that cemented the new school were based on "self-learning, discovery, experimentation, play, collaborative learning, integrity, artistic, democracy, free personality, intellectuality, cooperation, co-education, personal discipline and the preparation of the future citizen, of a man conscious of the dignity of every human being" (Mialaret, 1968, p.33).

Therefore, educational practices need a profound rethinking from the methodological point of view, the classroom task must change the conception of memoristic and instructional, to be autonomous, collaborative, experiential and constructivist, because taking into account the role of the teacher as a guide, it is necessary to enable beneficial conditions in the classroom for the learner to find the necessary means from their interests to build knowledge and self-formation integrally, so that their income at the social level is positive.

Constructivism

In this pedagogical current, teachers provide students with the appropriate tools to encourage interest in research, innovation and thus the acquisition of knowledge in a meaningful way; while traditional and behaviorist methods are oriented to teach verbally, memorize and impose content, resulting in passive learners (Tigse, 2019). Constructivism within its main postulates takes the conception of the students' prior knowledge, with a series of steps that lead to the goal, which is summarized in meaningful learning. From this point of view, Ausubel (1983) argues that the basis of teaching is based on the learners' prior knowledge, which emerges and is related to the new information imparted during classes.

Likewise, Piaget (1969) maintains that constructivism perceives knowledge as a self-construction of the individual that is reproduced as a result of the interaction between cognitive and social factors; this process is permanent in all educational scenarios in which the learner participates. Additionally, this hypothesis provides a coherent and unified vision of cognitive development from childhood to adulthood. In this regard, "teachers should not teach in the traditional sense of giving instruction, but should structure situations where students actively engage with the content through the manipulation of materials and social interaction" (Schunk, 2012, p.231).

In this aspect, the teacher becomes a guide, who through his methodology and didactics guides the student through the path of doubts, concerns and uncertainty, in order to develop skills and abilities that allow him to make up for all those gaps and shortcomings for the acquisition and generation of knowledge. Similarly, according to Schunk (2012), constructivism employs a horizontal classroom methodology where the student is the protagonist of his or her training and learning process, based on collective and common needs and interests for the construction of the social fabric.

Meaningful Learning

In the past, the conception was that learning consisted of modifying behavior and, for this reason, a behaviorist training focused on rules and stimulus-response was given. To this effect, Domenech (2012) states that learning is associative, since relationships are established between two stimuli automatically, an element derived from constructivist pedagogy. The denomination of Significant Learning

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In this sense, cognitive organization can be taken as the group of concepts that an individual possesses in a given field of knowledge, as well as their classification. In this sense, cognitive organization can be taken as the group of concepts that an individual possesses in a certain field of knowledge, as well as their classification.

Therefore, meaningful learning is based on the concept of relating previous knowledge with new theories and meanings in a consensual and substantial way, so that the learner develops new theorems in his or her cognitive structure that contribute to enriching his or her formative process (Ausubel, 1983). Additionally, from the school it is relevant to take into account these aspects that contribute to transform traditional educational practices into horizontal constructivist spaces of knowledge generation. Therefore, prior knowledge becomes the starting point where teachers and students explore, through dialogue and debate, different points of view and reactions to critical topics that may be relevant and significant for the educational community. In conclusion, meaningful learning arises from past experiences and existing information linked to new concepts and theories that emerge from any social or educational environment.

Critical Pedagogy

Critical pedagogy, as its word implies, entails analyzing the way in which the dominant culture moves, in order to validate and legitimize diverse social realities. In this aspect, it can be seen how training from this pedagogical current will be conceived as a practice that promotes free-thinking, reflective, critical, autonomous and transformative learners of their social environment, who through their decisions manage to significantly impact their context. In this regard, the inequity gaps must be taken into account, since we live in a world full of shortages and inequalities and it is essential to become a common and collective actor in the transformation of today's society. Likewise, we must participate actively and democratically in the political life of society, in order to contribute positively to decision-making for the benefit of all humanity.

In this sense, it can be paraphrased from Unigarro (2017) that critical pedagogy protects a model of education where the person, despite being repressed by the pressure exerted by the family, the school and the state, must have the ability to go out, expose their ideas, defend their essence, identity and in the end reach their autonomy.

Finally, critical pedagogy invites the school to rethink another type of training, which is focused on awakening in students the capacities and competencies to face the social, economic and political reality, as well as to have good bibliographical documentation that contributes significantly to teachers and students to stimulate the search for solutions to their problems in the educational eco-systems. In conclusion, Freire (1967) argues that education must be channeled in the present and future for the sake of a new society, unfocused on social inequalities, political manipulations and centered on the commitment to life and the world.

Teaching for Understanding

In this way, Gardner (1997, cited in López, 2017), points out that only the understanding and comprehension of the relevant contents for the learner guarantee the acquisition of knowledge, this theory takes it into account in the multiple intelligences where it is visualized that people possess different cognitive abilities, which are applied to the solution of different problems or situations of everyday life. A



From contemporary learning theories, such as the new school, meaningful learning, constructivism and active models based on competencies, learning is conceived not as the accumulation of knowledge, but as the competence to solve different problems or situations in a changing, globalized and confusing world; in addition, Educational Institutions should provide training that allows individuals to face new challenges from the different areas and subjects, as stated by Gardner (1997). Therefore, teaching for comprehension has gained strength in recent years and arises as a response to the need to stimulate the understanding of knowledge in students, this aspect is considered important for the progress of cognitive processes and the integral development of the individual.

METHODOLOGY

Nature of Research

The present research work was based on subjectivism, with which it was possible to go deeper into the object of study, through a constant process of searching for truth, which may be limited to time and space. In this regard, Hessen (1989) argues that "subjectivism limits the validity of truth to the subject that knows and judges. This may be the individual subject or the general human subject. In the first case one has an individual subjectivism; in the second, a general subjectivism" (p.27). In this section, it could be seen that the approach becomes very relevant in the way the object of study is analyzed, starting from the conception of the participants individually, contrasting different opinions and points of view in order to approach the truth.

Research Method

In this regard, this research finds theoretical support in grounded theory, defined by Corbin and Strauss (2002) as "a theory derived from data systematically collected and analyzed by a research process" (p.13). This implies that the development of the research germinates from the treatment of the information, since there must be an intrinsic relationship between the data, the researcher, the analysis and the conclusions that emerge from it. This method allowed a permanent discussion between the researcher and the data.

It also consolidated a theoretical generation by means of constructs on the relevance of PPP, to serve as a tool in the development of the educational practices of teachers in Medellín, in this aspect the grounded theory is used as a method. Therefore, this methodology made it possible to identify the voices, experiences, practices and behaviors of the social actors who are constantly immersed in the educational practices, which are the teachers.

Scenario

The ideal scenario is one that is easily accessible to the researcher, in which a good and immediate relationship is established with the informants that facilitates the collection of data related to the research interests (Taylor and Bodgan, 1984). Therefore, the research scenario is located in a micro-local space, because it was carried out in educational institutions located in the municipality.



of Medellín, Department of Antioquia. These are Joaquín Vallejo Arbeláez Educational Institution and Héctor Abad Gómez Educational Institution.

Key Informants

Therefore, the following subjects are identified as key informants.

Tabla 1
Informantes clave

Municipio.	Institución Educativa.	Informantes clave.
Medellín.	Joaquín Vallejo Arbeláez.	2 docentes y 1 directivo.
Medellín.	Héctor Abad Gómez.	2 docentes y 1 directivo.
Total, informantes clave		4 docentes y 2 directivos.

Fuente: Elaboración propia.

Research Techniques and Instruments

In this case, the Grounded Theory method analyzed only qualitative data, using the interview as the data collection technique and the in-depth interview as the instrument, using a script to consider important aspects of the inquiry, but with flexibility, since it is intended to provide space for the testimonies to emerge from the participants.

This theory was contemplated by Glaser and Strauss (1967) and consists of a methodology that attempts to deploy a theory based on the systematic collection and analysis of data from subjective reality. Glaser (1992) defines it as a methodology of analysis that uses a set of methods applied systematically to generate an inductive theory about a specific area. The final product of the research is a theoretical formulation or a set of conceptual hypotheses about the object of study. In this sense, it is necessary to focus on what the interviewee says and not on one's own conceptions, triangulating the information provided by the participants.

Grounded Theory Analysis

Microanalysis

This concept arose at the beginning of the research, to reveal the codes with their properties and dimensions in order to unveil their relationships. This process made it possible to extract the stories most closely related to the information required, giving rise to the application of the different moments considered in coding: first, open coding, then axial coding and finally selective coding.

Open coding

Next, the coding procedure followed in the research is presented. Corbin and Strauss



(2002, cited in Hurtado, 2010) define open coding as a procedure through which "concepts are identified and the units of analysis are located in each of these concepts corresponds in fact to the use of emerging categories where the system of categories is the product of the analysis" (p.1204). The units of analysis were taken as words, sequences of words, lines or paragraphs, whether short or long, which as the reading progressed could be associated with concepts that defined them.

Axial coding

After this primordial phase for the analysis process, axial coding began, the process lies in the relationship between the codes and the term axial is coined because the coding is produced around them by throwing them by their properties and dimensions, this is how they were grouped by similarities or differences and in this analysis this grouping gave rise to the entities. The relationships between codes and subcategories were established.

Selective Coding

In summary, the theory was constructed by identifying the central category, from which different levels of relationship with the other categories, subcategories and the corresponding hypotheses are proposed, which was taken up as part of a report that concentrates these elements through a logical and coherent organization, using the minimum possible number of conceptions to explain its theoretical proposition.

Theorization and Organization of Constructs

This process consisted in establishing coherent integrative relationships among the research results. In summary, this method of inquiry pursues the construction of understandable theories, based on experiential research, from how the actors involved perceive reality, in this case the directors and teachers of the Public Educational Institutions of Medellín. The theoretical constructs were the product of inductive analysis and the method of constant comparison that will be applied in the codification process, and the generation of categories and subcategories, in order to establish different relationships between them. In the evaluation process of the theoretical approach, the following criteria will be taken into account for its validation: coherence, internal consistency, comprehension, predictive capacity, conceptual precision, linguistic, semantic and originality.

RESULTS

With the detailed description of the methodology that supports the thesis, it is now important to elucidate the steps that were followed in order to obtain a knowledge that was consistent with the new trends and demands of the educational practice, but also that allowed to fulfill the purposes and objectives set forth in this research. In this sense, with the section that began in this precise instance, it is intended to pursue and achieve the following objectives: "To unveil the methodologies applied by teachers in the educational practices in the Joaquín Vallejo Arbeláez and Héctor Abad Gómez Institutions" and, additionally, "To interpret the application of pedagogy by projects as a tool for the development of educational practices", a very important reference to find in these times, a true sense to school and academic education, which is then translated into holistic wellbeing in defined.



Application of Grounded Theory

In correspondence with the previous paragraph, and with the true intentions of the author with the study, the contributions of the grounded theory of Corbin and Strauss (2002) were used for the organization of the present segment of the thesis, first to structure the scope and limitations of current educational practices and second to highlight the importance, lack and necessity of the use of the methodology based on the PPP, to bring the formative processes closer to the true essence of the retroversion of man towards his ontological and genuine condition that distinguishes him from other beings in the world.

For this method to have a place in the intentions of the study, first of all, it was organized on the basis of the configuration of coded representations of the informants, in view of the responsibility of the study to safeguard the identity of each human being who participated in the study, and also to ensure that the knowledge provided was as genuine and impactful as possible. It is from this perspective that Table 2 is presented.

Tabla 2
Representación cifrada de informantes clave

Características	Abreviatura.
Docente 1 de la institución Joaquín Vallejo	DOC1JV
Docente 2 de la institución Joaquín Vallejo	DOC2JV
Directivo de la institución Joaquín Vallejo	DIRJV
Docente 1 de la institución Héctor Abad Gómez	DOC1HG
Docente 1 de la institución Héctor Abad Gómez	DOC2HG
Directivo de la institución Héctor Abad Gómez	DIRHG

Fuente: Elaboración propia

In addition to the table of informants' representations, it was also important to organize table 3, oriented to synthesize each of the open and axial codes, important to selectively organize more concrete inductively developed codes in two major aspects in the following chapter, and in essence presented as an objective, to represent the theory derived spontaneously and substantially from the information collected. From this perspective, the table presented here was not organized in the first place, but emerged as the processes of codification and interpretation of the results were presented, and from there the PPP methodology was approached, which is the basis for the pedagogical practice, and could be built from the discursive contributions of the key informants.

Tabla 3
Síntesis orientadora del proceso de codificación.

Codificación abierta	Codificación axial	Codificación selectiva
Concepciones teóricas de la práctica (TPD)		
Rol docente (RD)	Práctica docente (PD)	
Práctica educativa (PE)		
Concepción de la propia didáctica (CPD)	Realidades de la docencia (RD)	Crítica y prospectiva de la PPP (CPPPP)
Modelo pedagógico (MP)		
Experiencia de aplicación (EA)	Gestión con la PPP (GPPP)	
Logros y Alcances de Aplicación		
Modelo de gestión de PPP		

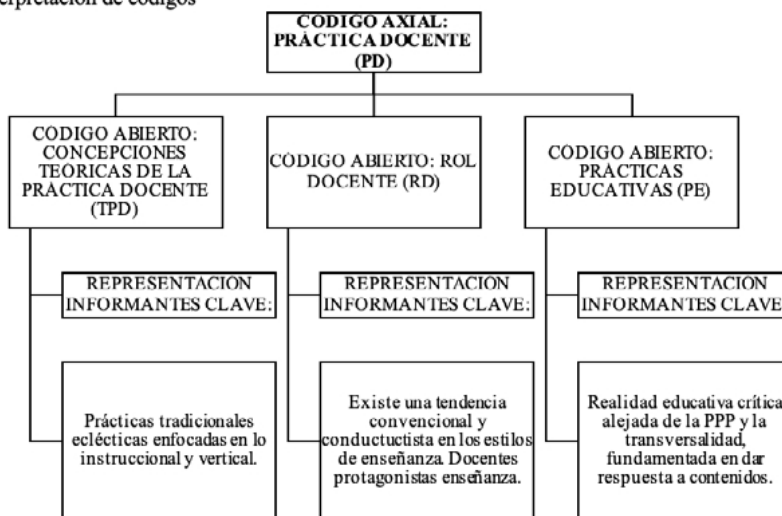
Fuente: Elaboración propia



With this, it is reiterated that the analysis of the grounded theory is derived from the table, but rather it must be said that it is a guiding summary, and that its links make it possible to understand at the outset, each of the knowledge derived from the microscopic analysis of each of the answers given by teachers and managers, and gave way to open coding, as the first visible, tangible and concrete representation that explained the conflictive phenomena of the study scenario.

In addition to open coding, axial codes were also structured, where large concepts with epistemological profiles derived from the contributions of the key informants were condensed, and which served as a basis for identifying conflicting realities, speculations and pseudo didactic innovations, based on the induction of codes that were generated in the same way as shown in Table 3; Finally, two selective codes were generated, appropriate in the theorization, since they become the last link in the acquisition of knowledge, which were translated in the thesis as the theoretical constructs generated. Having stated these ideas, it is now essential to consider the analysis to which the present research gave rise, based on the proposal of Corbin and Strauss (2002) and as reflected below.

Figura 1
Interpretación de códigos



Fuente: Elaboración propia

From the positions of the key informants, and from the interpretative scopes of this moment of the research, it is necessary to see that most of the informants think that teaching practice is the transmission of information to students or their daily task of teaching. However, in their teaching role, they include other activities that make their activity more dynamic and give it a different tone that they do not mention when they are asked about it. In general, most of them consider that the teaching practice is to teach either in the traditional or active way; these elements undoubtedly have nothing to do with PPP, and it is an obstructive element to achieve the integral, transversal and suitable goals for comprehensive education.

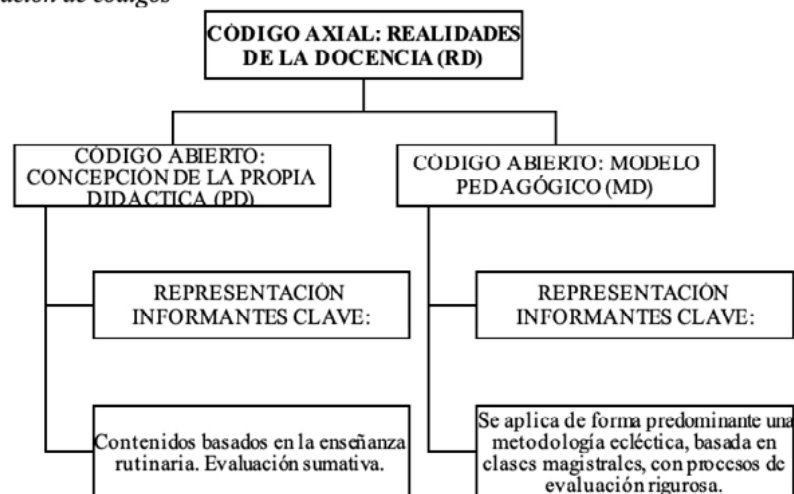
On the other hand, it was possible to interpret from the teaching practice, the need to be characterized as an integral activity that glimpses the events occurring in the interconnection between teacher and learner.

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Likewise, teachers' work and educational practices are based on professional knowledge and associated with thoughts structured on the basis of dogmas, meanings, notions, as well as disciplinary, pedagogical and didactic knowledge, all of which influence the way of discovering the context and reality, as well as the experiences they develop. It is worth mentioning, based on discourse analysis, the need for a new teaching role, the empowerment of the new millennium and the reconstruction of a new education. There is also a new demand for the profile and role of this new teacher, in order to form a list of desired competencies, in which converge today, postulates intertwined by active pedagogical currents such as criticism, constructivism, teaching for understanding and the movements of educational transformation. In addition, it is necessary to recover educational practice as a favorite space for training and reflection.

Figura 2
Interpretación de códigos



Fuente: Elaboración propia

Among the findings in the study of this category, the following stand out: There is a set of attributes that informants point out as typical of good teaching, both in general terms and according to the type of training provided in the institution. In another sense, some teachers are professionals in engineering and other careers, and therefore have no further pedagogical training, only in the areas of specialty, in this sense, active educational didactics are unknown, and consequently, they implement traditional vertical models in their classes. It is relevant to propose pedagogical training courses for teachers in order to improve educational practices.

Likewise, there is a curriculum and pedagogical model proposed by the Institutional Educational Project, which most teachers are familiar with, but have difficulty integrating into their teaching and didactic practice in the classroom. In this sense, it is relevant that teachers take ownership of the PPP methodology and pedagogical model in order to contribute from their classes to the generation of comprehensive competencies in students.



Memorandum 3. Category Management with Project-Based Pedagogy

However, to summarize what has been interpreted so far, it should be noted that the application of the PPP methodology is not very successful, since it was evident in the discourse of key informants, the low commitment of teachers in the appropriation and implementation of the proposal.

It should also be noted that there are limitations in achievements and scope ranging from the pedagogical, managerial, academic, social, cultural and other elements, which interfere with the achievement of transcendental objectives, and with the demands of a constructivist or complex pedagogy that goes hand in hand with the new demands of humanity in general. From this position, the appropriation of some technological tools in the teaching processes could be seen as a reach, but these did not set a guideline to transversalize and consolidate educational goals towards the achievement of students with the possibility of applying their knowledge in the different moments of the classes.

From this point of view, it is evident from the position of the informants that training in educational institutions is especially aimed at improving ICFES test scores, but little is oriented to the acquisition of competencies following the principles of curricular integration, which results in the disarticulation of all pedagogical processes. In this regard, the scope, achievements and educational goals are limited, and are not in line with an effective management of the methodology based on the PPP, for the achievement of a meaningful education.

In short, the management towards the use of the PPP methodology under the supervision of managers and teachers is presented in an adverse way to the approaches of this type of training, and the approach that should be commanding in the educational processes is broken, but little is applied, the achievements and scope are limited, and additionally the model tends to be conventional, traditional and not very transcendental.

DISCUSSION

Linked to the above, the research interest in PPP is not recent, as part of the academic literature specialized in the subject, multiple researches can be observed that have as their main object the analysis of this methodology and its different contributions to the educational processes at different levels and school cycles. In this sense, Molina (2015); Vargas et al. (2021), present research in which they intend to analyze the contributions of PPP in the company of ICTs to improve the academic performance of university students. As part of their results, the authors state that the power of the use of PPP lies in the possibility of exploring and testing hypotheses based on elements emanating from the environment and related to the students' interests, which significantly improves their academic performance, results that coincide with this research, since teachers recognize the benefits of the application of this methodology.

These findings coincide with what was stated by Martín and Rodríguez (2015) and Arias (2017), who affirm that PPP promotes the continuous strengthening of academic competencies, developing in students a greater awareness of their potential and their difficulties, based on the conscious application of cross-cutting pedagogical actions.



On the other hand, similar research (Castillo, 2008; Villanueva et al., 2022; López et al., 2015), mention that although the development of this methodology is based on the motivations and interests of the students, it requires a significant commitment and understanding of the teachers regarding the theoretical and practical implications of PPP and the transversalization of the theoretical and practical elements that make up the projects. The results obtained in the present research contrast with the above, as they show a basic recognition by the teachers of both institutions of the elements that constitute the PPP, however, their application is far from what the methodology requires.

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CONCLUSIONS

In the following, some of the most relevant findings of the study are emphasized in view of the proposed objectives: based on this, it is important in the first instance to highlight the findings on the methodology used by teachers to carry out the educational practices in the Joaquín Vallejo Arbeláez and Héctor Abad Gómez institutions. Hence, it was necessary to refer to some elements that were taken from the discourse of the informants and, duly interpreted in the light of the scope of the grounded theory. In this order of ideas it is necessary to mention the knowledge that arose when unveiling such methodology, which carries implicit in itself, the teaching practice, which, in the real case of study, was problematically raised from the transmission of information to students or their daily work focused unidirectionally to the management of theoretical, conceptual and routine knowledge, which only has its scopes for the class and the educational environment in general.

From this perspective, teachers limit themselves to the concept of traditional vertical instruction, i.e., to the educational processes that take place within the classroom, without including the pedagogical intervention that occurs before and after the training process; they also make it clear that the roles of the teacher make this teaching practice include the so-called educational practice, which is seen as a process of management and administration within the educational institutions. They also consider research, extension and innovation as part of this practice, but in the reality of analysis it is clearly problematized and in conflict, an aspect that separates the Joaquín Vallejo Arbeláez and Héctor Abad Gómez Institutions from the true use of a methodology based on the PPP.



From what has been described, it is emphasized then the need for a new teaching role, which occupies a prominent place in the present and future, for the construction of a new education, which is reflective according to the cognitive and critical social pedagogical model, where different methodologies that contribute to unveil the formula to face the new paradigms of current education are included. According to the referents considered as final reflections, it should be highlighted that the teachers of the selected institutions, apparently are sustained in a constructivist current, of cognitive, social and critical model, which is in tune with the modern realities of education, since the reflective aspect and the juncture between theory and practice are prioritized, in an academic work assisted by the critical and constructive conscience of the teacher in between action and reflection and fed by theories and assumptions that can be exposed to criticism to overcome paradigms and limitations. However, some teachers lack the appropriation of the model in their pedagogical practice, i.e., they know it, value it, but do not put it into educational practice.

The curriculum is defined in the IEP, which allows it to be dynamic and adjusted to educational and social needs, but it is estimated that there are problems in this regard, since the practices have little to do with the cross-cutting, comprehensive and usable purpose of the new trends in PPP. However, aspects such as the definition of competencies has not been very clear for teachers; they should be clearly defined and how to take them to the classes, since there is still a tendency to work by objectives, an element that makes the methodology applied in the Joaquín Vallejo Arbeláez and Héctor Abad Gómez Institutions even more conventional, distancing them from the true purpose of innovative training of the century and biased by the paradigmatic and applicative limitations of the educational practice.

It is sought, then, that the majority of teachers generate in the student the competence to reach an autonomous and integral formation and, thus, generate their own learning and can go by themselves in a changing society of knowledge. Hence, it is undoubtedly required the management towards the achievement of the consolidation of the PPP methodology, in the construction of transversal, holistic and innovative training processes based on processes where the eclectic and rationally, the processes of strengthening of competences, virtues and attitudes in the students that serve for life are included.

From all the research work, it was transcendental to organize some theoretical references, which will mark a guideline in the deepening and recognition of the problems underlying the lack of application of a methodology based on PPP, and at the same time, some solid theoretical constructs based on the constructivism approach are presented, The main goal of the PPP is the achievement of integral human beings, with the capacity to respond to the particular demands that each person experiences in his or her complex scenario and environment.

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