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Pedagogical Practice as the Basic Nucleus of Research, Innovation and Professional Skills

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ABSTRACT

This paper describes and illustrates the singular phenomenon of pedagogical practice as a basic nucleus in the development of research, innovation and professional competences, insofar as these aspects are articulated and integrated in a single process. Thus, pedagogical activity becomes the object of research as a real and concrete phenomenon, if only if the teacher develops a pedagogical innovation, and this as the object of scientific experimentation; then, teaching practice as an exercise, preparation or training ensures the development of professional competences, in the diagnosis, planning, management and evaluation of learning. This means that the strategies, methods and/or techniques of the teaching activity become the techniques and instruments of research, and likewise the class, the lesson or the pedagogical activity becomes a laboratory of experimentation, where innovation is tested or tried out. All of this is systematized in the present experience.

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I. INTRODUCTION

So much has been discussed and written showing that the teaching of theoretical subjects is neither the basis nor the fundamental factor in professional teacher training, but rather "teaching practice",

indicating that pre-professional practice should be the fundamental aspect of the teaching career; It is not possible that "universities, which group the set of traditional functions associated with progress and the transmission of knowledge: research, teaching and training" [1] continue to divorce theory from practice, it is necessary to transform teacher training, making the research develop in a real and concrete way, and not in subjects, that the future teacher gets involved with the object of study: the "teaching practice", the phenomenon to be investigated, in such a way that it is experimental, participatory, action and development; where the teaching practice is the laboratory, the practitioner the researcher who is part of the development of the phenomenon, as a form of action research or participatory research, where development runs parallel to research [2]. The University cannot continue to be more than a factory where apprentices are trained and academic degrees are awarded [3], since "most of the academic curriculum, both in high school and in university, is abstract in a pejorative sense. It must be like this" [3], it should not and cannot be like that, it is not possible to train future teachers where "the lessons are pure exercises, without any relation to the real world" [3], and furthermore, "most of the teachers are pure academics and not practical professionals; They are interested in terminology and methodology, not in the thing itself and its practice" [3], unrelated to true pedagogical innovation where didactic strategies, methods or techniques generate changes and solve students' learning problems, which These are true experimental tasks, trial or trial models, which need to be controlled rigorously or systematically, with input and output tests, as true research processes that provide new knowledge. In these conditions, as that, "a lesson on methods for a teacher who does not know the child, is as useless as a Therapeutics lesson for a doctor who has never seen a patient" [4], in such a way that "Pedagogy it has relied more on the system than on research" [4], and innovation; It is necessary to convert training "into an instrument that leads to experience and research" [4], innovation and research as a fundamental part of professional skills. Thus, the faculty or "the institute, by its very nature, whether or not it is part of the University, must be a research and information center at the same time as a school. Students will be trained, not only in teaching methods, but also in research methods, thus contributing to the Science of Education and a vast and valuable collaboration" [4], because research and innovation in teaching practice They constitute the essential part to attend and / or solve learning problems, when they correctly carry out the investigation, the concrete analysis of concrete reality, as the investigative capacity is an essential part of the teaching task, as well as when they design strategies, methods o problem solving techniques develop relevant innovation as an ipso facto and on-site pedagogical solution. Thus, the school where the pre-professional practice of the teaching career takes place is "the school, we repeat, is a laboratory where the spirit of the schoolchildren is studied to determine their orientation" [4] This is the necessary concept, and read like this in the present, to understand our experience about teaching practice as a basic core.

In this regard, Elliot asks: "To what extent does the purpose of systematically testing an educational theory oblige or empower professionals to develop their practice through research?" [5] In general, there is the assumption accepted by all that teaching practice is the test of a theory, especially that received in the classroom, from theoretical courses before practice, excluding research as the appropriate place to apply pedagogical theory; However, when the research is part of

the teaching practice and this research deals with the pedagogical problem, the research ends up being the place where the theory is applied, and not only is the teaching practice the only place where the theory is applied but also on the research. For this, it is necessary to conceive research as an inherent part of the action, of the development, of an ongoing project, as we have observed in the UNAE pedagogical model [6]. Thus the theory is applied through the research process and teaching practice simultaneously, since teaching practice is the object of study, the phenomenon or research problem. That is, when the teaching practice is a true experimental work, there not only is theory applied, but also research is developed. As our practitioners were not only the applicators of pedagogical theory but also researchers of their own teaching practice. For this reason, it is recommended that the training of teachers in the faculty or pedagogical institute should be developed through teaching practice and research, since they constitute the appropriate place to apply the theory, such as research through systematic monitoring and control of teaching practice. This also supposes considering that teaching practice, didactic projects, curricula, educational programs, are true experimental objects where scientific research is developed, that teaching practice not only serves to apply the theory previously learned but also to develop the experimental research, generating new theory in relation to what is investigated. As one of the concerns of our experience was to know how much the pre-professional practice had served to apply the theory learned in the classrooms of the teaching career.

Apart from assuming that the pre-professional practice is the place to apply the theory, fundamentally it is necessary to assume that the pre-professional practice is the appropriate place for the development of professional skills; Since these competencies require the innovative and investigative capacity of the teacher, at least in this the pedagogical model of the National University of Education of Ecuador (UNAE) [6] was clear, since it considered a proportional amount of hours dedicated to teaching practice through of the entire teaching career, from the first cycle; as research, innovation and the development of competences were the inescapable purposes of the model in teacher training [7]. The problem was how to integrate or articulate research, innovation and professional skills in a single process. This is Stenhouse's question: “How to design an investigation to capture educational acts in a spirit of inquiry? One way is to try to mold them into the shape of an experiment; another is based on carefully observing and recording them. An experiment is designed to sharpen observations on certain questions, and it is possible to allow the observation to be expressed as a measurement. Naturalistic observation responds to the natural form of events and tries to portray them in a way that makes them accessible to people who lack first-hand experience” [8]. First, it was necessary to transform and / or shape teaching practice in a “way of an experiment" or of a pedagogical laboratory to carry out a systematic observation of it, to make a careful record of the experience, "to sharpen the realization of observations", "to allow the observation to be expressed as a measurement "; and that this can be carried out with a “naturalistic observation”, spontaneously and freely, to register the events in a “natural way”. And above all, that this task can be carried out by the protagonists of the current experience, thus research results from action or participatory. From Stenhouse's position, the spirit of inquiry is resolved when the teacher investigates his own practice, during the teaching practice. In our experience, given the freedom that we assume for its conduct and development, we do not find any

contradiction between the act of learning, teaching and investigating; it all depends on how research and pedagogical theory are conceived.

Considering that our practitioners are in the process of teacher training, that the development of their competencies is ongoing [7], the learning of innovation and research is in its infancy, we do not expect the domination of a "teacher", nor to be located at the height of a qualified investigator; on the contrary, we had to look for ways to start, undertake or introduce real and concrete work. To facilitate this task, our practitioners were organized into groups of peers, so that they meet the requirement of "carrying out peer observation and holding conferences on the use of variation theory, it is necessary to collect data on student perceptions. on the "learning object" and the design, administration and analysis of pre and post tests" [8]; According to Elliot, we need a kind of Lesson Study for group work under the direction of the practical tutor. As long as we understand that teaching practice is not an extension of the theoretical courses but the fundamental activity; that, instead of depending on a theoretical subject taught in classrooms, the subjects depend on teaching practice, and not the other way around; because the practices are not "a course to go to the classroom and listen to lessons from a teacher. It was real action of future teachers in front of children and young people. As action and real work, it was located at a great distance from the subjects and represented the moment in which everything received in the subjects had to be brought into account appropriately to face the events that were emerging at school and in the classroom" [9]; the practice was a true innovation, a true trial, a true pedagogical laboratory in the development of professional skills, the basic nucleus that correlates, articulates and integrates research and innovation. Thus, "once the substance of this practice was visualized, which was and is work and not a subject, and that it is work related to the profession, it was easy to give it a new location (the one it always had per se, although it was not seen)" [9], the practitioner goes to school or to the classroom to develop his teaching work as well as a qualified or qualified teacher in the exercise of his profession. Then the Lesson Study is the fundamental strategy for conducting innovation and research among practitioners in real and non-simulated conditions. Thus, the practice had to be conceived in an integral way, its vision "has to be complete, and this requires that it practice not only in the dictation of classes (teaching practice), but also guiding activities of children and young people in school or college. and training in the administrative procedures typical of colleges and schools" [9] A true multifaceted conception of pre-professional teaching practice.

II. OBJECT OF STUDY

The pre-professional teaching practice to which our experience refers is part of the implementation of the so-called "pedagogical model of the National University of Education" (UNAE) of Ecuador, in which we serve as academic tutor of the practices, in charge of the Address with which we collaborate; In it we verify how the practitioners developed pedagogical innovation strategies, educational research and the development of their professional skills. These practices were carried out in the public schools of the canton of Azogues selected and chosen by the university, during the academic semesters from October 2015 to March 2016 and from April to July 2016, with the students of the second and third cycle of the teaching

career of Education General Basic (EGB) Through them we register all the indicators, instruments and research techniques, the strategies, methods, techniques of pedagogical invocation, elaborated and applied in all the activities and / or tasks of the teacher related to the dictation of the classes, that required one lesson per week and / or three lessons per semester as a minimum, always in charge of a parallel or section.

As part of the responsibilities of the practitioner, the development and presentation of the Knowledge Integrating Project (PIS) was required, this is the systematization of their practice and report of the investigation process. It is called "integrative activity" because it assumed that the teaching practice integrated the "knowledge", the theory of all the subjects of the teaching career. This task required the need to implement research activity through practices, a kind of experimental research, action research and research on the development of practice. Pedagogical innovation is born from the "pedagogical model" that among its phases or moment indicates the need to carry out the experimentation of a strategy that solves or addresses the problem of the learning of the students in charge. This forced the practitioner to create and experiment pedagogical strategies to meet the learning needs of the learners. These pedagogical innovations became true objects of investigation when entrance and exit examinations were applied to the development of these didactic strategies, since they were analyzed, discussed or evaluated as part of the Lesson Study, not only for research reasons but with the fundamental purpose of improving teaching practice, becoming true experimental research. Thus the practitioners with the PIS developed the research, with the creation of their didactic strategies they developed the pedagogical innovation; articulating innovation, research and development of teacher professional skills simultaneously. As the pre-professional practice was a pedagogical experiment and the school an educational laboratory, similar to any other experimental research laboratory, given its systematic monitoring and the research report embodied in the PIS. In such a way that the instruments, variables, indicators, data and information resulted from the teaching practice, from the curriculum development in the school classrooms.

III. DEVELOPMENT OR CONTENT

The questions posed by this experience were: How was educational research developed? What are the particularities of its techniques and instruments? How is pedagogical innovation understood and developed? What are the development steps and strategy? What are the professional teaching competencies in development? And how true is it that pre-professional practice includes research and innovation? Is it true that teaching practice serves to apply the theory learned in the classroom of the teaching career? Pre-professional practice in the pedagogical model of the UNAE should answer these questions correctly. According to Vigotsky, in this experience educational research is understood as "1) the analysis of the process as opposed to the analysis of the object; 2) the analysis that reveals causal, real or dynamic relationships in opposition to the enumeration of the external features of a process, that is, the analysis must be explanatory, not descriptive; 3) the evolutionary analysis that returns to the original source and reconstructs all the points of the development of a certain structure" [10]; We do not contemplate the object in a passive way but by participating in it, the object is not static but in process; It is

not a cold enumeration of data but the discovery of their causal relationships, their dynamics, their complexity; we hope to rebuild the process that will simply determine its structure. Here the real and concrete teaching practice is presented, in the complexity of the process and the diversity of its strategies, variables, techniques and instruments.

A . OF THE METHODS, MEANS & MATERIALS

As a method of inquiry this is "the theorization of practice and experimentation of theory", to improve education with research, providing solutions to school problems, experimenting with innovative strategies, investigating problems, the needs of schools, attending the difficulties of the learners. In this pre-professional practice experience, we had to verify whether the teaching practice articulates pedagogical theory and practice, research and innovation with the development of professional skills. If the development of professional competences includes research and innovation, if the future teacher carries out the educational diagnosis as part of the investigative capacity, if he proposes innovative strategies as part of the planning of classes and lessons, if he correctly conducts the process management teaching-learning and assessment of learning; since in practice the theory learned in the classroom is not mechanically applied, that the true development of teaching competencies happens in practice. Thus, for example, part of the professional competencies is required to "Make the diagnosis of the educational problem" and on it raise the pedagogical innovation, for which it was necessary to "Identify the learning problem to attend or solve"; These are typically a form of educational research, since the "research problem" arises from it, or when the new didactic strategy is put to the test, the "Application of the entrance test to learners" becomes necessary.

Then the teacher "Prepares and / or designs the lesson plans: Plan the teaching action", this is innovation through the "Design of a didactic strategy that addresses or solves the learning problem"; in such a way that, for research purposes, designed innovative strategies are constituted in the Working Hypothesis. Subsequently, the teacher develops the "direction of the teaching-learning process, in the development of classes or lessons", putting the innovation to the test the "trial or experimentation of its designed didactic strategy"; We observe that research is developed through practice, such as the development of an “experiment” whose “pedagogical laboratory” is the activities of the teacher and the students in the classroom; As indicated by the principles of the Lesson Study, including the moments to analyze and reflect on the teaching practice, based on the “field diary” and the “observation cards” or portfolios. Finally, we observe the "evaluation of learning results, the evaluation of the student's tasks or exams", as part of the analysis of applied innovation, this is the "assessment and measurement of the effectiveness or achievements of their innovative strategy"; in research means “organizing and processing the information or data, analyzing and discussing the results of the experience or research”, “applying the entry and exit test”, and finally by writing the practice report we obtain a true investigation report.

To better understand this natural articulation of research with innovation and professional competences, we list and describe the elements, aspects and characteristics of the research process, innovation and the development of professional competences of the teacher

separately or analytically.

Table 1. Of the Professional Competences of the Teacher.

Competence.	Of its content and relationship with research and innovation.	Moment.
To diagnose.	Task and / or ability to identify difficulties, needs or deficiencies in the learning of students; the diagnosis of the pedagogical problem is the starting point for the design of the pedagogical innovation and the formulation of the research problem.	At the beginning of the practices.
To plan.	Task or ability to design the lesson plans for each of the lessons in charge. It also includes the design of the pedagogical innovation strategy, as a test or trial model to be controlled or investigated. The teacher designs the strategy of the teaching-learning process.	Through all practice
Lead.	Central or basic task of the teaching action or the pedagogical practice that develops the lessons or classes in the classrooms. It is the moment of experimentation, test or trial of pedagogical innovation, as an object of research. At the rate of one (1) lesson per week or three (3) per semester minimum.	Through all practice.
Evaluate.	Task and / or ability of the teacher to analyze each of the student's tasks; This includes the entry and exit tests in the application of the innovative strategy, the results of which are analyzed as part of the research process. They provide evidence, data and information about teaching practice.	Through all practice.

Table 2. Of Pedagogical Innovation.

Structure.	How it was implemented.	Moment.
Identification of the educational or learning problem.	It was developed through a guide and format for observing the problem, with the question: What are the needs, deficiencies, problems that must be addressed? The diagnosis is the starting point for the innovative didactic strategy.	At the beginning of the practice.
Design of the didactic strategy. Essay, test or experiment.	Elaboration of the design or plan of the didactic strategy organizes the teaching-learning methodology that addresses the identified problem. The design defines the logical sequence of the tasks that will be applied in the classrooms.	At the beginning of the practice.
Analysis of the experience.	It constitutes each of the classes or lessons where the innovation strategy is applied, following the logical sequence of tasks listed in the plan. This is the key moment of didactic innovation that tests the strategy, registered and controlled process as an object of research.	Through all practice.
	Developed as a Lesson Study, after each lesson or class to introduce possible amendments or modifications to the strategy. It includes the evaluation of the tasks and products that the students generate as a result of the trial or experiment. The entrance and exit tests are analyzed at the end of the semester, processed and organized as part of the investigation.	Through all practice.

Table 3. Of the Investigation.

Instruments.	About the registration of evidence, data and information.	Moment.
Class or lesson observation sheet.	To record each of the observable indicators of teaching practice, including the moments of the strategy, the purpose, content and the tasks of the students, it serves to verify the development of professional competence and pedagogical innovation.	In each of the classes or lessons.
Field diary.	Registers the teaching experience from the practitioner's perspective, in which he analyzes and reflects on his own practice; presented at the end of each school visit. She serves to develop the Lesson Study and write the research methodology.	In each of the classes or lessons.
Entry and exit test.	They record the evidence about the achievement of learning, it serves to verify the effectiveness of pedagogical innovation, it measures the level or degree of student learning, products of the strategy and teaching practice.	At the beginning and at the end of the practices.
Lesson Study.	Strategy that allows us to carry out the collective evaluation of teaching practice, pedagogical innovation and each of the lessons or classes. It also served to formulate the conclusions and recommendations of the investigation report or PIS. It is the sustenance of the collective work of the interns, for the analysis and reflection of their practices under the direction of the internship tutor.	Through all practice.
Investigation report or PIS.	The research report is the Knowledge Integrating Project (PIS), it systematizes the teaching practice, presents the results of pedagogical innovation, above all the results of the research. Drafted under the direction of the internship tutor.	At the end of the practices.

To the elements and aspects listed is added a satisfaction survey about the results of the pre-professional practice, applied to the practitioners and teachers of the receiving schools, whose instrument was prepared by the Directorate of practices, this refers to;

a) The "results of the practice", asks about the quality of the guidance of the Internship Directorate and its relevance to the PIS (research), as well as about the relationship of the practices with the subjects of the career plan.
b) The "objectives of the practices" suggests answers about the relationship with the school, with the profession, the contribution of pedagogical innovations in schools, to support students, provide new teaching strategies, the contribution of teaching materials, regarding professional growth.

This opinion poll also suggests open-ended questions, in order to gain insight into the perceptions and experiences of practitioners and teachers in schools. With the following questions: What were your greatest learnings from research and practices? What was the greatest deficiency in research and practices? What do you suggest improving research and practices in school?

The attendance of the interns in the receiving schools during the semester from October 2015 to February 2016 was at the rate of one (1) day per week, throughout the semester, and in the semester from April to July 2016, the attendance of the interns to the school was intensive covering fourteen (14) consecutive days, in two weeks from Monday to Friday. From the results of the opinion survey, which are presented here, correspond to a sample of one hundred (100) surveys taken from the total number of UNAE students who carried out internships in the academic cycle from October 2015 to February 2016, from the parallels of the career of Initial Education, Interculturality and Basic General Education; Of these, EGB has the highest percentage for having more parallels, groups or sections.

IV. RESULTS

The results refer first to pedagogical innovation, whose innovative strategies were listed in "Perceptions and experiences" in the magazine Orientación [11] and were as follows: Reading and writing activities: "the scarecrow", "letter dominoes", "Paint words", "tourist guide", "the ringed". "Sequence cards", "discover the word". Group and individual dynamics: “solving mathematical problems with graphic illustration”. Playful or technical activities based on the game: "letter image", "alphabet soup", "read it to me", "game of vedoques", "knew the macaw". Workshop on reading and writing texts: “collaborative reading”, “el pongo”. The theater and the child: “creation of a musical play with scripts created by the children themselves”.

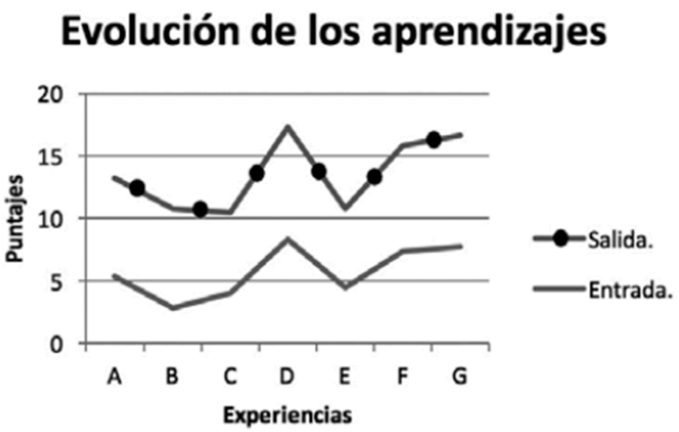

Figure 1. Evolution of learning.

The results of the educational research listed in the article "about the PIS" in the book "Convergences and divergences in research" [12] are observed in the following titles of the PIS presented by the practitioners: "ludic strategies as cooperation techniques and improvement of values practices", "reading and writing correctly through the use of a computer and a projector", "development of reading and writing in 2nd grade EGB students through collaborative learning strategies", "theater and music as a didactic resource to develop reading comprehension", "group and individual dynamics in educational inclusion", "game-based teaching", "improve reading comprehension through group reading of stories", "educational strategy activities based on the theory of multiple intelligences to understand, value and develop the different types of intellectual capacities in the classroom". "Development of listening skills through innovative and efficient strategies in 2nd grade of EGB", "writing a sentence and solving a mathematical problem from a graphic illustration and a question".

An illustrative example about the results of the effectiveness of the practices is observed in the figures or graphs that the practitioners present in their respective PIS; in them we observe the substantial difference that exists between the entrance and exit tests in all groups. This Figure corresponds to the Evolution of the learning of the students under the guidance of our practitioners, taken from the journal Pedagogy and knowledge, in the article on the "content and structure of practices in the pedagogical model of the UNAE" [13]

For the quantitative treatment and the design of the statistical graphs, the values that were assigned to the were the following: Very satisfactory (1), Satisfactory (2), Not very satisfactory (3), Improvable (4). Regarding the open responses and their qualitative analysis, they were first transcribed as they were formulated and / or written, respecting the idea or content of the response, without reference to grammatical deficiencies that distort the concept and increase the degree of subjectivity of each response.; then they were classified or organized by themes according to the judgment or the formulated proposition, and finally they were quantified by observing their repetition, redundancy, equivalence or similarity in content, meaning or message.

A. FROM THE RESULTS OF PRACTICE

We observe an almost parallel correlation between the quality of the guidance and its relevance to the PIS.

Figure 2. Results of the practices. Own elaboration.

The majority result is "satisfactory": answer 2: fifty (50) answers out of 100. Second. Very satisfactory: answer 1.

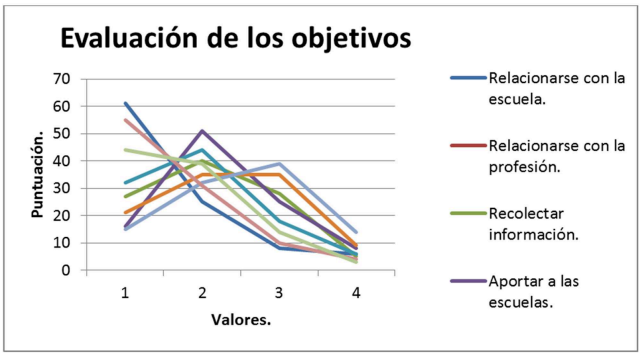

Figure 3. Evaluation of the objectives. Own elaboration.

B. OF THE OBJECTIVES OF THE PRACTICE

The correlation between the different suggested alternatives is uneven or very diverse in the opinions of the respondents.

The "relationship with the school" and "supporting their professional growth" are considered as outstanding, very satisfactory. Satisfactory: "contribute to the schools", "support the student", "relationship with the profession" and "collect information". Not very satisfactory: "support with teaching materials", "support with new methods", and "contribution to the PIS"

C. FROM THE THEORY OF THE SUBJECTS IN PRACTICE

To the question of How true is it that pre-professional practice is used to apply the theory learned in the classroom? The information indicates that there is still a certain contradiction between theory and practice, despite the innovative model of the UNAE applied In teacher training focused on teaching practice, career plan theory does not respond directly to it. Indicating a null relationship, that in this regard there is no greater evidence or proof of the theoretical content applied in teaching practice.

Figure 4. Use of subject information. Own elaboration.

The relationship between subject theory and pre- professional practice in the UNAE pedagogical model continues to be inexplicable or not very intelligible.

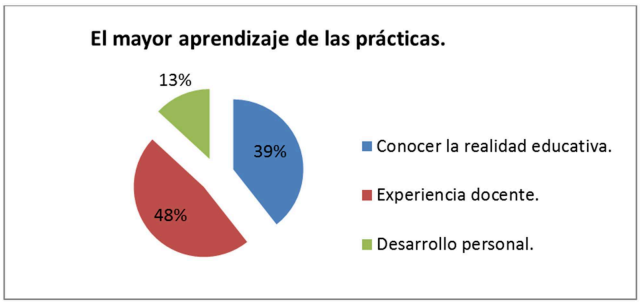

Figure 5. The biggest learning from the practices. Own elaboration.

D. FROM PERCEPTIONS AND EXPERIENCES

The open responses formulated by the practitioners led to the following conclusions,

a) What were your biggest learnings from research and practice?

Considering the categories of "Knowing the educational reality", "Teaching experience" and "Professional development". Practitioners affirm that the practice focuses on the "teaching experience" as a fundamental aspect in the development of professional competencies.

b) What was the biggest shortcoming of the research and practices?

Considering the categories about "On the relationship between the University and the school", "On the receiving schools" and "On the situation of the school teacher". The opinion of the practitioners is divided about the problem faced by the university in implementing the practices.

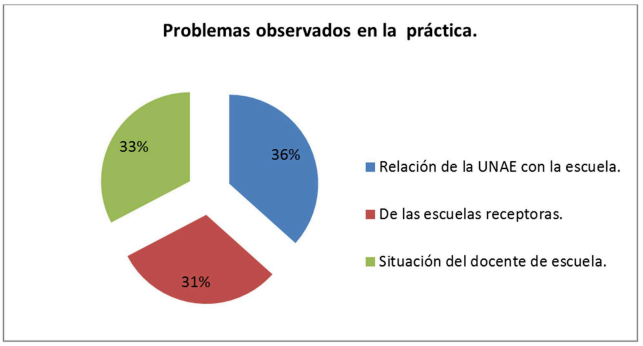

Figure 6. Problems observed in practice. Own elaboration.

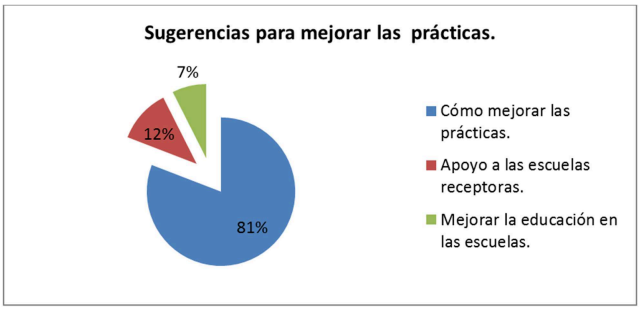

Figure 7. Suggestions for improving practices. Own elaboration.

c) What do you suggest to improve research anc practices at school?

When observing that the suggestions indicate "Improve practices regarding the Direction of practices, the criteria and precision in the development of practices, articulate research with practices, properly prepare practices", they also suggest more "Support to schools recipients" and "Improve education in schools". As "improving practices" imply a greater analysis of the educational reality and its concern to innovate and / or transform said reality.

CONCLUSION

According to Elliot, Stenhoe, Goodman and Encinas, pedagogues dedicated to educational research and pedagogical innovation, by Delors, Peñaloza, Perrenoud [14] or Freire [15], about teacher training, while claiming the need to focus the teaching career in pre-professional practice, and insist on the urgency of articulating research and innovation as part of the development of professional skills, of establishing the indissoluble unity between theory and practice, our experience, according to the pedagogical model of the UNAE, shows that it is possible to articulate and / or integrate research, innovation and professional competences provided that teaching practice is considered as the basic nucleus for it. This shows us the experience presented in the "development of the PIS", the work on the "structure and content of the practice at UNAE", as well as the article on the "experiences and perceptions" of the practitioners; added to the general evaluation of the practices regarding their effectiveness in the teacher training model, especially about the relationship between the theoretical subjects taught in the classrooms and the pre-professional practice developed.

This considers that, in educational research, the object of study is the pre-professional teaching practice, that pedagogical innovation happens in it, since the research evaluates the experimentation of didactic strategies, which for such reasons makes systematic monitoring and control corresponding, that for reasons of its study analyzes the development of the professional competences of the teacher. This is how it demonstrates the results of pre-professional practices, whose fundamental task is not reduced to applying the theory of the subjects but constitutes a conducive space to develop research and innovation, while at the same time

contributing to the transformation of the education and schools. In our experience it is shown that teaching practice is the basic nucleus for these developments. Correctly answering Stenhouse's question, about How to develop research and the spirit of inquiry in teachers? that the investigative spirit develops in pre-professional practice, when research is part of professional competencies, when the teacher develops pedagogical innovation, in such a way that school classrooms become true laboratories of pedagogical experimentation. According to Elliott, teaching practice has the purpose of systematically testing an educational theory, which for investigative reasons studies it, as an essay, test or experimentation. That teaching practice, as Peñaloza indicates, is not the extension of the theoretical course, or that one attends school to continue listening to classes or lessons.

In summary, as can be seen in the preceding figure, the elements and aspects, the instruments and materials are described and enumerated, all of them intersect with respect to the development of competences, research and innovation, in it we observe their articulation and integration in said basic nucleus; inasmuch as they are all constituted in the strategies, methods, techniques of innovation, in the instruments, variables and indicators; such as the field journal, lesson study, portfolios, curricular programs, class or lesson plans, exams, assignments or student assignments; As Vigotsky indicates, they are analyzed in their process, in the search for causal relationships, which reconstructs the evolution of experience, research is not a contemplative but a participatory act of research development.

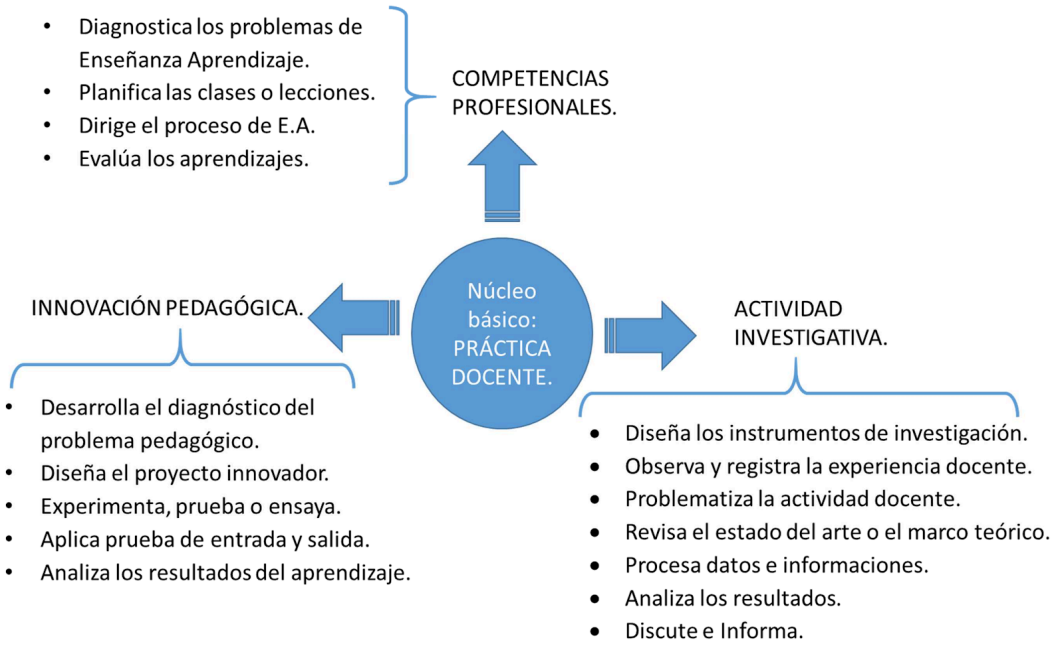

Figure 8. Scheme of the basic core, research, innovation and professional skills.

As a recommendation, it is up to the researchers to monitor the pedagogical practice as the basic nucleus for the indicated processes, and to the teacher training institutions the systematization of teaching practice, about the relationship between the development of teaching competencies, educational research and pedagogical innovation; we have only had to raise the scientific hypothesis for such future work.

REFERENCES

1. Delors, J. (1996) La educación encierra un tesoro. Santillana Ediciones UNESCO, Ma223-242. Ponencia del congreso anual de la British Educational Research Association, Universidad de Manchester, 2009.
2. Pérez, A. (2015) "Conversación desarrolladas en la UNAE", el 21 de octubre de 2015. Transcripción.Palacios, L. (2018) Desarrollo de las competencias por el sistema de tareas. Fondo Editorial de la UCH – Lima.
3. Stenhouse, L. (2004) La investigación como base de la enseñanza. Madrid. Ediciones Morata. 5ta. Edición.
4. Peñaloza, W. (1989) La Cantuta. Una experiencia en educación. Lima: Edición auspiciada por el CONYTEC.
5. Vigotsky, L. (1979) El desarrollo de los procesos psicológicos superiores. Harvard University Press, Cambridge.
6. Palacios, L. (2016) Experiencia y percepciones drid.
7. Palacios, L. (2008) Lógica de la ciencia e investigación educativa. Fondo Editorial del Pedagógico de San Marcos – Lima.
8. Goodman, P. (1973) La des-educación obligatoria. Editorial Fontanella. Barcelona.
9. Encinas, J. (1986) Un ensayo de escuela nueva en el Perú. Imprenta Minerva. Lima, Edición Facsimilar.
10. Elliott, J. (2010) El "estudio de la enseñanza y del aprendizaje": una forma globalizadora de investigación del profesorado. Revista Interuniversitaria de Formación del Profesorado, 68 (24, 2) P de los estudiantes acerca de las prácticas pre profesionales en la UNAE Revista "OrientAcción" de RELAPRO, publicación digital Nro. 2, 2016 – Colombia.
11. Palacios, L. (2020) Sobre o "Projeto Integrador do conhecimento" no modelo UNAE. En Convergencias y divergencias en investigación. De Tomás Fontaines-Ruiz, Johann Pirela Morillo, Jorge Maza-Cordova y Yamely Almarza Franco: Editores del RISEI (Ecuador) Pp. 264-272.
12. Palacios, L. (2019) Estructura y contenido de las prácticas preprofesionales en el modelo pedagógico de la Universidad Nacional de Educación (Ecuador) Revista Pedagogía y saberes, de la UPN Nro. 50 – Colombia.
13. Perrenoud, P. (2004) Diez nuevas competencias para enseñar. Barcelona: Graó.
14. Freire, P. (2004) Pedagogía de la autonomía. Sao Paulo: Editorial paz y tierra.