

## **Pedagogical device: training of teaching practices in university education**

Dispositivo pedagógico: formación de prácticas docente en la educación universitaria  
Dispositivo pedagógico: formação de práticas docentes na formação universitária

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**Abstract:** A review of the pedagogical device is carried out: teaching practice in the teaching-learning process of the student of the Faculty of Philosophy, Letters and Education Sciences, at the University of Guayaquil with the following categories of analysis: collaborative learning, training, training extensions, organization of remote connectivity, project-based learning, research processes, classroom projects, case studies, didactic guides, training research. The research methodology is descriptive with a bibliographic design having a direct observation and with a survey of 164 students of the career of Pedagogy of Mathematical Physics, Pedagogy of History and Social Sciences in addition to the Career of Pedagogy of Chemistry and Science. Biology,

which indicated that the best activation of teacher training is through classroom projects with active techniques such as project-based learning, study guides and case studies. The main objective is to identify the pedagogical devices of teaching practice in university education for the Faculty of Philosophy, Letters and Education Sciences. In conclusion, it is necessary to specify proactive and defined theoretical positions to build the development of the training of teaching practices in collaborative work at the University of Guayaquil.

**Keywords:** Pedagogical device, teaching practice, collaborative work, Higher Education, Faculty of Philosophy, University of Guayaquil.

**Resumen:** Se realiza una revisión del dispositivo pedagógico: práctica docente en el proceso de enseñanza-aprendizaje del estudiante de la Facultad de Filosofía, Letras y Ciencias de la Educación, en la Universidad de Guayaquil con las siguientes categorías de análisis: el aprendizaje colaborativo, las extensiones formativas, la organización de la conectividad remota, aprendizaje basado en proyectos, procesos investigativos, proyectos áulicos, estudio de casos, guías didácticas, investigación formativa. La metodología de investigación es descriptiva con un diseño bibliográfico teniendo una observación directa y con una encuesta a 164 estudiantes de la carrera de Pedagogía de la Física Matemática, Pedagogía de la Historia y Ciencias Sociales además la Carrera de Pedagogía de la Química y la Biología los cuales indicaron que la mejor activación de la formación docente es a través de los proyectos de aula con técnicas activas como el aprendizaje basado en proyecto, guías de estudio y estudio de caso. Como objetivo principal se identifican los dispositivos pedagógicos de práctica docente en la educación universitaria para la Facultad de Filosofía, Letras y Ciencias de la Educación. En conclusión, se debe que precisar posiciones teóricas proactivas

y definidas para construir el desarrollo de la formación de las prácticas docente en el trabajo colaborativo de la Universidad de Guayaquil.

**Palabras clave:** Dispositivo pedagógico, práctica docente, trabajo colaborativo, Educación Superior, Facultad de Filosofía, Universidad de Guayaquil.

**Resumo:** Uma revisão do dispositivo pedagógico: a prática docente no processo ensino-aprendizagem do aluno da Faculdade de Filosofia, Letras e Ciências da Educação da Universidade de Guayaquil é realizada com as seguintes categorias de análise: aprendizagem colaborativa, extensões formativas, organização da conectividade remota, aprendizagem baseada em projectos, processos de investigação, projectos de sala de aula, estudos de casos, guias didácticos, investigação formativa. A metodologia de investigação é descritiva com um desenho bibliográfico tendo uma observação directa e um inquérito a 164 estudantes da Pedagogia da Física Matemática, Pedagogia da História e das Ciências Sociais, bem como da Pedagogia da Química e Biologia que indicaram que a melhor activação da formação de professores é através de projectos em sala de aula com técnicas activas como a aprendizagem baseada em projectos, guias de estudo e estudos de caso. O principal objectivo é identificar os dispositivos pedagógicos da prática docente no ensino universitário para a Faculdade de Filosofia, Letras e Ciências da Educação. Em conclusão, é necessário especificar posições teóricas proactivas e definidas para construir o desenvolvimento da formação de práticas de ensino no trabalho colaborativo da Universidade de Guayaquil.

**Palavras-chave:** dispositivo pedagógico, prática de ensino, trabalho colaborativo, Ensino Superior, Faculdade de Filosofia, Universidade de Guayaquil.

## INTRODUCTION

Teaching practices are the actions of the educational process, that is, teaching practice is influenced by multiple factors: from the teacher's own academic training to the singularities of the entity in which he/she works, including the need to respect a compulsory program that is regulated by the government and the diverse responses and reactions of his/her students.

For the development of the theoretical level in the design of education in training, it is necessary to carry out the teaching practices focusing on the problems from the theoretical training, normally or the regular curriculum; the teaching practices are carried out at the end of the processes and it is wrong because the practice always helps you to improve the theory, it is better the articulation from the beginning of the career.

In this way, reality is more complex and even competitive as a meshing of practice and theory, this must be a reflexive habit since it is necessary to act and exemplify the competences, for that it is important the relation of the teaching practices in the initial training that affect the noble teachers. From the institution it is necessary to establish training links, the devices of the processes are necessary to identify them as: the reflection, the narrative from the objectification then that we must socialize this reflection to a writing of the vivencia through the practice diary, autobiographical writings and the interviews of clarification in addition to the rubrics and the observation feedback, case studies with memorable teachers and videoconferences in this sharing to intervene in the noblest habits of teaching, framing the practice, although the current reality is based on specific and general training from the traditional model where at the end it is given with a conclusive project even to make the thesis, through the formative model.

Therefore practices should be the articulating axis, that is, from the career where all spaces must be committed, based on it is reported and exemplified

the development of cases for the function of professional practice, for these alternative models it would be essential to work with the practice from the early years working in an integrated manner, you must have contact with outstanding teachers, experience in situ, in addition with project-based learning, with the school biography or with the life project. In this regard, Alharbi, Athauda, & Chiong (2018) noted that project-based learning is a pedagogical approach that many higher education programs have incorporated, with students working in teams or groups on a specific project over an extended period of time facilitated by an instructor. Likewise, Blumenfeld, et al (1991) noted that project-based learning has unique characteristics, such as involving students in solving complex problems or real-world issues to sustain the learning processes. Likewise, Lou & MacGregor (2010) indicated that it is one of the most important elements in the implementation of project-based learning allowing the facilitation of group work structures.

From the previous evidences, the articulation of contents through professional practices would respond to the student's needs to know from the teaching experience the didactic proposals that are necessary in the development of the practitioners of an integral formation. The integrating axis of didactics and the curriculum must be standardized in a systematic and collective way because the curricular has become more technocratic than the experiences of didactics. Based on this, project-based learning presents a didactic approach where students work collaboratively with the design of projects with the possibility of exercising an interdisciplinary range of skills. In this regard, Biasutti & El-Deghaidy (2014) pointed out that, for cooperative learning methodologies include advantages over traditional teaching approaches such as promotion and development that determine the following:

- Active participation of students in the learning process;

- Independent learning and teamwork;
- The integration of knowledge and skills in several areas;
- Student autonomy and awareness;
- Critical thinking processes;
- A positive attitude towards the subject of study;
- Student satisfaction.

It is for this reason that a reflective teacher must have some doors or safeguards that are the parts of a whole in an interdisciplinary way, that is to say, that knows how to work the development of the chairs from the theoretical and practical training from a cosmogonic look, that is why it is important to have teachers in these teams as sociologists, curricularists, pedagogues, philosophers to have a systemic idea that converges in the professional development of the student in the formative process.

In this sense, the reengineering of curricula in the design of training is much richer with the budgets of our countries, because living with foreign educational books takes away the identity of the social construct from the budget. However, it is necessary to readings of experts in the subject to help theorize the evolutionary development. In this regard, a study of teacher professional development through curriculum development as a teacher's experience in the field of online materials testing, research by Fisher (2011) pointed out that from the teacher's reflection on the use and impact of materials in associated technologies, these are a success that are defined as good experiences in the classroom from the teacher's judgment. For that reason, the implementation of learning materials associated with the development and proliferation of online Curriculum design opens an opportunity to replicate some of the unforeseen but significant impacts on teachers' professional development. However, curriculum design provides the

conditions in which teachers could reflexively generate knowledge, such as about the use of computers in their own particular environments.

Regarding classroom projects, a study on scientific activities through classroom projects and curricular ideas conducted by Demchik (2010) pointed out that the curriculum design should incorporate the acid rain method which presents six learning experiences such as: an introduction to the topic through educational media; investigations and presentations in class; laboratory activities; simulations; design; and implementation of a design. For that reason, once applied, students are divided into groups of three and directed to a variety of sources, such as library references and internet resources, so that they can conduct research. From these learning experiences, students acquire the ability to research, select appropriate information and apply it to particular concepts, i.e., by doing the acid rain activities, students learn in a practical way that there is a relationship between what they learn in science classes and what happens in the real world.

Therefore, Gómez & Peñaloza (2014) indicated that practice is necessary and from it to visualize the causes and effects of teaching practices, which are structural changes where they point to Jürgen Habermas as a German philosopher and sociologist known for his work in political philosophy, ethics and theory of law, as well as in philosophy of language, indicating that a conflict of antagonistic values is constitutive but it is not necessary to deny it but to work on it, There has been a neglect in the micro pedagogical to understand from the social aspect, politics and didactics where a change to positivism is founded, where first is the theory and then the practice, although education is phenomenological, changing and transforming in the classroom. Based on the above, a study determining advice in relation to educational theory about teaching practices conducted by Dennick (2012) pointed out that, if learning is built on existing knowledge, then an effective teacher must

be aware of his or her students' prior knowledge. Furthermore, in the acquisition of new knowledge can only be mediated by existing knowledge, i.e., that teachers present and explain new concepts using the knowledge that students already possess using analogies and metaphors to help build scaffolds and bridges to new understanding. Based on the above, the researcher gives the following twelve practical recommendations: 1) Determine and activate prior knowledge; 2) Build on existing knowledge and challenge misconceptions; 3) Facilitate social construction of meaning through group work; 4) Use active learning techniques; 5) Encourage students to think about how they learn and give students responsibility for their learning; 6) Make sure students get the experiences they need; 7) Reflection is aided by log books, folders and feedback; 8) Develop mental models, practical skills and attitudes; 9) Allow learners to participate in hypothesis testing and action planning; 10) Respect learners and recognize who they are and where they come from; 11) Ensure physical, psychological and emotional needs; 12) Teaching and learning is a relationship.

Consequently, it is better to make decisions from the teaching practice where the philosophy of Jürgen Habermas indicates, it focuses the problematic and activation to build new knowledge, that is, it must be reflective to problematize the causes and consequences of their teaching practice and then theorize to understand when and with what technique I am being constructivist, especially when it allows decision making in construction of the practice-theoretic in a spiral way.

The Carabante study (2021) study indicates that the reference is in:

The rationality manifested in communication has a discursive character because the success of communicative acts rests on the possibility of an argued defense of validity claims. We can therefore define discourses as processes in which speakers manage to provide a reasoned basis for

their communicative proposals and the validity claims that underlie them. The discourse ends successfully when these claims are "performed" or defended, and eventually accepted by the receiver. Consensus or agreement constitutes the optimal end of any discourse. (p. 3)

With respect to the theoretical construction from the educational practice is necessary within the reflection - action or action - reflection from that tacit knowledge, because this appropriation of knowledge to situations of practice helps us to resignify the "learning to do"; because that commoditization (private system differentiated with the Ecuadorian public sector taking away the leadership in areas such as Academia, Research and Technology) of education that is better to continue as we are sometimes in the same place without effort, has an impact on the learning of the learner; but the classroom climate is the best thermometer to know that we are ruining the class without that empowerment, it is there as it is given from "reflection in action" because now I realize that I am modifying my teaching practice in the classroom, to make it more dynamic and truthful with the practice.

However, the actions of the practice are motivated with theories with the professional habitus, as Bourdieu indicates the analysis of the devices as entrapment from the projection of teaching, which are those gages of the profession that are built in the unconscious of the teaching staff, and that it is difficult to build from the practice of development or that determines the complexity of the class, without reflection Cruz (2010).

Then, that assimilation and accommodation that Ausubel indicates, allows understanding the mental assimilation where it consists in the incorporation of objects within the schemes, schemes that are nothing else but the framework of actions that man can actively reproduce in reality, in practice it refers to the process of modifying schemes to accommodate a new change, in

making oneself understood with the most valuable device that is reflection and understanding new mental schemes. (Temporetti, 2006) .

From the above evidence, learning practices as educational dialogic reflection foresees that the need to make a mental schema is when at the same time a mental reengineering for the design of external conditioning factors, in favor of new knowledge updates, that is, when a thorough and critical examination of the "demands of beliefs" sometimes give in the development of practical knowledges and references of new contexts. In this regard, Simpson (2016) pointed out that dialogic learning has a positive impact as a pedagogical tool on the value students perceive of their learning experience. Therefore, by incorporating social networks into the learning context, the educator responsible for the design of the unit of study makes use of successful communicative models of interaction that allow him to ensure that students come to value other forms of knowledge, through explicit use focused on practices.

Likewise, the best residency practice that is carried out in class, above all leaving the technicality is the reflection of the formative process, of the experience seeking professionalization from the policy and complexity, however, it will act as a modeling that develops in the integrality preparing us for the adequacy of the practice, because it is from the reflective practice that we will return to the ethics and innovation of employability. In this aspect, the authors Prieto, Magnuson, Dillenbourg, & Saar (2020) pointed out that reflective practice is an important approach to teacher professional development, defining it as the professional growth that a teacher achieves as a result of acquiring greater experience and examining his or her teaching systematically.

In summary, the answers of the theory-practice in the training processes, have had incidence in the teaching devices in the work of pedagogical couples and

a collaborative work, that the "professional habitus" (process through which the professional performance is internalized in an unconscious way in the individuals at the level of knowledge and professional practices), as it is handled in the book "The distinction", which indicates that "they are the structures structured in the structures, which are handled as non-transferable dissipations over time", in the case of teaching practices it is a manifesto that is unconscious as a teaching nature where the cultural baggage of the learner from the development of their university beginnings to their sustenance of social reproduction and which is highly guided by the teachers Bourdieu & Passeron (1996).

Teaching: object of study of professional teaching knowledge.

Due to this, in general terms, training and regulation by the State is required to develop public training policies in a standard manner throughout the country, and teachers must have a high degree of ingenuity and creativity to carry out their teaching duties, that is, they must have a high social and individual commitment to the educational center, with teaching as their central function.

According to the manual of the Undersecretary of Public Policies in 1993 and analyzed by the Inter-American Development Bank, the following is a summary of the results of the study (Di Franco, Di Franco, & Siderac, 2016, p. 7) they indicate that:

The diagnosis was common to the entire region: the deterioration of quality, low internal performance, low equity in access and permanence, inadequate allocation of resources, little development of their own sources of financing and lack of articulation with the productive sector and between higher education institutions.

Therefore, due to this, the teaching professional is able to manage mismatches between the prescribed work and the actual work, in professional practices.

Within the professional knowledge the educator must place himself in the decision making of the practices based on singular contextualized situations of the educational task as it indicates (Pedroza-Melo, 2020) citing the article by (Naduri, 2012) emphasizes that teaching skills, personality attributes, tools and techniques in their teaching practice can contribute to the achievement of effective results in educational institutions. Faced with this challenge, it is estimated that human capital in the context of education brings together teaching competencies, teaching-learning skills, knowledge and pedagogical-didactic experience, values and attitudes of commitment in the training of their students, in addition to the educator must know the theories and experiences that bring about meaningful learning. Their studies should be based on research that develop other researches with the same formative line. In this same context, the teaching practice as a subjective construction is added to the necessary inputs to develop the teaching-learning process, from here the teacher is formed in his mental and psychological structure, this formative path is composed of school biography, professional socialization, initial training, professional development, together with traditional theories and incorporated theories.

"It is observed that this habitus is constructed in the intersubjective relationships that occur between teachers, in such a way that the beginning teacher elaborates his pedagogical knowledge in the interaction of his daily practice." (San Martín & Quilaqueo, 2012, p. 2) .

In this regard, San Martín & Quilaqueo (2012) pointed out that, in the process of social construction of teaching practice, "the educator can visualize himself as a craftsman, scientist, technician, professional or reflective etc. In addition, he/she has to be a reflective entity that provokes the media confrontation of the profession versus the practice to generate in the student an integral formation" (p. 10) .

Therefore, this habitus is built by what the student knows, the family, the psychosocial environment where the teacher, through this previous knowledge, molds this intelligence in the search for the social management of knowledge.

How to distribute intelligence: (1) Physically distributed intelligence: notes, diaries, folders, calculators, computers, etc. (2) Socially distributed intelligence: group learning with a common group test system, pair problem solving, Socratic teaching, dramatic activities; (3) Symbolic distributed intelligence: essays in mathematics and science, diagrams, classification tables, in literature. Variety of textual forms: stories, essays, lists, concept maps, graphs, two-dimensional tables. (Perkins, 1997, p. 14).

Likewise, teacher training is the same classroom practice that is required to train teachers who contemplate laws, practice, welfare, budgets, administration and management. Didactics is required to teach.

The characteristics of the pedagogical devices:

It allows the didactic approach to events in their real contexts, highlighting the place of conflict, contradiction, movement, the act in progress, and history. It includes the relationship of multiple lines or dimensions that intertwine: social, institutional, group, interpersonal, individual, technical; at explicit and implicit levels in imaginary and real registers. (Souto, 1998, p. 118).

However, the evaluation techniques within the context of the student body must be carried out by the participatory, conscious and organized teacher, which can be done through the pedagogical pairs that allow the university student a dialogue between peers.

The proposal to carry out teaching practices, implementing the pedagogical pair, aims at achieving a critical reflection on classroom practice and on the process of building professional knowledge. In this sense, the residents

recognize that working in a pedagogical pair is a contribution to their own training, since it enables spaces and instances of reflection. (Sanjurjo L. La pareja pedagógica como dispositivo de evaluación en la formación docente universitario, 2016, p. 7).

In synthesis, the most powerful discussions have their derivations, from the episteme in relation to the Theory it is necessary to know about the trilogy (student-teacher-family); in the Technique to build and deconstruct from the development of the pedagogical budgets in higher education (academy, research and linkage with the community); in the Ethics with the development of complexity; Social-effective with love and respect to our educational community.

Didactics is necessary for the development of the teaching-learning process, based on the recursive need for learning:

Didactics is reborn today on the basis of criticism of the eight assumptions we have listed. Because we believe that it is always possible to teach better, that it is necessary to permanently revise curricula; because it is necessary to select and use teaching strategies well and to create new ways of teaching and evaluating; because we are committed to ensuring that all students learn and build all kinds of knowledge that are indispensable in their personal lives, in their social relations, as citizens and as workers; because in order to seriously base pedagogical decisions and practices it is necessary to integrate the contributions of different disciplines as well as to carry out research in the specific field of teaching; and because reflection must systematically accompany all tasks related to the action of teaching, we affirm that it is necessary to have a mature, serious, rigorous and dynamic didactic theory. (De Camilloni, Cols, Basabe, & Feeney, 2007, p. 16).

Therefore, this perspective, didactics is a theoretical discipline that deals with the development of active techniques that are developed in the classroom,

with which you can play with dynamics such as: crossword puzzles, ideograms, anagrams, fitting of pieces, mentefacts, application of Cartesian planes.

The importance of the process of structuring information makes it necessary for the learner to prioritize ideas:

Concept maps, as well as V-heuristics, organized in tiny "fragments", help us to construct new meanings because they help us to organize the knowledge we place in long-term memory and because they can act as a kind of mental scaffolding to assemble the fragments of knowledge in our working memory (Novack, 1989, p. 5). (Novack, 1989, p. 5)

Among the advantages of active techniques for the development of teaching practice ideas we have:

- They are useful for organizing knowledge.
- They serve to preserve knowledge.
- They allow for meaningful learning.
- They facilitate the perception of interrelationships.
- They represent a set of meanings included in a structure.
- Allows timely verification of achievements.
- Develop creativity.
- Create psychomotor skills.
- Develop visual-spatial intelligence.

Teaching practice as seen from the learning environments depends on the investment of public universities that determine the following:

The results of the consultation showed that, in terms of national higher education policies, the main barrier to digital transformation at the institutional level is the "lack of public financial support" provided for HEIs to transform. Although there were some differences in the assessment of how national regulatory frameworks and educational policies were conducive to

transformation, this is the most important constraint across geographic areas. (López, et al., 2021, p. 36).

It is necessary to revalue the teaching practices for a real university transformation where the process is developed with digital tools for the presentation of experiential case studies in the classroom.

Didactic transposition is the process by which a knowledge content is modified to adapt it to its teaching. In this way, the knowledge is transformed into taught knowledge, adapted to the student's level:

A knowledge content that has been designated as knowledge to be taught, then undergoes a set of adaptive transformations that will make it suitable to occupy a place among the objects of teaching. The "work" that transforms an object of knowledge to be taught into an object of teaching is called didactic transposition. (Chevallard, 1998, p. 16).

It is necessary to know that the result of the student-teacher teaching actors leads us to a new actor in the process called "knowledge" as part of this teaching process, that is to say, that it can be visualized with a connotation of the subjectivized object of learning called: student. Being this knowledge a category of analysis of the system, which is being modified for the best performance of the teaching.

In the group-class, the explicit task leads to the achievement of learning: the construction of knowledge within a discipline, the acquisition of specific intellectual or motor skills, the modification of attitudes, the change in the forms of subject-object relationship, etc. The analysis of this from the non-manifest levels, from the implicit task, opens new perspectives of pedagogical understanding. "Overcoming obstacles of different kinds that interfere with the achievement of the objectives is not alien to teaching; on the contrary, the quality of teaching and the results depend largely on including this level of functioning." (Souto, 1993, p. 6).

To this end, knowledge is much more dynamic if it is learned in a group, which is why the pedagogical device of pedagogical training trains, teaches and plans the development of the constituent elements of teaching that above all prepares for the development of the profession in the classroom.

The Escuela Nueva and its contribution to university teaching practices

In Europe at the end of the nineteenth century, the new school develops in the development of the generational change of education, where education for life, the construction of a student capable of being a citizen, takes place. In Brunner's book (1995) indicates how the teaching should be carried out in such a way that the objectives of education are fulfilled from the intellectual reasoning of children and their cognitive psychology, the best development of the class evolves in these six parts according to the author (p. 16) .

The teaching internship or residency environment should be an inexhaustible place of experience that allows the new teacher to really get involved in the educational task, because he/she is going to carry out a formative practice. Our noble teachers in the process of training must make the environment of the student dynamic by recreating a series of problems that will form the motivation to solve the class.

Active methodologies allow giving value to the teaching-learning processes from a practical approach, which determines the following:

APS (service-learning) facilitates, from its open and social conception, experimenting on educational situations that, in addition, revert in improvements for the community. All this, combined with appropriate pedagogical techniques, is the ideal breeding ground for the emergence and consolidation of the teaching condition, i.e., for the appearance of the defining identity as a teacher. (Chiva-Bartoll & Gil-Gómez, 2018, p. 97).

Therefore, it is a model where teaching practices are manifested in the development of content and praxis associations where mutual collaboration is required for the development of teaching competencies.

When a situation is unapproachable, we are faced with a dilemma that prevents us from constructing the problematic situation. "The problem always implies the recognition of the situation as a possible resolution based on our intervention. The problematic situation always implies a construction, as such, on the part of the one who is going to approach it." (Sanjurjo & Rodriguez, 2003, p. 59) .

Thus, the problems in which we place the student under the current education as we observed in the authors we have seen, reveal the need to develop the intellect of students through reflective, generational and participatory practice inside and outside the classroom, it is necessary to rediscover that way to the teaching practice that is conscious and that resignifies the current education, as well as those resources that allows to optimize learning and integration:

The resources that contribute to comprehension, whether they are used on the blackboard or in the students' folders, are the diagrams (...) However, we cannot fail to mention that the diagrams have an indisputable pedagogical value and constitute a visual resource that, articulated in other basic forms, strengthen the process of progressive differentiation and integrative synthesis. (Sanjurjo & Rodriguez, 2003, p. 54)

Therefore, the didactic resources are necessary for learning and the representation of the formation of the teaching noble in the case of educational cloisters, some that do not have learning environments with technology even the classic utensils as recursive must overcome in content and interest to the student body to cause that effect of empowerment of the class. The active techniques proposed in this article promote the need to provide students with educational experience, even if they do not yet have the

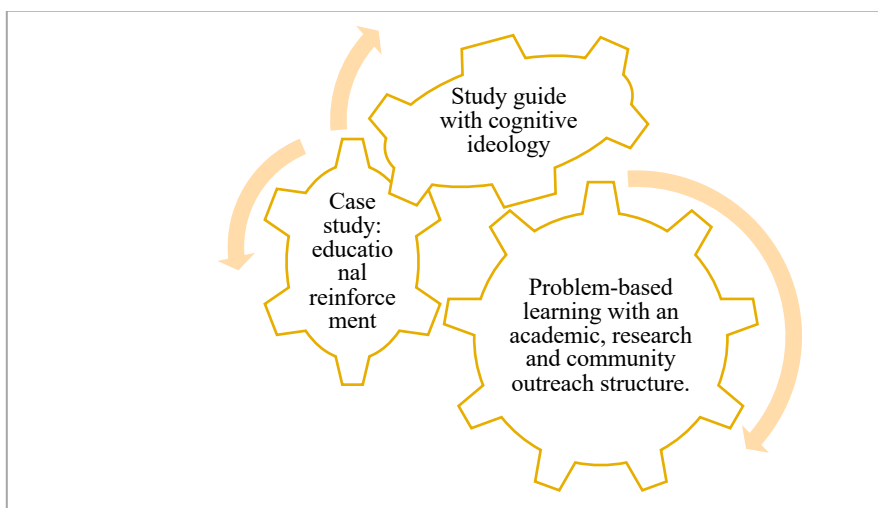
experience of "teaching practice". Thus, with the development and approach of a classroom project containing three active techniques: study guide, case study, problem-based learning, it is possible to condense the precisions of university teacher training.

Study guide: study and evaluation strategies inside and outside the classroom.

Case study: allows the reinforcement of contents with the exemplification of educational scenarios.

Problem-based learning: it implements the contents from research and its approach to the family-teaching-school context.

**Figure 1.** Active techniques based on the teacher training process



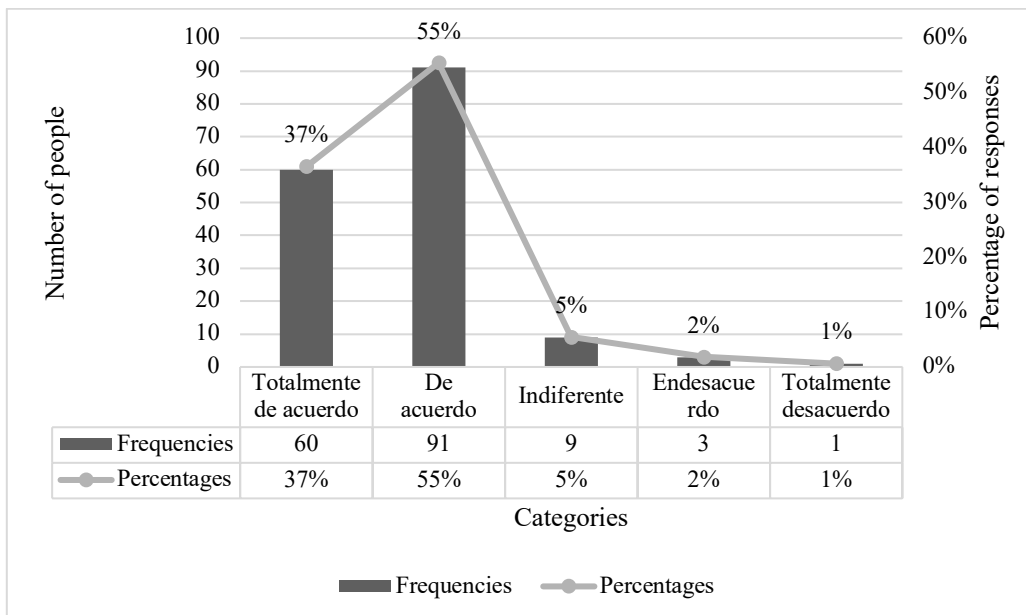
Source: Prepared by MSc Ericka Figueroa Martínez

## **MATERIALS AND METHODS**

A survey was made to 164 students of the University of Guayaquil, Faculty of Philosophy, Letters and Educational Sciences where the questions were focused on the formative process of the students who will obtain their degree in Educational Sciences. However, the interest of students to experience educational practices from the center of study is demonstrated, either by a

reflective practice through case studies or methodologies that allow them to connect with the current reality.

**Figure 2.** Online learning in the integration of case studies for student training.



Source: Prepared by MSc Ericka Figueroa-Martínez, survey directed to virtual education students period 2020-2021/ Pedagogy of Physics and Pedagogy of Chemistry and Biology.

Ninety-two percent of the students agreed with the need to carry out educational practices in the classroom through collaborative work, simulations or case studies, while 5% were indifferent due to lack of knowledge about the subject matter and 1% disagreed because they wanted the theoretical classes to be applied in educational institutions in zone 8 (Guayas-Samborondón).

## RESULTS

The use of the teacher training device in the classroom from the educational praxis is manifested in the 164 students who were surveyed, having an acceptance in the following aspects: collaborative learning, formative extensions, organization of remote connectivity, project-based learning, research processes, classroom projects, case studies, didactic guides, formative research.

In the collaborative learning in the classroom educational practices motivate the student to the development of teaching competencies their response demonstrates the level and degree of interest to meet this initiative through online learning in the integration of case studies for student training as proposed in the survey.

Therefore, among the aspects of the Pedagogical Device: teaching practices or residency, primary characteristics such as collaborative work and the summative formative process are evident, that is, the evaluated process, but with the approach of complexity.

Agreeing with Souto and Sanjurjo (2003) pointed out that complex thinking invites you to look for uncertainty, disorder and interaction are part of successful educational practices.

## CONCLUSIONS

This research identified the pedagogical devices of teaching practice in university education for the Faculty of Philosophy, Letters and Educational Sciences, specifying the theoretical positions to build the development of a class for the formation of teaching practices in the university based on aspects such as: collaborative learning, formative extensions, organization of remote connectivity, project-based learning, research processes, classroom projects, case studies, didactic guides, formative research.

It is necessary to carry out reflective practices that stimulate cognition where collaborative work is valued and that are transversal in this way the writing of formative essays or shared evaluations bringing the experience to the classroom through case studies, classroom projects, research workshops.

It is necessary the design of a guide for each process that is built including the collaborative autonomous task from a tacit orientation, hierarchizing the dynamics of the professional practice in the university through the consultation to memorable teachers, as the experiential part of the student.

Through experience, new concepts must be reconstructed with dynamics and mental schemes, making the school biography or life project dynamic for the recognition of the school identity.

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