



## APLICACIÓN DE LAS ESTRATEGIAS Y TÉCNICAS DIDÁCTICAS EN EL PROCESO DE ENSEÑANZA-APRENDIZAJE EN LOS ESTUDIANTES UNIVERSITARIOS

Lic. Carmita de Lourdes Altamirano Alvarez<sup>1</sup>., Lic. Alex Fabian Andino Jaramillo<sup>2</sup>.,  
Lic. Paola Estefania Calderón Ribera<sup>3</sup> and Lic. Paola Estefania Calderón Ribera<sup>4</sup>

<sup>1,3</sup> Educational Unit Fiscomisional “San Vicente de Paúl”, Riobamba, Chimborazo, Ecuador

<sup>2</sup>National Police of Ecuador. Special Operations Group. Ecuador

<sup>4</sup>Pedagogy Mention Intercultural Teaching. Riobamba, Ecuador

### ARTICLE INFO

#### Article History:

Received 11th January, 2018

Received in revised form 7th

February, 2018

Accepted 9th March, 2018

Published online 28th April, 2018

#### Key words:

teaching, learning, pedagogical practice,  
thinking, applications

### ABSTRACT

The present work is the result of a series of investigations that have been analyzed aimed at improving the teaching - learning process of university students. The central idea of this project is to identify the applicability of strategies and didactic techniques that strengthen the educational process in the student context. To do this, we proceeded to identify the contents with which we work in the various subjects to subsequently contextualize them with the student media. The importance in solving situations that are linked to them as a central aspect of the teaching - learning process; since, it is the base for the study of different careers. These processes form a logical and deductive context, people apply them in different situations, the problem and the solution directly depends on the ability to observe, extract information, reasoning ability, etc. It should not be ruled out that society has unconsciously intervened negatively in the learning process of various subjects, since the person who hears about didactic processes experiences feelings of partial ignorance or responds with absurd arguments, such as: incomprehensible empirically abstract. In this sense, the perception that students have in the classrooms or in the context through which they move daily should not be dissociated.

The objective to be achieved with this research is to analyze the application of teaching strategies and techniques in the teaching-learning process in the student context. To do this, we proceeded to identify the contents with which they work in various subjects including curricular meshes to subsequently contextualize them with the current environment. Since educational institutions must guarantee society that the professionals who are trained there are able to function effectively in different fields of work, but the constant questions that students ask are: Why is the teaching process? Do you find it in all the subjects or contexts? What is the objective of mastering these processes if we are not dynamic teachers? What is the use of studying and knowing these processes? This is the importance of improving the teaching - learning process of university students by framing their study to the resolution of situations related to their environment.

Copyright © Lic. Carmita de Lourdes Altamirano Alvarez *et al.* 2018, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

## INTRODUCTION

Nowadays, society is overly dependent on technological and computer-related advances to achieve significant learning, causing students to lack the skills to relate, communicate and contribute to a good life, both personally and collectively, within the community in which they live, study or work. Education has been an

issue addressed through time and space, in the course of history has been given a marked situation in terms of the teaching - learning process, since students have difficulty in building complex concepts and poor visualization. Regarding the applicability at a contextualized level in this field of education. The development of competences to establish, analyze and criticize real situations is frequently considered relevant in the last years of secondary school

or after it. The teachers analyze that the resolution of didactic processes, serve as a practice within the teaching - learning process, since it relates the real world and the cognitive process, this type of activities is very useful for any level of education. (Blum, 2003).

Numerous investigations confirm the high rate of students who fail in various subjects due to low academic performance according to Badano, Boleas and Dodera (1999); Bolea, Bosch and Gascón (1998); Corica and Otero (2007); Scotland (2003); Otero, Fanaro and Elichiribehety (2001), expressed both in the knowledge, skills and abilities that students actually acquire, and in their assessment of this problem.

Faced with this situation we question why the aforementioned "failure" occurs? Alonso, Gallegos and Honey (1999). In other works Corica and Otero (2007) emphasize that students argue and claim that the main task of the teacher is to explain the contents in the most detailed way possible, so that they can "understand" and "learn". The teacher would have the leading role in the teaching - learning process and on their shoulders would fall the responsibility of the students to learn or not. (Hernández, 2018).

The objective to be achieved with this research is to analyze the application of teaching strategies and techniques in the teaching-learning process in the student context. To do this, we proceeded to identify the contents with which we work in the various subjects to later contextualize them with the medium. Since higher institutions must guarantee to society that the professionals who are trained there are able to function effectively in different fields of work, but the constant questions that students ask are: Why is the teaching process Do you find in all the subjects or contexts? What is the objective of mastering these processes if we are not dynamic teachers? What is the use of studying and knowing these processes? This is the importance of improving the teaching - learning process of university students by framing their study to the resolution of situations related to their environment.

That is the importance of improving the teaching - learning process of university students, framing their study to solve problems related to their environment.

"Motivating students and getting them to improve their attitude towards cognitive education and its learning is one of the main responsibilities of the teacher of today and is one of the factors that determine the success or failure of teaching" (Bolea , Bosch and Gascón, 1998).

The modeling of real situations is a task that requires a lot of effort, because it is a crucial element in teaching in a contextualized way, for it the teacher aims to place a context where students can work with a phenomenon or situations of daily life that Be familiar with them and allow them to put their knowledge into play in a modeling process.

Problem solving involves the interaction of several cognitive processes, such as the ability of the student to transform the elements of a problem from one modality to another; this refers to the transformation of colloquial

language to systematic language or expressions without solving the problem yet.

According to the United Nations Educational, Scientific and Cultural Organization, in the Planning Guide for Information and Communication Technologies in Teacher Training (UNESCO, 2004), it states: the fixation of what has been learned is in general, 3% for what you hear, 40% for what you see, 50% for what you see and hear, and 70% for what you do, that is, what you see Take direct part Education where the student is a pacifist in the intellectual, does not agree from any point of view for the progress of the people. Current teachers must change their techniques and methods so that the teaching-learning process is open, giving students the opportunity to present their own point of view, being critical, analytical and autocratic (Campaña, 2018).

According to Lorenzo, Blanco and Guerrero (2005) the repeated history of failures leads students to doubt their intellectual capacity in relation to tasks and come to consider their efforts useless, manifesting feelings of helplessness or passivity.

However, the teacher constantly struggles to be attended and understood in the classes, so it is forced to use different learning environments where their techniques, methods and educational tools vary according to the topic to work. For this reason, one of the alternatives is the use of virtual tools as a pedagogical means to improve the learning process.

The Secretariat of Higher Education, Science, Technology and Innovation SENESCYT (2017) has been generating great changes in education, which also entails changes in institutions and teachers; The latter must be more human and dedicated to their vocation, so that the students are the beneficiaries.

Given the commitment to ensure the quality of education, it is determined that elementary knowledge must penetrate our teaching and education from an early age. In relation to the current society there are still the strangest prejudices. Some say that only people of great understanding can engage in heuristic understanding; they also affirm that for this it is necessary to have a "mechanical memory" that allows to remember the definitions, etc. (Castro, 2018).

So it cannot be denied that there are brains with great inclinations towards one or another mental activity, but neither can it be said that there are normal brains, absolutely incapable of perception and complete assimilation of the indispensable cognitive knowledge, at least in the magnitude of middle school programs. The results are safe, only in those cases when the introduction in the field of education takes place in an easy and pleasant way, based on examples of the daily environment, selected with the corresponding reasoning and interest.

Problem solving based on real situations is an interesting way to develop thinking. It is unquestionable the need for our students to learn to do independent work, learn to study, learn to read, learn to think, as this will contribute to their excellent training. It is essential to teach and exercise the student so that by itself and through the

correct use of cognitive language, to analyze, compare, value, conclude, and of course the learning in your mind is durable. All these skills the student will acquire as the teacher is able to develop, but for that it is necessary to perform a systematic, conscious and deep work, so that they feel the need to acquire the contents themselves and really can do it.

We rarely find situations in textbooks that do not depend so much on content, but on the contrary, depend more on deductive reasoning. However, it is very difficult to establish what kind of problems is or not reasoning, because to solve any problem you have to reason despite this there are some problems in which reasoning predominates, being the theoretical content that is needed very elementary, in most cases, with a minimum knowledge, is reasoned correctly, it is enough, to solve these problems. In order to awaken interest in readers, problems are proposed on issues of daily life and practice. Next, it is detailed in a generalized way how various contents related to the current environment are linked.

Education is a preparation for a good life. It translates into happier and less pernicious lives, then a great opportunity has been sadly missed. (Purple, 2005). This education can be given to any of the three levels that we have commented:

**Level 1** .- are things that every citizen should master before allowing you to vote. Without a minimum capacity to discuss, understand and analyze what others say, how will you make decisions that will affect others?

**Level 2**.- is for professionals who use logic. It serves in law to have a logical theory of argumentation, in computing logic circuits are crucial, in linguistics it is convenient to analyze the logical deep structure. It is an instrument to work your field of interest.

**Level 3** .- is for those in love with logic, willing to spend years of their lives to understand what are the laws of right thinking. A minimum dose of vitamins is not enough for those impassioned; They need to go through the whole bottle.

This is a problem of direct proportionality between different didactic approaches, where you have to find out an unknown quantity that forms a proportion with other quantities diagnosed, as well as knowing which processes are necessary to solve it and perform them correctly. Only the concrete result of the problem is valued; the procedures carried out to achieve this result are not valued.

Chance is present in everyday life in many contexts in which there are notions of uncertainty, risk and probability, for example, the weather forecast, medical diagnosis, study of the possibility of taking life insurance or making an investment, evaluation of a student, etc. Not only professionals, but any person must react to messages in which these elements appear, make decisions that may affect them, make judgments about the relationship between events or make inferences and predictions. (Gigerenzer, 2008). In these situations, probability is not a tangible property, therefore, objective of the events that affect us (such as weight, color, surface) but a perception or degree of belief in the likelihood of the person

assigning the probability on plausibility of occurrence of the event (which will occur or not) (Batanero, 2015).

Teachers must generate strategies that allow linking teaching-learning with the student's context, which leads to an improvement in their knowledge and apply assertive pedagogical practices, didactic processes, techniques and active methods so that students get the programmatic content without difficulty and motivated to be more competent.

### **Development**

#### **Application of Teaching Strategies**

Studies of social representations (SR) in education respond mainly to environmental education, gender studies, curriculum and different educational reforms. Such research has privileged the role played by the teacher as the main mediator between the formal specifications of the curriculum and pedagogical practice, while the role of the student has not been sufficiently addressed. (Martínez, 2007).

According to Martínez (2007) there have been studies of social representations that some actors of the educational process have about learning and teaching, they found that university students represent significant learning as:

1. Analyze, reason and understand.
2. Acquire skills.
3. Appropriate knowledge.
4. Achieve new knowledge.
5. Relate theory and practice.

In other terms, social representation or the applicability of a subject is a practical knowledge. By giving meaning to events and acts that end up being habitual for us, this knowledge forges evidences of our consensual reality, because it participates in the social construction of our reality. (Jodelet, 1986).

In this way, the use of the teaching - learning process links the teacher to develop "cognitive systems in which it is possible to recognize the presence of stereotypes, opinions, beliefs, values and norms that tend to have a positive or negative attitudinal orientation". (Araya, 2001). Cognitive knowledge allows us to investigate the processes and laws of nature, society and technology, as well as solve practical problems that arise in daily life in these fields, that is, by relating objects to situations in context they make them functional. The study of the educational process along with the cognitive language contribute to the intellectual formation of the individuals, these two areas of knowledge are the main indicators of the intellectual development of the students, on the one hand the language develops the capacity of oral expression, and for the On the other hand, the development of skills and abilities develops their capacity for reasoning, "on the other hand, due to their character as cognitive tools, they represent a common instrument of work for the rest of the disciplines", and because of their practical use, learning becomes necessary for a better development in life.

Teaching contributes to cognitive development in general, its study requires the analysis of basic cognitive activities, as Duval (2017) states: "Learning constitutes, of course, a

privileged field of study for the analysis of fundamental cognitive activities such as conceptualization, reasoning, the resolution of real situations, and even, the comprehension of texts "(page 13); there are in addition to these, other processes that take place during cognitive learning, such as those proposed in the curricular guidelines for education; the communication, the modeling and the elaboration of procedures.

Rico (1995) recognizes that the importance of didactic study responds to three types of arguments; the first is that it develops the capacities of reasoning, of generalizing, and of making abstraction; these skills are enhanced during the teaching process, so their study has a high level of training with objectives always linked to the development of cognitive skills.

We can say that the educational process is a complement to all the other spheres, since its development has managed to expand its field of action, needing to solve problems that arise in daily life and practice, in order to obtain considerable savings of effort and time, of the relationships that she researches in different fields.

It is therefore essential to ensure that students understand that education is important if it is taught correctly and with proper guidance and guidance, as it is essential in the development of science and technology, but also contributes to the training of responsible people and able to perform any position or occupation. There are various situations in everyday life as students, which contain concepts through which it will be possible to develop various activities since without realizing them we execute them day by day.

### ***Trends in the Application of the Educational Didactic Process***

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2016) mentions, "Education plays a fundamental and transversal role in the lives of people, as it is a tool that helps create more just societies, fair and tolerant. The 2030 Sustainable Development Agenda recognizes this, by including not only Objective No. 4, which establishes "guaranteeing an inclusive, equitable and quality education and promoting lifelong learning opportunities for all", but rather give it a prominence that crosses all the other ODS.

From a broad point of view, there is a consensus that indicates that the teacher is an important factor in the learning process in a student. There are several contributions to the teaching - learning model, which provide didactic proposals for teachers on the knowledge, skills, abilities, principles, values and attitudes necessary for students to learn to develop their potential.

### ***The Curriculum***

Based on the importance of designing dynamic, modern curricula that conform to academic conditions, with the aim of creating a training plan that facilitates teacher interaction in a real context and social commitment. The importance of the curriculum is derived from the need as specialists and teachers for having an analytical framework that allows to understand the variety of levels involved in the Educational Systems and in general, in

education. Because of this we can plan and intervene in the teaching and learning processes. (Jacobs, 1991); (Cebrián, 1997).

If we carry out a historical research on the development of the curriculum it will be possible to observe that, in some way, it responds to the historical context in which it has been developed. At present, for those who study the subject it is very simple to question the way in which the curriculum materialized and identify the errors that have become present in the teaching.

So, we can understand that the curriculum evolves with the understanding of historical, and current phenomena. (Jacobs, 1991); (Cebrián, 1997).

If we carry out a historical research on the development of the curriculum it will be possible to observe that, in some way, it responds to the historical context in which it has been developed. At present, for those who study the subject it is very simple to question the way in which the curriculum materialized and identify the errors that have become present in the teaching.

So, we can understand that the curriculum evolves with the understanding of historical, and current phenomena. (Jacobs, 1991); (Cebrián, 1997).

According to Jacobs (1991) and Cebrián (1997), the curriculum through a training plan aims to plan and manage education in children, adolescents and adults in which the difficulty of the learning and teaching processes must be borne in mind. Quality and correct formation of individuals through the dissemination of "academic values" and the demand for cognitive knowledge.

### ***The didactic***

#### ***Teaching must be viewed in a way that many can understand***

According to Domingo (2005) the didactic is defined as "the discipline that explains the processes of teaching, learning in accordance with the realization of educational purposes." It links activities with moral and ethics and seeks to know how to teach that study and thus give results, where it demonstrates specific topics to achieve new and understandable knowledge in mathematics.

In order to achieve an integral formation of students' personality, it is necessary to develop the capacity for self-improvement, reflection on the contents learned, the way in which one learns, communication and the generation of ideas; as well as the development of attitudes, skills and competencies that allow solving the scientific and social problems of their profession, in a coherent and appropriate manner, which would reflect the maximum expression of educational quality (Abambari, 2015).

This formative purpose, according to Dominguez (2014), is a difficult task to carry out, since it implies developing in them an academic and research preparation, in terms of knowledge and skills, and also, developing a real personal commitment, channeled into a job. Responsible and efficient, in order to contribute to the solution of the needs and problems that must be faced in correspondence with the economic and social reality of each context of professional performance.

### ***The Research Teacher***

The teacher as a researcher is committed to make a change with the student interaction with this must be dynamic and demanding, using all means you have, including technology, this is to motivate them and thus be able to organize and lead large groups to inculcate knowledge.

According to Jaspers (1946), the research teacher has the option of putting the student in contact with the process of knowledge, that teacher who researches, teaches with new techniques as this helps development and guides the training of their students. It assumes great responsibilities, encourages students to be more creative and critical on important issues and also to search for solutions.

### ***Pedagogical Mediation***

Pedagogical mediation is used as a great tool for learning, in order to improve and facilitate communication between them, this method can be done in two ways. The place where the activities take place must also be taken into account since it fulfills an important role for the teacher.

According to Álvarez (2001), the following should be taken into account when planning teaching:

Introduce an appropriate methodology that maintains the interest of the students, the point is to promote commitment to the construction of knowledge and learning, as active processes.

Encourage the relationship between students so that there is good social communication, for this exchange of information is required in order to improve their knowledge.

### ***The Evaluation***

Evaluating is understanding and focuses on the learning process which provides the student's form, also addresses the teacher of the class to strengthen qualities such as self-confidence, self-control, autonomy and guide the progress of all students where a degree of rivalry between the group.

For Stake (2006), "evaluation always consists of a determination of merits and defects, sometimes it is much more, but its essential function is to establish the merit of something that is its first purpose that is its definition. That is the condition. "Finally, as can be seen, the evaluation can be conceived from different angles and perspectives.

On the other hand, Santos (1996) analyzed the cultural characteristics that a specific way of evaluating schools generates.

The path of improvement: the change in the paradigm as professional contexts where teachers develop their work must assume a philosophy in which an intense and deep work is possible away from efficient obsessions. (Santos, 1996).

Critical evaluation requires a greater participation of all the elements that intervene in the evaluation process. (Adelman, 1987).

For the school evaluation to advance from technological positions to critical positions, it has to sit down in the functions that I consider most relevant. (Santos, 1993),

"Designing an evaluative investigation is an art". (Cronbach, 1987).

This type of education occurs in extracurricular environments and provides experiences and motivations that can be the basis for further learning. Specifically in science, technology, informal learning experiences help to give a sense of fun and additional astonishment to a better understanding of the concepts, issues, and thought processes in technical and scientific disciplines. Informal scientific education is self-directed, since each trainee chooses what and how to learn based on their needs and interests. (Vázquez and Manassero, 2007).

### ***Current Panorama of Education***

It requires a leadership advance in which it is possible to obtain new educational research.

It is necessary that the study be detailed and agree to verify study strategies, examine various cultures and times, as well as social and participatory aspects, where a fundamental role in practice is required with respect to development for the growing countries of education.

1. Who is intelligent knows that he does not know everything, reflects and analyzes before answering the evaluation.
2. With time you can get to achieve great things, it's just a matter of waiting and taking advantage of time.
3. Whoever says it is difficult will never go out to solve difficult problems favorably.
4. There is only one thing that makes a dream impossible to achieve is fear of failure.
5. Intelligence is the ability to adapt to change.

The reasonable man adapts to the world, the unreasonable man persists in adapting the world to himself, therefore, all progress depends on the unreasonable man becomes positive trait art and frequent changes that help restore that element. The way of doing and practicing in an efficient and enriching way must be determined "the school fulfills through the way of the evaluation an ideological function of the state". (Álvarez, 1995).

The school contains doctrines that lead to understand situations and explanations, textualizing a process where teaching and learning evaluate the conditions and results of the system, raise questions for measurement when evaluating teachers, especially for students.

### ***Best practices. New Standards for Teaching and Learning***

When we talk about best practices in teaching, we refer to serious, thoughtful, informed, responsible and updated teaching. Best practices are used to describe the updated and respectable compact work that is used in a field.

If a professional applies the best practices, he is aware of all the benefits of the new knowledge he can offer his clients. We believe, and try to prove, that progressive principles in education can and should be those that govern classroom practice that offers the hope of generating the most difficult and lasting reform that has taken place in the school system. (Zemelman, 1998).

On the best practices in each of its categories we can say that the teaching problems in the current classroom affect the academic community as well as society in general, as well as the best practices acquire greater importance, establishing that these categories and their practices can be replicated in the relevant country.

If a professional follows the "best practice" indicators, he is a scholar of new research and constantly offers his "regulars" all the advantages offered by new knowledge (Zemelman, Harvey and Arthur, 1998).

It has been said over time that the area of education has not evolved much, at least it has not evolved much like other areas. Although if this were not true, if teachers take ideas seriously, trust research, and believe in the plausibility of human progress, then our professional language should encourage and abide by the advanced practices that are helping progress in this area. For this reason, the authors decided to use the term "Best Practices" and the concept it implies as a symbol of serious, reflective, responsible, informed and updated teaching (Zemelman, Harvey and Arthur, 1992).

### ***Didactic Dimension of Teaching and Learning Processes***

In the search for this research, we take into consideration that the vision of Professor Bruno D'Amore of the University of Bologna, (D'Amore, 2007), who speaks about the idea of the existence of a new meta-didactic form is of great importance. In teaching and learning. The researchers affirm that the class is a type of micro society, in which there are interactions between students and teachers to build and disseminate knowledge in a didactic way in which there is teaching by both parties.

### ***For the Study of the Didactic Processes Five Possible Levels of Study or Types of Analysis are Proposed***

- The first level talks about the elements of the learning process as a practice in which its parts are: an agent, a means, actions aimed at resolving a problematic situation as well as the goals, intentions and values that are included within the process.
- The second level of analysis affects the study of the objects and processes that guide the different practices.
- The third level describes the interaction and configuration patterns on the didactic and cognitive trajectories of the students.
- The fourth expresses the social phenomena that occur in teaching and learning processes by identifying the rules that govern the process.

These four points are oriented towards an explanatory descriptive didactic, so they enunciate a fifth point that allows assessing the didactic suitability of the processes in order to identify those that lead to improvements and changes.

Academic researches to study tell us that the processes of teaching and learning can be considered from an approach oriented to phenomena of social and cultural nature for which they also establish the existence of a set of rules that control any didactic contract, where the Professor is in charge of selecting problematic situations that improve learning and presents them to students, in order to get

involved in their resolution on their own; If the students are faced with problems for the generation of solutions, the teacher will enter to mediate giving guidelines or regulations that allow to advance in the resolution process, finally the teacher must recognize when the appropriation of knowledge by the students takes place.

### ***Elements of Information or Knowledge that are Above the Elements or Processes Themselves, Among Them we Find***

- Methods, structures and organization of knowledge
- Access to knowledge
- Production and operation modes
- Didactic knowledge.

The norms already mentioned are not only followed in the moments of interaction between teachers and students, its scope includes the phases of curricular design and evaluation. The rules regulate the work of the teacher, the work of the student, the use of technological resources and the interaction between teachers and students.

The regulation includes the set of epistemic rules that regulate the activity that can be developed in a given institution. It is considered that to describe the activity it is necessary to contemplate aspects such as: the language, the problematic situations, the concepts, the procedures and techniques, the propositions, properties and affirmations as well as the arguments; all these elements form what are called epistemic configurations.

At the last upper level of the epistemic configurations are the meta-systemic norms, which allow to determine macro aspects such as: What is to solve a problem? or when is a problem considered to be solved?

The target configurations regulate the valid practices as well as those that are considered wrong and that are generally caused by the summative evaluations that cause the student to try to adapt to a system in which he / she is not fully involved.

Finally, they consider that the teaching and learning processes should be guided to the achievement of training objectives that include valuable practices for the training of the students and this also requires the appropriation of knowledge about the cognitive dynamic strategies and the didactic knowledge that contribute positively to such training. The objective of didactic research in this field should be to clarify the role of meta knowledge, to discriminate its different types and functions in the study processes and to avoid, as far as possible, undesired effects of some deviant practices and metapractices. Education is essential in the life of the human being since it generates more just and tolerant societies.

Pedagogy is the queen of all sciences, it intervenes not only in schools or at work, but in the daily life and practice of each person, since there are various situations in which we apply epistemological concepts to develop various activities that without realizing we execute daily. The knowledge allows solving practical problems that are presented daily, also develops the ability to reason, so their study has a very high level of training that is associated with the development of skills.

There are elements that are fundamental in the teaching-learning process since it facilitates the level of understanding in university students and also facilitates teaching to teachers.

The curriculum is one of the fundamental elements in the teaching process, since it manages and plans the education of students through quality and correct training, taking into account the levels of difficulty that this paradigm has. The didactic is also a fundamental part of this process, since it looks for the way to teach the subject by means of more creative, new and understandable methods for the students, thus, motivating them and awakening their interest in diverse areas. The research teacher is a very important factor in teaching, this assumes responsibility motivates the creativity of their students, in addition, is responsible for interacting with students in a dynamic and demanding using different means for better understanding by their students, with the aim of instilling new knowledge and encouraging them to search for solutions.

Finally, we consider that, the teaching - learning process is of great importance for the correct formation of the students and for the development of their abilities and abilities, besides being present in practically all the fields, the majority of works that today in day they are carried out have cognitive knowledge present, even, the different university careers involve dynamic current approaches, as well as the daily problems that arise, that is, this science has been present from history to the present and despite being a little complex, is a science that makes life easier.

### ***Teaching Process – Learning***

Practical activities experience a number of events, which allow us to grasp the correct principles that will be useful and beneficial in the theory of education being "A set of coherent principles, advice and recommendations to influence practice." (Capella, Collom and Paciano, 1995). Learning strategies are organized, systematized and intentional processes that have as their main priority the learning of a scientific content, the learner uses their abilities and in the same way they allow to educate.

"They are procedural contents, belonging to the field << know how to do >>, are the goals skills or << skills of skills >> that we use to learn, are the processes that we set in motion to learn any learning content." (Gallardo and Ferreras, 2000).

### ***Theories of Learning***

Man has not only shown a desire to learn, but his curiosity has often led him to find out how he learns. Since ancient times, each civilized society has developed and approved ideas about the nature of the learning process. (Gonzalo, 2009).

According to Picón (2001), the theory in use can be inferred by carefully and systematically observing the person's behavior in their natural environment. For this case, the reconstruction of the didactic practice of the teacher in the Restrepo classroom (2002), prefers the anthropological social method, since it uses the direct observation of classroom events supported by the detailed record of notes, together with the systematic analysis of

that information in the reconstruction of the theory in use that governs the teacher's didactic behavior.

According to Carr and Kemmis (1988), it includes three objectives: the first aimed at constructing substantive theories based on the tacit behavior of the participants and not on theories outside the practical context, the second aimed at creating conceptual frameworks that provide a solution to the present fragilities in the praxis studied, the third one aimed at motivating teachers to examine the problems and practices present in their didactic execution and involve them in processes of change. The circulation between these objectives is structured in a spiral movement that begins with the generation of substantive theories, continues with the design of theoretical frameworks to support the practices, and culminates with reflection and training for change along with its execution, point of departure of the new reflection cycle.

### ***Theory of Behavioral Learning***

For behaviorism, learning means; the relatively permanent changes that occur in the behavioral repertoire of an organism, as a result of experience. (Gonzalo, 2009). The learner will achieve an individual behavior that has been oriented between him and the exploration with the environment which will access to project characteristics of transformation on the part of the apprentice, according to Striano (2006) "the behaviorist model recognizes the learning to the conditioning of the stimulating associations" response as an emblematic relationship between the individual and the environment ". (Page 12)

The different theories of learning are not incompatible with each other. In some cases, they complement each other, and in others, they can be seen as exclusionary, based on different metaphors about knowledge and learning. (Sfard, 1998).

At the moment a culture of learning is lived that is characterized by a generalized education in a permanent and massive formation that demands to learn many things at the same time in different contexts, or in the different learning groupings to which one belongs. (Well, 2008)

### ***Theory of Constructivist Learning***

Constructivism in general and Piaget's theory in particular considers the subject as an active being in the process of his cognitive development. More than behavior, constructivism is interested in how the human being processes information, in what way the data obtained through perception is organized according to the mental constructions that the individual already has as a result of their interaction with things (Gonzalo, 2009).

In constructivism the student is the fundamental actor since it allows him to find the meaning through the establishment and modification of his knowledge based on the information obtained in his experiences individually building his own knowledge or knowledge without deviating from the context, according to Soler (2006) "Constructivism takes up the epistemological premises of the" interpretive "paradigm and applies them to learning, considering a cognitive activity of the learner, who organizes and gives meaning to the individual experience. (Page 29).

### **Theory of Cognitive Learning**

For Cognoscitivism, learning is the process by which cognitive structures are created and modified, these constitute the set of systematized and hierarchized knowledge stored in memory that allow the subject to respond to new or similar situations. (Gonzalo, 2009).

Neisser (1967) understands cognition, as an act of knowing, is the set of processes through which the sensory input (the one that enters through the senses) is transformed, reduced, elaborated, stored, remembered or used.

The cognitivist method is responsible for studying the process of knowledge acquisition through the different behavioral characteristics of the individual which will allow an approximate agreement with other people.

### **Historical-Cultural Learning Theory**

For this current, learning, means the appropriation of social historical experience. (Pérez and Blanco, 2010). According to Gates and Jorgensen (2009), moderate forms of social justice are the kind of study that does not question status, but tend to see social inequalities as something natural, the result of different capacities and merits of people.

The research has offered readings on how didactics and education are part of the power technologies of modern societies, has undoubtedly contributed to breaking with the myth of political neutrality in these fields of knowledge and practice. In the same way, critical education has contributed to this effect as part of the political views of education. (Valero, 2012).

As an author, it could be said that the teaching - learning process is the union of values and recommendations to be applied in practice. They are also well organized systems that give more importance to learning and that, because of that, allows education; that is, teach or introduce this process in any field or area of a scientific nature. It is a system that is based on (know what to do) and are what we use to learn any learning content.

It has been shown to have the desire to learn, and it is because of this fact that it has become a necessity that the means or methods are constantly being sought to satisfy this need. As a main method has been taken observation and experimentation, since it has allowed to develop and create concepts or methodologies that are used in daily life. Behavioral learning has helped make permanent changes in behaviors through experience because it reacts to situations in the environment that surrounds them, so this learning system orients to act differently but correctly in each situation that is presented.

Constructivist learning allows finding the meaning of things through the reconstruction of new knowledge that is, adding an extra to existing knowledge; based on the information collected by the experiences they have lived. It could be said that the teaching - learning process is fundamental for a correct education since, if all the existing teaching theories are put into practice, it would result in big relevant changes because if you use these systems in a correct way and efficient would favor the

learning of students who wish to learn, synthesizing methods in a simple way for good understanding.

### **CONCLUSIONS**

Through the research carried out it can be affirmed that the application of the teaching - learning process can be formulated in the following way:

Learning the didactic process or pedagogy is closely linked to the vision of the role given as a role in current education to solve problems of daily life. The daily life is an existential universe composed of at least three complementary subuniverses: 1) the daily school life, 2) the extracurricular daily life and 3) the ideal life of the employment associated to the professions and technical specialties. In all these sub-universes, didactics is considered as basic, essential and elementary in the educational process.

The applications in the educational field, has been linked as a superficial topic and isolated from the pedagogical practices by the teacher in the classrooms, because it is mostly seen as a natural element that is clear from the task of teaching and without analyzing it as a parameter that can measure its effectiveness. This is because the conception that teaching is closely linked to the metaphor of content transfer is still maintained, with the teacher being the transmitter, director and the main actor of the teaching and learning process and the student is considered as a receiver and merely a spectator.

In the everyday world the didactic process is considered elementary for a wide range of social practices related to the number, measure and commercial transaction. In accordance with the above, students consider solving problems such as the fundamental cognitive activity of their social development, where theoretical social arguments based on the epistemological field are used. Therefore, it is necessary for teachers to focus their study and planning on contextualization so that students magnify their spectrum and do not continue to visualize the educational process as deficient.

### **Bibliography**

1. Abambari, M. (2015). *Valoración epistemológica y didáctica de la evaluación de competencias profesionales*, 11(1), 16-27. Obtenido de: <https://transformacion.reduc.edu.cu/index.php/transformacion/article/view/3/3>
2. Adelman, C. (1987). *The Politics of Evaluating*. En SKILBECK, m. *Evaluating Curriculum in the Eighties*. London: Modder and Stoughton.
3. Alonso, C., Gallegos, D. y Honey, P. (1999). *Los estilos de aprendizaje: procedimientos de diagnósticos y mejora*. Madrid: Ediciones Mensajero S.A.
4. Álvarez, J (1995). *Valor social y académico de la evaluación*. En *varios: Volver a pensar la educación*. Madrid: Morata. Ed.
5. Álvarez, J. (2001). *Entender la didáctica, entender el currículum*. Miño y Dávila editores. Madrid, España.
6. Araya, S. (2001). *La equidad de género en la educación*, pp.159–187.

7. Badano, C., Boleas, P. y Dodera, M. (1999). *Un estudio de la influencia de la representación en el rendimiento académico del alumno de primer año de la Universidad*. Revista de Estudios y Experiencias en Educación, pp.79-88.
8. Baquero, R. (1997). *Vigotsky y el aprendizaje escolar*. Buenos Aires, Argentina: Aique.
9. Batanero, C. (2015). *Razonamiento probabilístico en la vida cotidiana: un desafío educativo*. Repositorio Universidad de Granada, p.4.
10. Blum, W. (2003). *Applications and modelling in education*. ICMI, (39), pp.111-129.
11. Bolea, P. Bosch, M. y Gascón, J. (febrero de 1998). *Proceso de sistematización escolar*, Jornadas SIIDM ñ BAEZA 98. Obtenido de <http://www.ugr.es/~jgodino/siidm/escorial/ponencia8.htm>
12. Campaña, C. (2018). *Utilización de software libre (Dr. Geo y Kig) y su incidencia en el aprendizaje significativo*. Atlante: Cuadernos de Educación y Desarrollo, pp.5-6.
13. Capella, J., Collom, A. y Paciano F. (1995). *Teoría de la educación*. San José, Costa Rica: Universidad Estatal a Distancia.
14. Carr, W. y Kemmis, S. (1988). *Teoría crítica de la enseñanza* (J.Bravo,Trad) España: Ediciones Martínez Roca.
15. Castro, C. (2018). *Los procesos y su incidencia en el razonamiento lógico en la resolución de situaciones reales*. Atlante: Cuadernos de Educación y Desarrollo, pp.3-4.
16. Cebrián, J (1997). *Nuevas competencias para la formación inicial y permanente del profesorado*. Edutec. Revista Electrónica De Tecnología Educativa, p,6.
17. Corica, A. y Otero, M. (2007). *Las ideas de algunos estudiantes acerca de la enseñanza- aprendizaje en el Nivel Medio*. Electrónica de Investigación en Educación en Ciencias, pp.29.
18. Cronbach, L. (1987). *Issues in Planning Evaluations*. En *Murphy, R y Torrance, H.: Evaluating Education: Issues and Methods*. London: Paul Chapman.
19. D'Amore, B. (2007). *IleCongrés International sur la ThéorieAnthropologique du Didactique*. *Paradigma*, XXVIII (2), p.49-77. Uzes France: Paradigma.
20. Domingo, C. (2005). *Didáctica: caracterización, pasado, presente y futuro*. Madrid: Akal editores.
21. Domínguez, L. (2014). *La formación de valores en jóvenes universitarios*. Revista Universidad de La Habana (278), 108-118. Obtenido de <http://scieloprueba.sld.cu/pdf/uh/n278/uh07278.pdf>
22. Duval, M. (2017). *El desarrollo cognitivo y meta cognitivo del escolar primario*, p13. Obtenido de <https://gerardopatinovaron.wordpress.com/3-1-1-importancia-de-la-ensenanza-de-las-matematicas/>
23. Escocia, M. (2003). *Hacia una primera aproximación*. Latinoamericana de Matemática Educativa, pp.292-298.
24. Gallardo, B. y Ferreras, A. (2000). *Estrategias de aprendizaje*. Un programa de intervención para ESO y EPA. Madrid: Fareso, S.A.
25. Gates, P. y Jorgensen, R. (2009). *Foregrounding social justice in teacher education*. Journal of Teacher Education 12(3), 161-170. doi: 10.1007/s10857-009-9105-4.
26. Gigerenzer, G. (2008). *La intuición es irracional*. Madrid: Redes.
27. Gonzalo, B. (14 de julio de 2009). Blogger. Obtenido de Referencias Educativas: <http://gonzaloborjacruz.blogspot.com/2009/07/teorias-de-aprendizaje-paradigmas-y.html>
28. Hernández, A. (2018). *Aulas abiertas una estrategia para aprender*. Atlante: Cuadernos de Educación y Desarrollo, (2).
29. Jacobs, H. (1991). *Curriculum intregation, critical thinking and common sense*. Cogitare, p.2.
30. Jaspers, K. (1946). *La idea de la universidad*. Traducción Agustina Schroeder. En: La idea de la universidad en Alemania. Buenos Aires: Editorial Sudamericana.
31. Jodelet, D. (1986). *La representación social: fenómenos conceptos y teoría*. Barcelona: Paidós.
32. Lorenzo, J., Blanco, N. y Guerrero, E. (2005). *El dominio afectivo en el aprendizaje*. Latinoamericana de Educación Matemática, pp.15-32.
33. Martín, M. (1996). *Planeación, administración y evaluación de la educación*. México: ITESM.
34. Martínez, C. (2007). *Representaciones de estudiantes universitarios sobre el aprendizaje significativo y las condiciones que lo favorecen*. Perfiles Educativos.
35. Morado, R. (2005). *¿Para quién la lógica?* Cuaderno del Seminario de Pedagogía Universitaria, (8).
36. Neisser, U. (1967). *Psicología Cognoscitiva*. México: Trillas.
37. Otero, M., Fanaro, M. y Elichiribehety, I. (2001). *El conocimiento de los estudiantes que ingresan a la Universidad*. Latinoamericana de Investigación en Matemática, pp.267-287.
38. Pérez, A. y Blanco, B. (2010). *Introducción a la Sociología de la Investigación para la elaboración de Proyectos*. Quito.
39. Picón, G. (2001). *El comportamiento y el cambio en las organizaciones educativas: vías para una investigación educacional crítica*. Investigación y Postgrado, 16(2), 25-51, Obtenido de: <http://ocenet.oceano.com/consulta/welcome.do>.
40. Pozo, J. (2008). *Aprendices y Maestros. La psicología cognitiva del aprendizaje*. Madrid: Colección Alianza Ensayo.
41. Restrepo, B. (2002). *Efectos destacados de una variante pedagógica en la investigación*. *Acción educativa*. En línea. Obtenido de: <http://www.rieoei.org/deloslectores/370Restrepo.PDF>
42. Rico, P. (1995). *Errores en el Aprendizaje*. México: Grupo Editorial Iberoamérica.
43. Santos, M. (1993). *La evaluación un proceso de diálogo, comprensión y mejora*. Archidona: Aljibe. Ed.
44. Santos, M. (1996). *Crítico de la eficacia de la crítica. Lo verdadero, lo verosímil y lo verificable en el análisis de las instituciones educativas*.

- Ponencia presentada al IV. Congreso Interuniversitario de Organización Escolar. Tarragona.
45. Santos, M. (1996). *Cultura que genera la evaluación en las escuelas*. En varios: Las prácticas culturales en el aula: Metodología y evaluación. Granada: CEP.
46. SENESCYT. (2017). *La Senescyt es una institución indispensable para cambiar el país*. Obtenido de: <https://www.educacionsuperior.gob.ec/rene-ramirez-la-senescyt-es-una-institucion-indispensable-para-cambiar-el-pais/>
47. Sfard, A. (1998). *On Two Metaphors for Learning and the Dangers of Choosing Just One*. Educational Researcher, 27, 2, 4-13
48. Soler, E. (2006). *Constructivismo, innovación y enseñanza efectiva*. Venezuela: Equinoccio, p.29
49. Striano, M. (2006). *Modelos Teóricos y Metodológicos de la Enseñanza*. México: Siglo xxi editores, s.a. de C.V., p.12
50. UNESCO. (2004). *Guía de planificación*. Montevideo, Uruguay. Obtenido de: <http://unesdoc.unesco.org/images/0012/001295/129533s.pdf>
51. UNESCO. (2016). *Aportes para la enseñanza de las ciencias*. Santiago, Chile. Obtenido de: <http://unesdoc.unesco.org/images/0024/002447/244733s.pdf>
52. Valero, P. (2012). La educación como una red de prácticas sociales. En P. Valero & O. Skovsmose (Eds.), *Educación crítica. Una visión sociopolítica del aprendizaje y la enseñanza*. Bogotá, Colombia: Una empresa docente. Obtenido de: <http://funes.uniandes.edu.co/2011/1/Valero2012Educacion.pdf>
53. Zemeleman, S., Harvey, D. y Hyde, A. (1992). *Best Practice: New Standards for Teaching and Learning in American Schools*. America: Hienemann.
54. Zemelman, S. (1998). *Best Practice: New Standards for Teaching and Learning in America's School*. America: Hienemann.
55. Zemelman, S., Harvey, D. y Arthur, H. (1998). *Best Practice: New Standards for Teaching and Learning in American Schools*. America: Hienemann

\*\*\*\*\*