

The training of the educational psychologist for independent knowledge management as a professional requirement

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Abstract

Currently, training the new generation of professionals is a challenge for universities, as presented in the Professional Model of the Bachelor's Degree in Education, Pedagogy-Psychology, which energize the formation of the labor resources that the country requires competently. Consequently, the mission of this career is to train workers suitable for a labor world in continuous change, which requires periodically recycling, reconvertng or updating the professional competencies demanded by the economic and social development of the country related to pedagogical and psychological training. In this way, the article intends to support the need to train future educational psychologists in the independent management of knowledge based on a didactic model and the practical verification of the methodology that concretizes it in one of the disciplines of the career: Physiological and Psychological Foundations of Education (FFPE). Theoretical and empirical methods were used to carry out the research, particularly the experiential pedagogical experience, which revealed the methodology's effectiveness in transforming students towards higher stages in their professional protagonism.

Keywords: independent knowledge management, professional simulation problem method, professional protagonism.

INTRODUCTION

Contemporary educational institutions require professionals in pedagogical careers that respond to new socio-educational needs. In this sense, school institutions require new professionals to solve increasingly complex situations. Therefore, the formation of the Educational-Psychology professional demands a dynamic and interactive conception of the teaching-learning process, in which self-knowledge, responsibility, initiative, perseverance, firmness, polemic capacity, self-confidence, and other elements will have an essential meaning in the way the future professional uses his knowledge, with a protagonist attitude in the exercise of the modes of action, are promoted.

In the psychoeducational psychologist's behavior, showing competencies for professional performance must imply ethical, communicative, creative, generative and attention to changes, close to the educational reality and capable of understanding and transforming it; with versatility, authenticity and resilience.

It becomes then a permanent demand to the teacher of the Bachelor's Degree in Education Pedagogy-Psychology at present, the search and appropriation of the foundations that, from the methodological and scientific point of view, make it possible to design strategies, procedures and actions that propitiate the preparation of the students of this career to exercise the professional activities inherent to their work, as advisors, educational counselors, directors of the teaching-educational process and researchers; which have certain particularities in the current social scenario. However, in this process, insufficiencies still limit this development, so it becomes necessary to carry out research in this area.

The discipline Physiological and Psychological Foundations of Education (FFPE) in the Bachelor's Degree in Education, Pedagogy-Psychology, is taught from the first to the third year of the career, from its structuring in 11 subjects that have an extensive diversity of contents that are structured from the psychological science and its applications in education.

In the teaching-learning process of this discipline, various contents are specified, which include the scientific theories of psychological science, its concepts and basic categories, as well as laws and principles governing the development of the personality of the subjects, the regularities and manifestations of psychic development, the study of groups, as well as those related to learning styles and strategies; which are of obvious application in solving the problems of everyday life and the exercise of the profession. Furthermore, these contents facilitate the future professional, the mastery of the physiological and psychological foundations that explain the identity and diversity of the subjects in such a way that they make it possible to direct and execute the educational work in a differentiated way on scientific bases.

At the national level, several researchers have dedicated their works to studying the training process of the Bachelor's Degree in Education professional, Pedagogy-Psychology, among which stand out recently, Román (2018), Rosales (2021) and Pantoja (2022), studies in which significant contributions in the understanding of the dynamics of the initial training of professionals of this career are emphasized, as well as important elements referred to the conformation of the modes of action of the psychopedagogical counseling and educational guidance.

In several of the theoretical contributions of the research above, it is revealed the proposal of methods, which are mainly focused on improving the training process of the professionals of this career; therefore, it is necessary to intend the contributions in this sense towards the improvement of the teaching-learning process in the career, based on the particular and general didactic-methodological requirements of the disciplines and subjects, focused on guaranteeing the professionalization of the graduate in education in Pedagogy-Psychology, from a metacognitive perspective. In this way, the article intends to support the need to train future psychopedagogues in the independent management of knowledge based on a didactic model and the practical verification of the methodology that concretizes it in one of the disciplines of the career: Physiological and Psychological Foundations of Education (FFPE).

Development

In higher education institutions, a process of knowledge management takes place, which is deployed in all substantive university processes, and, therefore in the development of the teaching-learning process, through the systematic and planned interaction of the actors in the process, in order to achieve the correct assimilation of knowledge and skills and a consequent level of generalization of concepts and procedures, through the best use and creation of resources of individual and collective knowledge. This constitutes how the university community generates knowledge from using teaching-learning methodologies, technologies for education and trends to create and transmit knowledge.

Knowledge management is a term that comes from the organizational context. Several theorists who study the subject internationally, among them Escorcía and Barros (2020), agree in defining it as a set of processes that allow the use of knowledge as a key factor to add and generate value. In this sense, they point out that it includes not only the processes of creation, acquisition and transfer of knowledge but also the reflection of this knowledge in the behavior of the subjects and the organization.

From this perspective, knowledge management is, due to its characteristics, a set of actions inherent to human activity and its permanent desire to improve the work it develops. Its primary mission is to create an environment in which available knowledge and information are accessible and can be used to stimulate creativity and improve decision-making. So the key is to create a culture in which information and knowledge are valued, shared, managed and used effectively and efficiently.

The concept of independent knowledge management is not defined in such a way in the literature consulted; however, in the review conducted, there are concepts related to its essence, defined by authors such as Bahr and de la Torre (2016), Calcines, Valdés and Monteagudo (2017), González, Mainegra and García (2021), who link it to the need for subjects to be able to generate, use and share knowledge effectively on their own. Based on these contributions, this concept is related to self-management of knowledge, self-management of learning, and self-managed learning, which have in common that the student is assigned greater protagonism as an active subject in the learning process.

In response to this need, the authors worked on elaborating a didactic model of independent knowledge management with a professional approach for students of the Pedagogy - Psychology career at the University of Granma. The model considers the dialectic relationship between the components of the teaching-learning process, emphasizing the importance of the categories: didactic resources, teaching methods and learning tasks, and the didactic principles proposed by different authors.

Thus, within these, the following are essentially considered: the theory-practice unity, the unity of the cognitive and the affective, the unity between the social and the individual, as well as those defined for the teaching of the psycho-pedagogical contents and the methodological procedures that materialize them, pointing out the motivational processes (Salazar and Cáceres, 2022), based on the use of active teaching methods (González et al., 2022), as well as its incidence in the self-reflective processes (Jerez, 2020).

The didactic model of independent knowledge management with a professional approach is defined as the representation of the essential characteristics of the process aimed at activating learning towards independent knowledge management, based on the proposed objectives with a dynamic character, given the dialectical relationships of coordination and subordination between the subsystems and components that integrate it. The model emphasizes the processes of cognitive conditioning, logical-cognitive reconstruction and cognitive regulation of independent knowledge management with a professional approach.

The study started from the conceptual delimitation of independent knowledge management since it is not defined in this way in the scientific literature consulted. The latter is defined as psychodidactic process oriented to the autonomous and self-regulated performance of the student to plan, implement, control and evaluate the actions and conditions that allow him/her to obtain knowledge efficiently through creative professional practices oriented towards problem-solving, leadership development and the capacity to innovate and investigate; applying the theoretical and practical elements corresponding to his/her professional modes of action (Carreño et al., 2022).

Of particular importance in this sense are the active methods, among which are those of *problémica* teaching: *problémica* exposition, partial or heuristic search and the investigative, feasible use to activate the teaching-learning process of the subjects of the FFPE discipline.

Thus, the investigative method of reflective cooperation is proposed, which occupies a central place; it is based first on problem-solving teaching. It favors the creation of contradictions based on the objectives established in the professional's model and the professional problems to be solved in the performance contexts, as well as the use of group dynamics techniques, modeling, and professional games, based on the imitation of the real environment through playful models of professional activity. Computer and communication technologies are also considered teaching aids.

The research method of reflective cooperation is defined as the system of actions performed by the teacher to teach the contents of a given subject, aimed at the training and development of skills to independently manage knowledge based on metacognitive processes and the generation of continuous individual and collective reflections, focused on the model of the professional.

Its objective is to structure the teaching-learning process through the fulfillment of didactic procedures that contemplate the execution, by the teacher and the student, of steps that take place in the research process, through collaboration and cooperation, from analysis and reflection on the content of the tasks and the algorithms for their solution.

It is aimed at complementing other methods and procedures used in the teaching-learning process of the subjects of the discipline, and according to its flexible character, it can be implemented in other disciplines of the curriculum of the Bachelor's degree in education, Pedagogy-Psychology. However, the execution of the didactic procedures that conform to it must follow the logic of appropriation and systematization of the content as a basis for the independent management of knowledge: lecture, seminar, practical class, laboratory practice, investigative work practice.

In the teaching-learning process, all the influences that the individual receives, both in the content selection and the methods and resources used, create the conditions that favor the formation and development of the personality. The research method of reflective cooperation considers the individual-personal character of the independent management of knowledge. In contrast, the backbone of the independent activity of students is the internal aspect of the process, given in the relationship motive-objective-task-result. In this process, the student manifests the development achieved in the cognitive-intellectual and affective-motivational spheres, according to his social development situation.

From this point of view, the projection of the training of professionals from the perspective of independent knowledge management leads to the development and strengthening of the world outlook, a fundamental personal formation of the stage, which reflects its influence on all other aspects of the personality structure. Moreover, the development of the worldview creates the basis for the self-determination of the personality, i.e., the possibility of acting consciously and reflexively, relatively independent of external influences.

Its value is justified by the need to innovate teaching methodologies to obtain superior results in the teaching and learning of

the contents of the FFPE discipline of the Bachelor's Degree in Education. Pedagogy-Psychology, taking as a reference the particularities of the contents, the transformations that occurred with the implementation of the E Curriculum, and the advances in the use of interactive and communicative platforms. Its novelty lies in systematizing the research method dynamized by the processes of cooperation and reflection from a metacognitive perspective.

For its application, an analysis of several aspects must be carried out, such as:

- In the students: the level reached in the development of the cognitive processes that are activated in the learning process, the adequacy of the configuration of the personal characteristics with the stage of development, the previous knowledge they have of the theory of the subjects, the state reached to exhibit research skills, as well as for communication and group cooperation.
- In the professors: the theoretical and methodological preparation achieved and their experience teaching the discipline.
- In the subjects: the possibilities of their implementation, according to their objectives and contents in each of the years, the establishment of the relations objective-content-method-didactic resources, evaluation.

The method is feasible to apply in the teaching-learning process from the first year of the course since the subjects of the discipline begin to be taught in the first semester, with the subject Physiology of Human Development, and in the second semester with General Psychology. These introduce the theoretical and methodological foundations that support psychological science and favor understanding its importance for professional practice. This is achieved with the unity of demands by the pedagogical group through the systematization of the learning acquired in the subjects of other disciplines, such as Introduction to Pedagogy-Psychology, in which the relevant elements of the professional's model and the importance of studying efficiently are addressed.

From this approach, they are presented as didactic procedures that make up the research method of reflective cooperation:

1. Metacognitive disposition.
2. Methodological integration.
3. Orientation towards cognitive independence.
4. Systematization of strategies for the application and transfer of contents, based on information exchange, knowledge production, personal involvement, reflection and group cooperation.

The research method of reflective cooperation significantly influences the training of future professionals for the Bachelor's Degree in Education. Pedagogy - Psychology, as it constitutes a way for the activation of learning, enhances the intellectual development of future professionals, as well as the transition from dependence to independence and self-determination, because of the need to make decisions in the solution of tasks based on problem situations; awakens interest in the subjects and the profession; it creates in students a collaborative spirit in the joint fulfillment of tasks; it demands the application of knowledge, strengthening the theory-practice link, as a basis for the formation of psycho-pedagogical competencies; it accelerates the possibilities of adaptation to basic labor entities and enhances professional protagonism.

For the concretion of the scientific result of the research, i.e., the model, the methodology is used since its conception is considered essential for the prescription, indication and standardization of the procedure in the field of teaching and learning, according to the proposed objective; it is based on a sequence of phases and stages that allows guiding the pedagogical practice in these subjects and can also be adjusted to any theoretical model.

In the particular case of the research conducted, the methodology is conceived as a system of methods, procedures and techniques that, regulated by certain requirements, will allow conducting the independent management of knowledge with a professional approach in the students of the Pedagogy - Psychology career, through the subjects of the FFPE discipline.

The methodology is aimed at teachers to improve their methods, procedures and techniques to prepare students for the independent management of knowledge focused on their professional exercises. For the preparation of the proposal, the characteristics of the FFPE discipline are considered, starting from its location in the study plan, objectives, topics and

fundamental contents.

The subjects of the discipline are taught from the first to the third year of the course. The discipline is preceded by Philosophical and Pedagogical Foundations of Education and is taught simultaneously with the disciplines: Didactics and Curriculum, Educational Guidance and Methodology of Educational Research.

In the subjects of the FFPE discipline:

- It characterizes physical development and explains the physiological bases of psychic development,
- It contributes to the understanding of human development from a bio-psycho-social conception.
- It promotes the understanding of the development of the human psyche and the conditions of emergence and potential development of this and of the personality, as a level of superior integration of the psychic, its characterization and the determination of the psychic qualities and functions in each stage of its development.
- It contributes to the development of communication skills and provides procedures for mediation and conflict resolution; it also addresses mental health and identifies some alterations of psychic functions.
- It facilitates the analysis of learning-related processes, their diagnosis, and the design of individual and group learning tasks.
- Students are prepared to assess with an ethical and responsible attitude, in the different contexts of action, the psychological and physiological development of the subjects involved as well as the individual and group learning process, using as assessment criteria the theoretical and methodological foundations of the theories studied.
- Tools are provided to analyze scientific psychological knowledge's emergence, development and crisis during the different historical stages.

The content of the discipline is conceived to achieve an effective preparation of the professional in training for the solution of the problems that arise in the object of the profession, which is the educational process that materializes in the educational guidance of students, families and neighbors in the community, in the psycho-pedagogical counseling to managers and teachers, the direction of the teaching-learning process of pedagogical and psychological disciplines, and in educational research in the contexts where he/she develops his/her professional work.

It constitutes the starting point for the formation of the professional Pedagogy-Psychology career, from the appropriation of psychological constructs that are essential for the learning of other subjects of different disciplines that follow and that are received in parallel, such is the case of guidance in the Educational Context.

The discipline above contributes to the conformation of the psychoeducational psychologist's mode of action, which includes:

- Educational guidance to students, teachers, family and community members involved in the educational process
- Counseling in educational institutions
- The direction of the teaching-learning process of Pedagogy and Psychology in the training of educators based on the results of educational, and scientific research

Based on the exposed elements, the system of actions by stages is specified, which were partially implemented in the teaching-learning process through the experiential pedagogical experience, in which the active participation of teachers and students, together with the researcher, is considered to transform the teaching-learning process of the FFPE discipline, from the partial implementation of the methodology, aimed at enhancing the independent management of knowledge with a professional approach and the use of the research method of reflective cooperation in one of the subjects of the discipline.

The logic of the process is the delimitation of the context of the implementation of the experience and the description, which fits the characteristics and the context in which the present research is carried out.

As a context to implement the experiential pedagogical experience, the teaching-learning process of the FFPE discipline, of the Bachelor's Degree in Education Pedagogy - Psychology at the University of Granma, which is located in the Blas Roca Calderío campus in the municipality of Manzanillo, is chosen as the context for implementing the experiential pedagogical experience. For its application, the characteristics of the educational context are taken into account, related to the teaching schedule and the availability of premises for the realization of methodological preparation activities and other meetings planned with teachers and students.

The FFPE discipline corresponding to Syllabus E comprises 8 subjects, with 558 h/c, distributed in 446 h/c of classes and 112 h/c of research work practice. As mentioned above, the subjects of the discipline deepen, systematize and broaden the psychological contents that serve as the basis for the exercise of the modes of action of the Pedagogy-Psychology professional in the different contexts in which they work.

For the development of the experience, a total of 6 teachers were selected, 5 of them participate directly in the teaching-learning process of the discipline and the head of the career is included as part of the team that participates in the research. In addition, one of the professors who participate as part of the discipline's faculty is also the Principal Professor of the Academic Year (PPAA) of the group of students participating in the experience, who provides support in the organization and discipline of the group and its diagnosis.

Ninety percent of the professors in the discipline have more than 20 years of teaching in higher education and the same or more years of experience in the teaching process in the FFPE discipline. All of them have the academic degree of MSc. three hold the category of Assistant Professor and three are assistants, which endorse the high academic and teaching level of the professionals in the sample. They have a vast knowledge of the contents of the discipline and the subjects they teach, a high level of commitment and sense of belonging to the career, and a high level of knowledge of the students of the year. All of them showed interest and willingness to participate in the development of the experience from the beginning, stating as a general criterion its importance to modify the pedagogical practice in the career, specifically in relation to the didactic-methodological conception of the discipline for the independent management of knowledge with a professional approach.

For the realization of the experiential pedagogical experience, a group of 18 students, all female, from the municipalities of Manzanillo, Campechuela, Niquero and Pilón, was chosen for the second year of the course.

In order to characterize the group, a review of documents was made, such as characterization of the brigade, minutes of the year group and reports of the teaching results of previous courses. As a result of this characterization, it is obtained that the group has:

- Limited development of general intellectual, research and study skills that do not go beyond the reproductive level.
- Limitations in the integration of the different contents they receive and their application to new professional situations
- Insufficient dedication to individual study, as evidenced by the quality of the teaching results achieved in the first year.

The results obtained in the initial diagnosis are also taken as a reference, which reveals that, in general, students have limitations to manifest themselves as protagonists in their training as professionals in Pedagogy-Psychology.

The description of the implementation of the methodology in the educational practice is expressed as follows: we proceed at first to carry out a methodological preparation by conducting two workshops with the teachers of the disciplinary group, with a duration of approximately 90 minutes, with a fortnightly frequency, which are developed in October 2019.

It intends to prepare teachers for the incorporation of the methodology and method that is modeled in the teaching-learning process so that they can implement them from the subjects they teach and, at the same time, possess a sufficient mastery of their theoretical and practical aspects, to evaluate the effectiveness in their partial implementation by the researcher in a subject of the discipline. In these workshops, a common frame of reference is established regarding the most relevant theoretical and methodological issues to enhance independent knowledge management; in addition, it allows the formation of a common objective and the commitment of the group members with the research being carried out.

To this end, the following topics and objectives are defined for each of the workshops:

Workshop No. 1.

Topic: Objectives, stages and actions of the methodology.

Objective: To provide a system of basic and general knowledge and skills for the application of the objectives, stages and actions of the methodology in the teaching-learning process of the FFPE discipline.

Workshop No. 2.

Topic: Procedures corresponding to the reflective cooperation research method.

Objective: To provide a system of basic and general knowledge and skills for the application of the didactic procedures of the research method of reflective cooperation in the teaching-learning process of the FFPE discipline.

During the workshops, there was a fruitful exchange between the teachers and the researcher, through debates and continuous reflections on the level of relevance and feasibility of the methodology as a concretion of the didactic model, insofar as it makes it possible to solve the detected insufficiencies and the feasibility of its application. The criteria issued in the debate carried out reveal:

- Adequacy of the proposed methodology, its objectives, stages and actions to the needs of improvement of the teaching-learning process of the discipline.
- Updating and novelty in the actions of the methodology elaborated in tune with the current demands of didactics in higher education.
- Appropriate conception of the procedures of the research method of reflective cooperation.
- Correspondence between the methodology used and its concreteness in the proposed method.

At the conclusion of the workshops, the P.N.I. technique was applied to determine what positive, negative and interesting aspects the teachers found in the workshops.

Summarizing the information obtained, we conclude:

- The teachers consider that the theoretical-methodological preparation workshops provide sufficient, updated, precise and ample information on the proposed methodology, its stages and actions so that it has a positive impact on the reconstruction of the didactic-methodological conception of the discipline's subjects as a basis for achieving independent knowledge management with a professional approach.
- The teachers show satisfaction with the methodological preparation received on the research method of reflective cooperation, as a viable and effective procedure, to achieve independent knowledge management with a professional approach, in the function of the development of the student's professional protagonism; to the extent that the motivational and experiential processes are linked to the obtaining of knowledge of the subjects of the discipline, from the reflection and self-reflection of the cognitive and affective processes that are carried out in the teaching-learning process.

At the end of the preparation workshops, the professors of the discipline, together with the researcher, decided that the experience should be applied to the subject of Social Psychology of Education. This subject has a total of 56 h/c, distributed in 12 h/c of lectures, 16 h/c of seminars and 14 h/c of practical classes, divided into three themes: Theme 1. The theoretical framework for the approach to the group in the educational context, Theme 2. The theoretical framework for the study of the community and Theme 3. It has 10 h/c of research work practice. It is taught in the second year of the course, with an integrating character as the group and the community are conceived as contexts of intermediation between the social and the individual, which are essential determinants of the personal development of the subject. Other disciplines such as General Psychology, Research Methodology, Sociology of Education and Pedagogy contribute basic content for its understanding.

This subject is basic in the formation of the graduates of the Pedagogy-Psychology career since the contents taught in it allow understanding the role of the groups and the community in the development of the personality of the subjects of education, so

they become a tool for their management. Its object of study is the psychosocial phenomena expressed in the abovementioned contexts and the theoretical and methodological foundations of their diagnosis and intervention. Its content responds to the demands of the professional profile of a graduate of the Bachelor's Degree in Education in Pedagogy-Psychology.

It is decided on the partial implementation of the methodology in subject 2, which has as time fund 16 h/c, distributed as follows: 4 h/c of Lecture, 4 h/c of the seminar, 6 h/c of practical class and 2 h/c of the partial test. The contents dealt with in this subject can be consulted in the Analytical Program of the course.

In the space of collaboration between the researcher and the other professors of the discipline, who also have the experience of having taught the subject of Group Psychology for the D curriculum (with coinciding contents) in previous courses, a decision is made on the topic to be covered, the actions of the methodology and method to be worked on, and a consensus is reached on the objectives, contents, skills and tasks of independent work to be proposed for the intention of the process towards independent management of knowledge.

The methodology is put into practice according to the stages that compose it and the procedures corresponding to the method in the teaching activities of Topic 2 of the subject above. In this way, it is exemplified how it is implemented, taking as a reference one of the different class typologies developed in the subject. In these teaching activities illustrated, the professors of the discipline and the head of the course participate as observers of the process.

Table 1

	Conference	Seminar	Practical Class
Procedures of the reflective cooperative research method.	Metacognitive disposition. Methodological integration.	Orientation towards cognitive independence.	Systematization of strategies for the application and transfer of contents, based on information exchange, knowledge production, personal involvement, reflection and group cooperation.

Source: Own elaboration.

To assess the effectiveness of the actions in the educational practice, several techniques and instruments were applied, such as Group interviews with teachers, to obtain the teachers' assessment of the actions of the methodology proposed and its application possibilities, and group interviews applied to students, to obtain information about their experiences and experiences when participating in the teaching process of the subject, in which the methodology and the method were applied. Record of experiences: to make notes of the activities carried out, which makes it possible to detail the information on the execution of the methodology.

The main results are obtained from the integration of the results obtained in the different techniques and instruments.

The professors of the discipline who participated in the partial implementation of the methodology agree in assuring that its execution in practice corroborates its validity and that the use of the proposed method favors attending aspects in the teaching of the subjects that were treated in a limited way in previous courses, the reason why it is considered valuable, based on the following aspects:

- It enables the incorporation in the teaching-learning process of the discipline of didactic actions and procedures to guide the student in obtaining knowledge in close relation to the professional model; which enhances the student to develop greater cognitive independence to obtain the professional contents from the subjects and the ability to transfer the contents learned to new professional situations.
- It favors the development of the teaching-learning process of the discipline from the link of the motivational and experiential processes in obtaining knowledge, from the reflection and self-reflection of the cognitive and affective processes that take place in this process, so that it favors the student to show greater motivation for the contents of the profession and personal involvement in the solution of professional problems.

- It favors the conception of a teaching-learning process of the discipline oriented to the development in the student of a responsible attitude and an active, conscious and committed participation in the solution of professional problems posed by the subjects.
- Inclusion of the theme of independent knowledge management in the methodological conception of the discipline.
- Conception of the discipline's academic, labor and research component from those proposed in the methodology and method.

During the development of the experiential pedagogical experience, a positive gradual transformation of the students was observed, which is evidenced in their performance levels in managing knowledge independently. The students refer their interest, motivation and satisfaction with the development of the classes in which the methodology and the method modeled were partially applied; in the criteria issued, they stand out for their originality, initiative capacity and adequacy in the criteria expressed in the answers. They consider that these transformations are achieved fundamentally in the following aspects: motivation towards the activity, greater capacity to use concept maps, schemes and others in the representation of acquired knowledge, facing independent work tasks with greater security and responsibility, creatively using previous learning, greater individual and group commitment to developing their cognitive independence, capacity to develop self-reflective and self-evaluation processes in the performance of their functions within the teaching-learning process, as well as the development of skills for the search and presentation of information.

Therefore, it can be summarized that students move towards higher levels in their ability to apply the contents received in terms of the exercise of the profession independently, creatively and with the capacity to make decisions and be responsible for them.

This is corroborated by the level of development of skills for the independent management of knowledge and the strengthening of qualities related to professional protagonism, which are revealed in the regulation and behavioral self-regulation in the teaching-learning process: the ability to organize their time, responsibility, punctuality, ability to make decisions, skills for group work. In addition, they show progress in the independence to orally present their arguments and their ability to defend them, coherence in the presentation and the correct use of scientific vocabulary. The students also show greater interest in the activities planned in the subjects, a playful attitude towards the knowledge acquired and the skills developed for their application in solving professional problems.

Conclusions

Improving the formative process in universities demands highly qualified professionals capable of creatively facing the problems that arise in the contemporary world. Therefore, it is necessary to seek new ways to facilitate the process of knowledge through independent management.

The methodology for the independent management of knowledge with a professional approach for students of the Pedagogy-Psychology career proves its effectiveness in the results achieved in its partial implementation through the experiential pedagogical experience, superior to the initial state in which the professional protagonism of the students was found, as an expression of the processes of procedural cognitive conditioning, logical-cognitive reconstruction and cognitive regulation, transversality by the investigative method of reflective cooperation; a positive gradual transformation of the students was observed, which is evidenced in their performance levels to manage knowledge independently.

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