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Systematization of Experiences, Proposal of Educational Strategies Planned from Learning Styles: Diagnosis

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Abstract---*This work was based on the identification of the types of learning styles taught by teachers in educational sectors in the province of Manabí, canton Chone. The educational units investigated and surveyed are Raymundo Aveiga, Augusto Solórzano Hoyos, Milenio Eugenio Espejo, Santa Mariana de Jesús, Cinco de Mayo and Oswaldo Castro. The data collected is from the 2018-2019 school year. The theoretical bases were established in the theories of Honey Alonzo and authors such as Aragón and Jiménez. A brief diagnosis of the types of learning styles in students is proposed and the objective is to analyze the results applied based on the sample. The applied methodology starts from the descriptive method and the descriptive systematization to build the experiences exposed by the authors and the data obtained in the diagnosis. Teachers must create lesson plans that include the learning styles of the students and thus be able to adopt teaching-learning strategies for the various groups of students.*

Keywords---*educational strategies, learning styles, planning, student groups, systematization experiences*

Introduction

The systematization of the project Proposals for planned educational strategies based on learning styles. Case studies educational units of Chone diagnostic phase was carried out in the year 2018 where an analysis of the educational programs was carried out to the teachers of the education sectors is Chone that were selected, in relation to the problem of teaching and to the way each individual learns. The duty of educators is to provide students with learning methods such as the inverted classroom, exhibitions, gamification, and games so that students can receive the information since it is evident the lack of identification and even affective achievements that students develop with their teachers, who have not been able to or have neglected the problem due to various factors that intervene in the situation such as the character of the teacher in the classroom, not knowing how to listen, intolerance, the use of too technical language when teaching classes, deficiencies didactic pedagogical, not allowing questioning, monotony in classes, lack of motivation, among others (García et al., 2014).

The strategies used by teachers in the process do not have the necessary effectiveness to achieve excellent results during learning, due to the lack of planning, either in a general or specific way for the group of students. The role of the teacher must be readjusted to go beyond the role of the transmitter of knowledge that is traditional, teaching professionals must perform a daily routine, to be able to interact with students outside the classroom, where they are allowed to establish bonds of trust and friendship. The directors and teachers of the educational units of Chone have been informed and cultivated about teaching strategies, based on a diagnosis, ideas were generated for micro-curricular planning, where teachers include it in their lesson plans to have equality with the students, so it was necessary to build the experiences that start from the training due to the pedagogical - didactic weaknesses expressed by those involved, by having a repository of information in the determination of the groups within the classroom (Arthurs, 2007; Akdemir & Koszalka, 2008).

Education must adapt to the diversities of people, whether with individual characteristics or particular cognitive traits, in such a way that everyone has the same possibilities (Ordóñez Rodríguez, 2015). The foregoing leads to enable the student to approach unintelligible information that requires more elaborate levels of processing so that he can deploy multiple skills and autonomous techniques, which allow him to remain and complete his higher education. Among the many problems that educational training entails, is the lack of knowledge on the part of those responsible for the institutions about the types of styles in learning, in addition to the forms for the acquisition of knowledge that students direct to enter higher education (Domínguez Rodríguez et al., 2015).

The general objective gave the guidelines for the analysis of the results of the diagnosis of the types of styles in learning in the first phase of the project, adding to this the specific objectives such as the identification of the theoretical bases of Alonso-Gallego-Honey of learning styles (CHAEA) and the scale of learning strategies (ACRA) on which the project was based. The processes for the selection of diagnostic instruments were defined to be able to narrate the experiences through their usefulness based on the results.

On the other hand, the milestones of the systematization allowed to frame in detail the events that gave life to the experiences, such as the theoretical preparation and the study of the problem for the application of instruments such as the CHAEA and ACRA for the collection of data and to be able to diagnose types of learning styles and strategies. The worldologies of the authors are taken from the objectivity of the results and investigations that speak about the subject matter. In the interviews carried out, relevant data were obtained regarding the theoretical bases on which the project was based, starting from the analysis of the results obtained for the deconstruction of the experiences lived during the socialization of the results (Cutrer et al., 2013; Burbank et al., 2006).

The transformations and improvements show the analysis of the diagnosis, determining the types of learning styles, the groups within the classroom, and the style by gender. Regarding the improvements, it can be understood that education is strengthened. In the lessons learned, it was possible to determine the factors that significantly influenced the diagnostic phase, among which the types of learning styles that determine how students are instructed in the educational units understudy can be mentioned.

Materials and Methods

The methodology used in this experience systematization study was based on a qualitative approach, with a descriptive-narrative methodology in which a work scheme was proposed, having as a starting point a planning phase defining the theme, objectives, milestones, and systematization instruments. In the second phase, instruments designed in accordance with the objectives set were applied to the consulted authors, teachers of the institutions, researchers, and students. Interviews, data analysis, and observations that were compiled were carried out and the information was collected and edited.

The procedure carried out in the first part of the project was to identify the learning styles with the use of the Honey Alonso CHAEA questionnaire, which consists of 80 statements, divided into four sections of 20 items corresponding to the four learning styles that are active, reflective, theoretical, and pragmatic. It is a self-administered test with a dichotomous score, agree or disagree. The absolute score that the student obtains in each section indicates the degree of preference.

Analysis and Discussion of the Results

Education in Ecuador is in a stage of stagnation and setbacks compared to other countries, considering as the main factor the lack of updating of teachers on issues that contribute to covering new needs that society demands in a changing context. (Gargallo López et al., 2013), argue that learning styles are defined as the different ways in which an individual can learn. Types of learning styles are cognitive, affective, and physiological traits that are used as relatively consistent indicators of how learners distinguish interactions and respond to their learning environments. All people who use a particular method for interaction and acceptance process information. The characteristics of the types of styles in teaching are usually part of any psycho-pedagogical report, which is prepared on a student and is a foundation for didactic strategies with pedagogical reinforcements so that these are the most appropriate.

The study of the analysis of learning and teaching theories has come from daily practice, where the inescapable hypothesis is sought from practical experience. In such a way that good teaching work can hardly be understood without theoretical knowledge followed by practical development and vice versa (Gallego Gil & Nevot Luna, 2008). From the point of view of the student as well as the pedagogue, the concept of learning styles is relevant since it promises great possibilities of action to acquire more effective teaching. It is precisely the goal of the contemporary educational model where the concept of learning styles is directly related to the conception of teaching, as an active

course where the manipulation of information by the receiver is required to achieve knowledge (Santiago & Guzmán, 2005). (Gonzalez Clavero, 2011), consider that individuals have a style or more than one learning style that registers flexibility and the possibilities of being able to change the type of style for more efficient learning.

There are numerous ways of understanding learning, such as the approach that the learner attributes to his instruction process and the influence of certain elements on the ability to absorb and retain information such as the fact of obtaining skills, abilities, and incorporating information content (Coloma Manrique et al., 2008). The cognitive style of each person has a peculiar way of perceiving and processing information. Styles are not innate. They can be acquired and modified thanks to the experience and in the field of education, they can be intervened through appropriate pedagogical actions, whatever the way of understanding learning, learning obeys preferred styles of making use of one's skills (García-Peñalvo, 2013). The author (Hulme & Allcock, 2010), mentions that the learning process is made up of four different stages, it has been discovered that people concentrate more on a certain stage of the cycle so that preferences for one stage or another appear clear.

Depending on the dominant stage, we can speak of four learning styles: The active style is chosen by people who are usually open-minded, not very skeptical, and enthusiastically undertake new tasks. They are motivated by challenges and are bored with long deadlines, and they tend to prefer group tasks to individual ones since they easily get involved in the affairs of others. In the reflective style, the type of learning is typical of prudent people, where all alternatives are considered before making a move. They collect data and analyze it before concluding and enjoy watching others perform, listening, and not intervening until they are sure. They create a distant and condescending air around them (Demirbas & Demirkan, 2007; Hsieh et al., 2011).

Within the theoretical style, observations are adapted and integrated into coherent theories. There is a tendency to approach problems vertically, staggered by logical stages. It is a learning characteristic of perfectionist people who like to analyze and synthesize the information they receive; above all, they seek rationality and objectivity. The key point of pragmatism as far as learning is concerned lies in the practical application of ideas. The positive aspects of new ideas are highlighted and every opportunity to experiment with them is taken. Style varies over the life course and changes because of the models we emulate in different aspects of our lives. But when we prefer a style, they are fluid (Sternberg, 1994).

The spatial and temporal context

The specific objectives of the study were based on knowing the theoretical bases of Alonso-Gallego-Honey of learning styles CHAEA and the scale of learning strategies ACRA. In this sense, optimal learning requires four phases, so it will be convenient to present the subject where activities that cover all the phases of the Kolb wheel are guaranteed. On the one hand, the learning of all the students will be facilitated where they will choose their preferred style and they will also be helped to enhance their abilities and skills when teaching. A second objective was to analyze the processes in the selection of the CHAEA and ACRA diagnostic instruments, which went through a thorough and detailed theoretical review in the voices of the authors, the Honey Alonso questionnaire on the types of styles in learning as an instrument that allows identifying the type of style that prevails in a person. In the spatial and temporal context, it was determined by the interpretation of the authors and research teachers. The educational institutions of training in the city of Chone were considered the geography location and the socioeconomic level of the students (Milne et al., 2016; Raynard, 2017).

Involved in the current process

Those responsible for the social areas oversaw coordinating and selecting the educational institutions in which the project was going to be executed, which had as a fundamental requirement to be in high school to be able to implement the diagnosis, based on the questionnaires of CHAEA and ACRA. On the other hand, the students of the pedagogy of experimental sciences and pedagogy, of the national-foreign languages participated in participation with the execution of the instruments such as data tabulation, execution of the micro curricular planning, and the participation in workshops with activities and expected products. For a student to present great knowledge, it is necessary to consider their previous ideas, needs, expectations, learning styles, and strategies (Coll, 2001). Learning styles are a process through which abilities, skills, and abilities are acquired and modified, combination and analysis of the differences and similarities that mark the different types of styles in learning. (Griffith, 1984), defines learning styles as characteristic modes by which various individuals process information, feel and behave in learning environments; We also share (Keefe, 1988), the idea that learning styles are cognitive, affective, and physiological

traits that serve as relatively stable indicators of how students perceive, interact with, and respond to their learning environments.

Participatory diagnosis

In an informal conversation with the advisor Billy Loján Maldonado and the project leader Mg. Orley Reyes Meza of the Eloy Alfaro Lay University of Manabí stated that the problem always focuses on the use of a traditional methodology. According to what was expressed by the internal authors in the interviews, it is considered that both the topics and the requirements covered in the diagnostic test allowed knowing the learning styles of the students, based on the application of the CHAEA and ACRA instruments.

In general, according to each educational unit, the results were the following: In the educational unit of the Millennium Eugenio Espejo, the application of the CHAEA questionnaire applied to the students obtained the results of the learning styles where the most predominant is the reflective style with 26%, theoretical with 18%, pragmatic with 14%, active 12% and a small group of students combines their reflective/pragmatic styles 16%, reflective/theoretical 6%, active/pragmatic 4% and active/theoretical/pragmatic 2%. The Raymundo Aveiga Educational Unit of the CHAEA questionnaire applied to the students obtained the results of the learning styles, the predominant style is reflective with 26%, theoretical with 20%, pragmatic with 14%, active 16%; a minimum group of students combine their reflective/active 10%, theoretical/pragmatic 6%, reflective/pragmatic 4%, active/theoretical/pragmatic 2%, and reflective/theoretical 2% styles.

The Educational Unit Dr. Osvaldo Castro Intriago based on the CHAEA questionnaire applied to the students, the following results were obtained on the types of learning styles, it is relevant to frame that the outstanding style is reflective with 44%, theoretical with 20%, pragmatic with 8%, active 6% and an imperceptible group of students combine their theoretical styles pragmatic with 8%, reflective/theoretical 4%, reflective/pragmatic 4%, active/pragmatic 2%, reflective/active 2%, active/pragmatic 2% and reflective/theoretical/pragmatic 2%.

In the Augusto Solórzano Hoyo Educational Unit, with the application of the CHAEA questionnaire applied to the students, the results of the learning styles were obtained, highlighting the pragmatic with 34%, reflective with 32%, active with 14%, theoretical 2% and a group a small number of students combine their reflective/active 4%, active/theoretical/pragmatic 4%, active/theoretical 2%, active/pragmatic 2%, reflective/theoretical 2%, reflective/pragmatic 2%, and theoretical/pragmatic 2% styles.

The Santa Mariana de Jesús Educational Unit based on the CHAEA questionnaire applied to the students, the results were obtained, where the most outstanding is the reflective with 40%, pragmatic with 16%, active with 12%, theoretical 12% and a small set of students harmonize their reflective/active 8%, active/theoretical 4%, active/pragmatic 4%, reflective/pragmatic 2% and reflective/theoretical/pragmatic 2% styles. In the Cinco de Mayo Educational Unit, based on the application of the CHAEA questionnaire applied to the students, the results were obtained, the predominant being reflective with 32%, pragmatic with 26%, theoretical with 18%, active 16%, and a group a small number of students adopt their reflective/pragmatic 4% and active/pragmatic 4% styles.

The types of learning styles that exist and are adopted in classes to improve the academic performance of students were investigated by the scientific and international community. Specifically, a study was carried out where data on Ecuadorian education was obtained with the help of three articles.

- Learning styles, case study: educational units of Chone.
- Learning styles and gender, case study: educational units of Chone.
- Teacher learning styles, case study: Chone educational units.

Transformations and expressed improvements

The beginning of this project consisted of analyzing the learning styles of the students of the selected educational units of the Chone canton, to find out what gender the students manage to teach the contents in class and in this way strengthen the teaching process. -learning. Regarding the improvements, it can be understood that education is strengthened, which raises attention and arouses interest.

Lessons learned

From what was experienced, the proposed project of planned educational strategies based on learning styles, allowed us to know in a significant way from diagnoses the groups of students in each classroom, giving help to the teachers

to propose teaching methodologies according to the dominant learning style. Some students linearly constitute their thoughts, which are based on being theoretical, but not reflective. On the other hand, some students prefer to opt for a pragmatic approach that encompasses an ecology of knowledge that allows them to acquire lasting skills for their professional development (Shaw & Marlow, 1999; Tulbure, 2012).

Notably, the predominant learning style in males is reflective, except for Raymundo Aveiga educational units, where the theoretical style predominates, and Augusto Solórzano Hoyos, where the pragmatic style predominates. The predominant learning style in females is reflective, except for the Cinco de Mayo Educational Unit where the pragmatic style predominates. However, between genders, men are more reflective and women more pragmatic, although they are not opposed.

Regarding the diagnosis of learning styles in students, knowing the results of the students in each style, the teacher proposes strategies and by raising educational quality, he also maintains and argues that learning styles are defined as the different ways in which an individual can learn, so the study fits this theory. Similarly (Valencia et al., 2015), maintain that learning styles are the cognitive, affective, and physiological traits that serve as relatively stable indicators of how students perceive interactions and respond to their learning environments.

Conclusions

Teachers must make diagnoses that include student learning styles to adapt teaching-learning strategies to the various groups of students in a classroom since learning styles are cognitive, affective, and physiological traits. they serve as relatively stable indicators of how learners, where perceive interactions and respond to their learning environments. It is important for teachers to have an inventory of student learning styles to propose strategies and raise educational quality, in addition to sustaining and arguing that learning styles are defined as the different ways in which an individual can learn (Velásquez et al., 2022; Oka, 2021).

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