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FORTALECIMIENTO DEL DIAGNÓSTICO PEDAGÓGICO INTEGRAL EN LA GESTIÓN DE PROYECTOS EDUCATIVOS PARA MEJORAR LAS COMPETENCIAS DE LOS ESTUDIANTES DE LA CARRERA DE EDUCACIÓN

STRENGTHENING COMPREHENSIVE PEDAGOGICAL DIAGNOSIS IN THE MANAGEMENT OF EDUCATIONAL PROJECTS TO IMPROVE THE SKILLS OF STUDENTS IN THE EDUCATION DEGREE PROGRAM

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Resumen

El presente artículo analiza la importancia del diagnóstico pedagógico en la formación de estudiantes de la carrera de Educación de la Universidad Estatal del Sur de Manabí (UNESUM). La investigación se fundamenta en estudios previos realizados por académicos internacionales, incluyendo proyectos de investigación, tesis de maestría y doctorado. A través de la sistematización de diversas fuentes bibliográficas, se conceptualiza el diagnóstico como un proceso integrado de investigación y educación que aprovecha las experiencias formativas universitarias. Como resultado principal, se identifican las competencias esenciales que los futuros profesionales deben desarrollar para diseñar proyectos educativos efectivos. Estos proyectos requieren la participación de múltiples actores: estudiantes, tutores, profesores, instituciones educativas, familias y el entorno laboral, estableciendo así una red colaborativa que enriquece el proceso formativo.

Palabras claves: competencia profesional, diagnóstico, proyecto educativo.

Abstract

This article analyzes the importance of pedagogical diagnosis in the training of students in the Education program at the Universidad Estatal del Sur de Manabí (UNESUM). The research is based on previous studies conducted by international scholars, including research projects, master's and doctoral theses. Through the systematization of various bibliographic sources, the diagnosis is conceptualized as an integrated process of research and education that takes advantage of university formative experiences. As a main result, the essential competencies that future professionals must develop to design effective educational projects are identified. These projects require the participation of multiple actors: students, tutors, teachers, educational institutions, families, and the work environment, thus establishing a collaborative network that enriches the formative process.

Keywords: diagnosis, educational project, professional competence.

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1. Introduction

In today's global context, education faces significant challenges in its role of training competent professionals who are adaptable to a constantly changing environment. The need to improve the training process in various degree programs has been a recurring theme in academic and political debates, given that the quality of education directly determines the ability of graduates to respond to the demands of the labor market and contribute to social development. The development of skills in Ecuadorian university graduates from the State University of Southern Manabí is a vital goal for raising the quality of learning among professionals in training, taking into account the direction of the teaching-learning process.

However, notable transformations can be seen based on the provisions of educational reforms, which must correspond to each of the contexts in which professional practice takes place, with training being developed from that real-world scenario. This responds to the era of permanent development of science and technology; it also implies an efficient and effective professional practice of

pedagogy and didactics adjusted to the context, becoming the solution to the problems that arise in each space in which they operate.

Ecuadorian academic literature, represented by researchers such as Vallejo (1994), Larrañaga (1999), Ortiz (2009), González (2010), and Petroff (2010), highlights the importance of studying professional training as a fundamental component of human development. These authors emphasize that, in the current Ecuadorian context, it is imperative to achieve technical, technological, and professional training that promotes the country's development. To achieve this objective, they point out that professional training must be based on university processes of excellence, where the role of the teacher is crucial as a facilitator and guide of these training processes.

However, given the realities of the technological and pedagogical context at UNESUM, when applying the factual diagnosis, the results made it possible to determine that there are insufficiencies, limitations, and stagnation in the transformation of the training process for education



professionals, both individually and collectively.

In this regard, in Ecuador, the education system has been subject to constant reforms that seek to align it with the social and economic needs of the country. Higher education in particular has also been prompted to reevaluate its training strategies, especially in areas related to the management of educational projects, which are fundamental to the professional practice of future teachers.

From this perspective, Ecuador's educational policies, such as the Development Plan for the New Ecuador 2024-2025, recognize the importance of training qualified professionals who can lead initiatives in the field of education. However, there are limitations in the educational training process at UNESUM that undermine students' ability to develop the necessary teaching skills.

The term diagnosis, etymologically, comes from the Greek words "dia", meaning "through," and "gnosis", which can be understood as "revealed knowledge." Therefore, an etymological interpretation of the

meaning of the word diagnosis, in the integration of its parts, could be "through revealed knowledge."

Due to the widespread and continued use of the diagnostic category in medical sciences, when looking up definitions in Spanish dictionaries, it can be seen that it is associated with the act of recognizing or distinguishing the signs or symptoms of a disease, or with the classification or determination of the disease made by the doctor based on the signs and symptoms observed in the patient.

For this reason, there is a very strong tendency, especially in the popular imagination, to relate diagnosis to a result. This is not entirely wrong, however, in the pedagogical sciences, the diagnostic category tends to be associated with an investigative process, without denying that the result is also part of it. Diagnosis is a process inherent in all education; it is the starting point for proper educational work, for establishing supportive relationships with students and educators in accordance with their individual and collective needs.

However, this important process has multiple perspectives in higher

education, which are related to the training of the professionals who carry it out, and this does not always favor the full realization of the diagnosis. This is the reason for specifying in this article the essential aspects of the concept of comprehensive diagnosis for higher education.

2. Development

This article contains the necessary reference elements when presenting the results of the systematization: the concept of comprehensive diagnosis in higher education, which is specified in the essential characteristics, functions, laws, and principles of this university training process. Readers' attention is drawn to the fact that the essential change lies in considering comprehensive diagnosis as an educational and research process, that is, as a process of inquiry-explanation-intervention that occurs systematically in higher education, Carnero, M (2020).

The study of official documents is inextricably linked to pedagogical diagnosis, which, in addition to considering students' prior

knowledge and skills, their aptitudes, attitudes, interests, social background, state of mind, health, among other aspects that characterize them, includes a new integrative element. This complements the student's competence by preparing them to efficiently face the professional situations that arise during the management of the teaching-learning process in their areas of activity. Here, it is determined which aspect will be emphasized as the basis for the formation of educational project management competence, without losing sight of the fact that this manifests itself within a system where the constituent parts do not act in isolation and independently.

Both for pedagogical diagnosis and for planning and evaluating Ecuador's educational policies, such as the Development Plan for the New Ecuador 2024-2025, recognize the importance of training qualified professionals who can lead initiatives in the field of education. However, there are limitations in the training process of the education degree program at UNESUM that undermine students' ability to develop the



necessary pedagogical skills. Among these, the following stand out:

Lack of updating of curriculum content, which does not fully reflect the current needs of the educational environment nor take into account the incorporation of new technologies.

1. Lack of interdisciplinary projects that link different areas of knowledge and approach education from a more holistic perspective, promoting critical thinking and innovation.
2. Lack of training for future educators in identifying and addressing the social needs of their communities, which is crucial for the success of projects.
3. Low student participation in community or research projects, which reduces practical experience.
4. Low level of innovation among students, which affects their ability to develop creative projects.
5. Insufficient teamwork skills among students, which is essential in the management of educational projects.

6. Lack of training in communication, leadership, and conflict resolution skills, which are key in project management.

The factual diagnosis also identified the following as the main causes affecting the aforementioned limitations:

1. A one-dimensional approach to competencies focused on cognitive aspects, without considering the social-emotional and technical skills necessary for project management.
2. A lack of teaching strategies that integrate project-based learning, where students take the lead in their own learning.
3. The use of traditional teaching methods that do not encourage innovation and active learning predominates, thus limiting the ability to design effective educational projects.
4. Tendency to evaluate theoretical knowledge rather than the practical application of skills and competencies in educational projects.
5. Poor training in the use of technologies that could facilitate

the planning and management of educational projects.

6. Lack of attention to cultural and contextual particularities that affect the planning and execution of projects, thus limiting their relevance.

The relationship between the limitations and their possible causes indicates that the training process in the UNESUM education program needs to be reviewed and improved in order to enhance the professional performance of its students in project management, as well as in the development of skills for their implementation.

At the international level, skills training responds to global demands, such as digitization and the need for cross-cutting skills, with a focus on mobility and international recognition of qualifications.

In Ecuador, the focus is on improving the quality of technical and technological training, with an emphasis on equity and social inclusion, seeking to better integrate the productive and educational sectors to address local economic challenges. Therefore, at the Universidad Estatal del Sur de

Manabí, the educational model is designed to respond to the local needs of the province, with a methodology that promotes practical and contextualized learning, focusing on key sectors for the economic development of Manabí.

The analytical perspectives of the researchers discussed reflect the complex and controversial nature of the topic. At the same time, they allow us to understand how the process of professional training, although guided by global trends, adapts to national and local realities, responding to specific socioeconomic and cultural contexts.

However, the author considers that there has not been sufficient argumentation for a theory that allows for the planning, execution, control, and evaluation of educational projects in the Ecuadorian university pedagogical sphere, from a perspective that integrates the cognitive, affective-motivational, personality qualities, and metacognitive processes, reinforcing the formation of soft skills, the use of technological resources, as well as the cultural and contextual particularities of the community, in line with the demands of the



UNESUM Education Career Professional Model. This makes it possible to direct the search for theoretical references that serve as a basis for diagnosing the current situation of professional skills training, which in turn allows for the development of a methodology based on a training model for educational project management skills, to promote the professional pedagogical performance of students in the Education Career.

The proposal for this competency, as well as its name, stems from the intention to use the content of educational projects to shape its structure.

In line with the above, the research is based on the conceptualization of the diagnosis for the implementation of a methodology based on a model for training in educational project management, which takes into account the relationship between: innovation, creativity, and the use of transformative methodologies in training; and tradition, which generates resistance to change in traditional methods that are not aligned with new educational trends, contributing to the improvement of

professional pedagogical performance in the management of educational projects.

3. Materials and methods

The study adopts a qualitative approach aimed at understanding comprehensive pedagogical diagnosis in the training of education students at the State University of Southern Manabí (UNESUM). The research is carried out using a documentary and exploratory design, based on the systematization of bibliographic sources and the analysis of regulatory and academic documents.

The qualitative approach facilitates the analysis of comprehensive pedagogical diagnosis as a process of inquiry-explanation-intervention in higher education, using the following methods:

Documentary analysis allows for the review and systematization of previous studies, educational regulations, and institutional documents related to pedagogical diagnosis and skills training. Content analysis focuses on the interpretation of academic texts and theoretical

references to identify characteristics, functions, principles, and laws of comprehensive diagnosis. Additionally, the study of theoretical cases examines experiences documented in national and international research on skills training in educational project management.

The selection of documentary sources is based on criteria of relevance, timeliness, and pertinence in the field of higher education. The documentary corpus includes research from indexed journals, undergraduate and doctoral theses, national educational regulations, and university training models.

Information is compiled through a systematic review of specialized literature and official documents. Data organization is structured using categorization matrices that address: conceptualization of comprehensive pedagogical diagnosis, principles and functions of diagnosis in skills training, and limitations and challenges in pedagogical training at UNESUM.

Information processing is carried out through thematic coding, allowing the

identification of recurring patterns in the sources consulted. The emerging categories relate to the integration of pedagogical diagnosis in the management of educational projects, its formative impact, and the challenges of the teaching-learning process.

The validity of the study is based on three fundamental criteria: the triangulation of sources to obtain a comprehensive view of the object of study, theoretical saturation through the exhaustive review of documents until convergence of findings is achieved, and logical consistency between objectives, theoretical framework, and conclusions.

The methodological design implemented enables a systematic approach to pedagogical diagnosis in higher education, contributing to the development of strategies for training skills in educational project management.

4. Results and Discussion

The results of the research highlight the importance of comprehensive pedagogical diagnosis in the development of skills for managing



educational projects in higher education. Based on documentary analysis and the study of theoretical and regulatory sources, the following findings were identified:

1. Characterization of comprehensive pedagogical diagnosis

Comprehensive pedagogical diagnosis is conceived as a systematic and interdisciplinary process that allows for inquiry,

explanation, and intervention in the education of university students. Its approach focuses not only on assessing prior knowledge, but also on understanding the interaction between students and their educational, work, and community environments.

The key elements identified in the pedagogical diagnosis are presented in Table 1.

Table 1. Essential characteristics of comprehensive educational diagnosis

Feature	Description
Inquiry	Process of gathering information about student development and context.
Explanation	Interpretation of the data obtained to establish a frame of reference for pedagogical training.
Intervention	Application of improvement strategies based on the individual and collective needs of students.
Student leadership	Student participation in the process of diagnosing and planning their learning.
Cooperative work	Coordination between teachers, tutors, the community, and the work environment to enhance professional training.

2. Limitaciones en la formación de competencias en la UNESUM

The analysis of the Education degree program at UNESUM revealed a series of limitations that affect the acquisition of teaching and educational project management skills. Factors that affect the professional performance of graduates were identified, such as

the lack of curriculum updates, the lack of training in innovative methodologies, and the limited connection with community projects.

Table 2. *Main limitations in the development of teaching skills*

Identified Limitations	Cause	Consequences
Lack of curriculum updates	Traditional teaching approach, disconnected from the current context.	Outdated training that is poorly adapted to new educational environments.
Weak training in innovative methodologies	Predominance of traditional teaching methods.	Lack of creativity and innovation in the management of educational projects.
Poor connection with community projects	Limited participation in external professional internships.	Little experience in the design and implementation of projects in real-world scenarios.
Low development of leadership and communication skills	Focus on theoretical aspects without training in soft skills.	Difficulties in team management and pedagogical decision-making.
Insufficient training in the use of educational technologies	Lack of resources and training in digital tools.	Difficulty in integrating technologies into the teaching-learning process.

3. Proposal for improving comprehensive educational diagnosis

Based on the findings obtained, a methodological model for the implementation of comprehensive pedagogical diagnosis in higher education is proposed. This model emphasizes the need to integrate active methodologies, promote links with the environment, and strengthen training in cross-cutting skills such as communication, creativity, and leadership.

Comprehensive pedagogical diagnosis, as a key tool in the management of educational projects, should be a dynamic process that

encourages reflection and self-directed learning in students. The systematization of strategies aimed at improving professional skills will contribute to higher education that is more relevant and aligned with the needs of the current context.

Discussion

Definition and essential characteristics of comprehensive diagnosis in higher education

The analysis focuses on studies and conceptions of diagnosis linked to pedagogical practice, addressed by contemporary authors such as González (2002), Arias (2004), Pérez et al. (2004), Akudovich et al.



(2011), Valle (2012), López (2015), and Arriaga (2015).

These researchers agree on fundamental aspects related to diagnosis in the practice of education professionals. First, they recognize its procedural nature, which facilitates understanding of the educational reality. They also highlight the importance of in-depth inquiry to understand the object of research, as well as its guiding role in promoting the qualitative transformation of the situations identified. Additionally, they point out the relevance of using various methods, procedures, and situations within the student training dynamic.

However, areas requiring further development to improve diagnosis in the pedagogical sciences, especially in higher education, have been identified. These include taking advantage of the interrelationships within and between higher education contexts to understand and transform the object of research; strengthening student leadership in the diagnostic process; promoting cooperative work among participants; conceptualizing diagnosis as a dialectical process of

inquiry-explanation-intervention; and its function as an educational guidance process.

The aforementioned aspects have been emphasized by various researchers such as Carnero (2009, 2018, 2019), González (2016), Meneses et al. (2016), Tarrió et al. (2016), Tarrió (2017), Meneses (2017), Carnero et al. (2017), and Kaparakate et al. (2017), who through their research have contributed to the definition of comprehensive diagnosis in higher education:

"A systematic and objective process of inquiry, explanation, and intervention regarding the social situation of university students' development, which is carried out within the dynamics of their educational processes at the university, workplace, and community, based on student leadership and the cooperative work of all those involved in order to discover individual and/or collective needs, prevent negative impacts, and plan actions that have an impact on the professional training and comprehensive professional

development of graduates and engineers." (Carnero, 2019, p. 106).

This conceptualization highlights transcendental and essential elements. First, it is conceived as a systematic and objective process of inquiry-explanation-intervention.

This implies that each diagnostic instrument and method used allows, simultaneously and interdependently, to obtain relevant information, verify its validity, reconstruct knowledge about higher education subjects and contexts, and promote transformation processes based on individual and collective needs, as well as existing social demands.

Inquiry, specifically, is conceptualized as the process of searching for and compiling information, data, facts, and events that facilitate the reconstruction of knowledge about students and their higher education contexts, emphasizing the historical trajectory of their development.

The explanation is defined as a reconstruction of knowledge about students and their higher education contexts, based on the historical dynamics of their development,

supported by the rigorous use of scientifically proven methods and subject to a set of interdependent indicators, validated in practice as representative of reality.

Intervention is presented as a helping relationship, an educational act, an influence, to raise awareness and stimulate processes of change and transformation in students and their higher education contexts, considering their potential, needs, and social demands.

Systematicity implies interdependence, unity, and simultaneity between inquiry, explanation, and intervention, which are inseparable in their practical application, as well as the continuity that must characterize this process in all activities that take place in and between higher education contexts.

Objectivity refers to the rigor with which the comprehensive diagnosis must be carried out, as it must reflect that part of reality subject to the process because of a system of indicators duly validated as representative of it, and the use of scientific methods proven in practice.



The social situation of university students' development is a part of reality that can be researched. In this sense, it is of research interest to examine the unique and unrepeatable way in which each student, based on their level of development, potential, and experiences, perceives, assimilates, and internalizes the influences and demands that each higher education context exerts on them. How these influences are integrated within the university community determines how each student relates to others and to their academic activity, assimilates, and internalizes the influences and demands that each higher education context exerts on them, and how these, in their unity, determine the way in which each student relates to others, to their academic, work, research, and outreach activities, and to themselves.

Another distinctive aspect is the leading role played by students in comprehensive diagnosis, meaning that, in addition to knowing that they are subjects of the process, they are actively and responsibly involved in the exchange of information, its assessment and analysis, and the

determination of actions to achieve higher levels of development in line with their individual needs and the social demands posed by higher education contexts. Cooperative work or cooperation translates into commitment, involvement, and responsibility on the part of all those involved in the search for and exchange of relevant information, data, facts, and events, in the analysis, organization, and verification of this information, and in the planning and execution of objectives and actions to enhance the comprehensive professional training and development of university students.

Finally, the definition specifies the aims of comprehensive diagnosis, which are to identify individual and/or collective needs, prevent problems, and plan actions that will have an impact on the comprehensive professional training and development of university students who, in a few years, will obtain a degree in education.

This aspiration makes it possible to define the functions of comprehensive diagnosis, which will

be explained below, followed by the laws and principles.

Functions, laws, and principles of comprehensive diagnosis in higher education

There are many definitions that express the concept of function, but in essence, they all reflect that functions constitute a type of activity dominated by a set of operations and management actions performed by the subject, through which the objectives of the system in question can be achieved. (Valle, 2007).

In this sense, it is assumed how comprehensive diagnosis operates and impacts the system of relationships established in and between higher education contexts for the comprehensive professional training and development of future education graduates.

Hence, three interdependent functions are identified, given the essential characteristics of comprehensive diagnosis explained above:

- Heuristic function: this is fulfilled in the systematic and objective discovery of issues relating to the interrelationships that occur in

and between higher education contexts, as well as between educators and students, and also in the reconstruction of knowledge as a dialectical path of successive approximation to the truth, based on the system of indicators and the methods and instruments designed for this purpose.

- Preventive function: this is carried out by warning, forecasting, and raising awareness through systematic exchange between those involved, to prevent possible impacts on processes promptly, as well as to take advantage of potentialities and strengths to promote the comprehensive professional training and development of university students.
- Projective function: this takes the form of planning individual and collective objectives and actions in the short, medium, and long term, always and in all activities involving comprehensive diagnostic actions, always to enhance the processes of comprehensive professional training and development of students.



The "fundamental genetic law of development," formulated by Vigotsky (Arias, 1999), is considered itself the fundamental law governing the diagnostic process:

Everything that has been formed or is in the process of formation at the intrapsychological level can be expressed and understood through the interpsychic (assignment of activities, tasks, interviews, experimental situations, observation of the product of the activity, and communication with the subject) (p.152).

By defending the idea that intervention is an intrinsic part of comprehensive diagnosis, understood as a helping relationship that is offered according to the needs of each individual or group to stimulate development processes, the second law governing the comprehensive diagnosis process is formulated: "The development achieved by each individual or group and their potential can be promoted and stimulated through the means used to determine it (assignment of activities, tasks, interviews, experimental situations, and communication)" (Carnero, 2019).

The integration of both laws leads to the reaffirmation that everything that occurs in the system of relationships within and between higher education contexts can be used to investigate, explain, and intervene systematically and objectively, to discover individual and/or collective needs, preventing adverse effects, and planning actions that have an impact on the professional training and comprehensive professional development of education graduates, hence its importance in the training of educational project management skills.

These laws highlight the dialectic of the comprehensive diagnostic process, where real practice is its beginning and end. In it, the process is developed, investigated, explained, and intervened in a systematic and simultaneous manner as a dialectical path to approaching the truth and as a way to enhance the development of processes and subjects.

The principles assumed are an integrative synthesis of those proposed by Carnero (2009) in his doctoral thesis and have been taken up and enriched in doctoral research

by Meneses (2017) and Tarrió (2017).

These authors agree in proposing principles for student assessment based on the framework that guides them: the historical-cultural approach. Hence, we start from the principles they have formulated to propose those that should govern the comprehensive assessment process in higher education, in accordance with the conditions and requirements of this subsystem of education, that is, based on its contextualization.

Principle of cooperation: The diagnosis is made based on the committed and responsible participation of all those involved in the students' educational processes, essentially the school's leaders and teaching staff, families, university tutors, and workplaces where internships are carried out, community factors, and the students themselves, in a coordinated effort by tutors, guidance counselors, and year heads.

Everyone participates, gets involved, and commits themselves, at the request of the tutor, the guidance teacher, and the year head, in the investigation-explanation-

intervention, from the application, processing, analysis, and interpretation of comprehensive diagnostic methods and instruments, in the characterization of the student's social development situation, in the process of its analysis and the simultaneous development of individual and collective plans and projects to improve it.

Everyone contributes to monitoring and controlling compliance and to strengthening the training processes to achieve this. The comprehensive diagnostic process enables us to gain a deeper understanding of each student's educational reality, and one keyway to achieve this goal is through the committed and responsible participation of all those involved in the process.

Principle of dynamism: In this sense, visits to classes, student group activities, year and degree programs, work placements, research, community, and home activities, and in general, all activities in which educators and learners interact, offer the possibility of observing their behavior, analyzing their interventions, their assessments, their projections, evaluating their



learning processes and results, understanding their bodily, gestural, and emotional expressions, asking them questions, and conversing with them.

This is the essential path for the comprehensive diagnostic process, which also allows for helping in the right direction at times when complex and difficult situations arise that educators and learners have to face, as an appropriate way to enhance training processes and stimulate comprehensive professional development processes.

Every moment of interaction with those involved becomes part of the diagnostic process and should be used optimally for that purpose. This does not mean that it is not necessary or advisable to use specific diagnostic tests or techniques to obtain important information and explore it in greater depth for explanatory and interventional purposes.

In higher education, spaces for intersubjectivity incorporate the institution where students carry out their work placements. These processes are distinguished by their professional nature, problem-solving

approach, and transformation of the social environment, which gives them different characteristics that promote an interventional diagnostic process that guides the training of professionals who respond to the model demanded by Ecuadorian society.

Principle of comprehensiveness: this involves getting to know the individual in the context of higher education and throughout their life. It is essential to understand their past and how it has affected them to understand their present and be able to plan actions that will lead to the satisfaction of their individual needs and the fulfillment of social demands.

It is not enough to know their characteristics and behavior; it is essential to understand and explain their interaction with the environment, how they perceive, face, and resolve life's contingencies, and how these affect them, based on an analysis of their past and present history.

This allows us to determine what resources they must successfully navigate the process of their professional training and the help they may need to achieve the

objectives required of them by the professional model, based on their self-improvement through the integration of the university, the family, the center where they carry out their work placements, and the community.

Furthermore, the idea of understanding and enhancing the development of individuals, groups, and social institutions from their complexity, that is, from the indissoluble unity between the historical, psychological, biological, social, and cultural aspects on the individual and collective levels, is fundamental to the realization of this process.

The collaboration of all participants in the diagnostic process is a way to achieve greater precision and objectivity in the knowledge and transformation of the object of this process, as well as a positive impact on all those involved. It also provides all the data for the formation of competence and the direction of educational projects with a greater level of precision.

The use of a system of scientific methods, instruments, and procedures in accordance with the

material conditions, the level of preparation of the participants, the characteristics of the subjects, groups, institutions, or processes under study, and the system of interdependent indicators that respond to a unit of analysis to organize knowledge, constitute a basic aspect for the realization of this process and the foundation of its comprehensiveness. The above leads to the idea that comprehensive diagnosis is essentially an educational guidance process, as it enables and requires the assistance of education professionals in the necessary direction and at the precise moment when their action is needed to facilitate the fulfillment of the purpose of education, with the intention of achieving coherence in the educational actions carried out in the different contexts of higher education and stimulating the development of all those involved.

Principle of scientificity: The comprehensive diagnostic process is a successive search for the information needed to reach the most accurate conclusions possible about the subjects. All of this requires the information available at a specific moment about the characteristics of



the students. Before undertaking the study, those involved should orient themselves in terms of what they are going to study, what they are going to test, and how they are going to do it; that is, what methods and techniques they will use, which should be in line with scientific advances in the field of pedagogical and psychological sciences and the particular characteristics that are appreciated in the comprehensive diagnostic process of the student and the group. In higher education, the aspects to be diagnosed are determined based on the demands that society places on future graduates. The methods and techniques must be selected considering the social development situation in which these students find themselves: on the threshold of adulthood, in a process of professional training in which they determine their place in life and towards which they assume an attitude that may or may not facilitate their comprehensive professional development.

The data obtained from the study must be interpreted with the utmost objectivity. To this end, they must use the scientific method in the search, organization, and

interpretation of data; they will formulate working hypotheses about the possible causes of the characteristics observed and will seek and examine data that may support or refute these hypotheses. They should also ensure that their conclusions are justified only when the evidence, from various sources and using various methods, supports or refutes the hypotheses, which in turn will form the basis for the construction of the conclusions of the comprehensive diagnosis at a given moment: the comprehensive characterization.

The aspects discussed above require methodological specificity, an ordering into stages and phases of the actions to be carried out by professors, students, and other educators in the various higher education contexts participating in the comprehensive diagnosis, as well as the methods, techniques, and instruments conceived based on the indicators determined for this important process. To this end, we recommend consulting the article, "Proactive conception of educational work at the University" by Carnero and Arzuaga (2019).

5. Conclusions

Comprehensive diagnosis in higher education is conceived as a research and educational process that requires scientific rigor as well as student involvement, cooperation from professors and other educators in different higher education contexts, and the use of the many activities that students engage in during their professional training, taking into account human nature in historical, biological, psychological, social, and cultural terms, which must be integrated in such a way as to enable understanding and guidance from an educational perspective of the processes of comprehensive professional development of students during their time at university. This will be a fundamental basis for the training of future graduates of the Education degree program in the management of educational projects.

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