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Evaluation of the learning strategies of the 10th-grade students in a private school of Bucaramanga

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Abstract. This investigation presents the results of the evaluation of the learning strategies of 10th-grade students, to focalize the factors involved in their school learning process. The employed design in this investigation is Quantitative, cross-sectional descriptive. The sample consisted of 30 10th-grade students, to whom the test, Diagnostic Questionnaire for Learning Strategies-CEDEA, a psychoeducative questionnaire (pilotage and validation by experts), and the informed consent to the students and parents. For the questionnaire interpretation, it was taken into account that the scores higher than 60, are considered like strengths and 20 like weak strategies, it was made a relation of the psychoeducative characteristics with the CEDEA variables. The results reveal that old and new students, no matter if they are man or woman, the scores are weak (under 20). In metacognitive-evaluative (Evaluation, planning and self- resources valuation) strategies, information processing strategies (Transference, Memorization, comprehensive, information organization, information acquirement and elaboration), handle of the resources strategies (teamwork and interaction, context control and resources) and dispositional strategies (Perceived self-efficiency, Attention-Active disposition, fitness and mood and anxiety control). In consequence, the data point that the students have a lack of strength in their studying habits, auto regulation in their learning and in the significant learning.

1. Introduction

In the test "Saber 11" (Colombian high school test), the Colombian Institute for higher education promotion ("Instituto Colombiano para el Fomento de la Educación Superior") ICFES. Performs a schools classification in the six categories: A+, A, B, C and D. Which in the schools are classified, and the range of values of the general results index that each of them comprises. The Educative Institution objective of the study, compared with the other educational establishments of Colombia, is on the 2.413 positions, with B qualification; regarding the private education in national level in the place 1718 - qualification B; and in relation with the Santander the place 168- qualification B; in the Bucaramanga's school the place 52- qualification B, and in the Bucaramanga private schools the place 32, qualification B. Taking into account the situation, and the new educative proposal of the institution, that seeks permanent management, effective and efficient in order to strengthen teachers as leaders of change, and the innovation in their pedagogic procedures, where they develop a series of activities with the aim of enhancing the abilities of students in the direction of meaningful and autoregulated learning. It was desired to evaluate the learning strategies used by tenth-grade students, whose result could help to improve the results on the test "Saber 11" and representative categories of the institution on the school qualification ICFES [1] . With the application of diagnostic questionnaires of learning strategies-CEDEA- in the 10th-grade students, it looks to enhance the role of the teacher from the promotion of



meaningful learning and mediation to guide constructivist activities of students. In this way, is provided to the educative system by preparing the students in strategic individuals, autonomous and independent, in the development of the of optimal learning strategies, since the students will have the conscience of what they know and what they don't know, evaluate what they remember and what they don't, planning on a systematic way for a determined situation, select appropriate strategies for each situation, identifying if they're beneficial, modify or replace the strategies for others and lead the research of relevant information in the memory.

The Self-regulation is "Process formed by self-generated thoughts, emotions, and actions that are planned and adapted cyclically to achieve the personal goals" by Zimmerman, [2] . In this way, the self-regulation refers to learning strategies that the students activate when they're working to achieve the goals that they have set for themselves.

In accordance with Gonzales Fernandez [3] for Zimmerman (1989, 1995) [4] , the students can be considered self-regulated, in the way they're -from a metacognitive, motivational and behavioral point of view- an active participant in their own learning process. It is assumed that the self- regulation in the scholar learning, is an activity that can be trained on the students, achieving they're capable to learn with a superior grade of self-regulation.

Initially the "Cognition control", is the cognitive compound of the self-regulation, also know like metacognition, which deals with the degree of awareness or knowledge of students about their ways of thinking, it covers knowledge, control, and regulation of cognitive processes, content and skills to control those processes in order to organize, review and modify them according to progress and learning outcomes Crus Gutierrez [5] , and that stops Schraw & Moshman , metacognitive activities have three dimensions: Plan, Monitor, and Evaluate.

It implies being aware of the strengths and weaknesses of our own intellectual functioning, and the types of reasoning errors that we usually commit, such awareness would help us to explore our strengths, compensate for our weakness and avoid making common mistakes. The authors Panadero & Tapia, [6] , in their article, explain the phases, process, and acquisition of the self- regulation based on the socio-cognitive model of It implies being aware of the strengths and weaknesses of our own intellectual functioning, and the types of reasoning errors that we usually commit, such awareness would help us to explore our strengths, compensate for our weakness and avoid making common mistakes. The authors Panadero & Tapia [6] , in their article, explain the phases, process, and acquisition of the self-regulation based on the socio-cognitive model of Zimmerman & Moylan [7] , and describe the 3 presented phases: Planning, execution, and self- reflexing.

In the planning phase, is about the initial phase where the student face, for the first time to the task, the student analyze the task, value their capacity to complete it, establish goals and plan. The interest for the task and the motivational orientation, take a crucial role to achieve a good planning and realize the activity adequately. According to Zimmerman and Maoylan [7] aforementioned for Panadero and Tapia [8] , the self-regulation process begins with the analysis of the task where the task to be performed is broken into smaller elements and based on the previous knowledge, a personal strategy is established for its execution By Winne, Self-regulation of learning seen from the models of information processing, [9] . The student establishes his objectives based on the evaluation criteria, which correspond to the standards under which the activity will be evaluated and the level of perfection, is what the student wants to accomplish in the task.

The self-motivating beliefs are also discussed in the planning phase, dealing with values, interest and goals, personal variables that generate and sustain the motivation to carry out an activity. Interact with each other to result in the level and type of motivation that the student will have during the task By Panadero y Tapia [8] .

In the execution phase, in accordance with Panadero and Tapias [8] , it is important that the student maintain concentration and use appropriate learning strategies for two reasons: first, so that they do not diminish their interest and motivation and, second, to reach the learning objectives.

Now in the last phase, self-reflection, according to Panadero & Alonso-Tapia, Theories of educational self-regulation: a comparison and theoretical reflection [10]. The student values his work

and tries to explain the reasons for the results obtained that in doing so justifies the causes of his success or failure and, depending on his attributional style, he experiences positive or negative emotions that can influence his motivation and ability to self-regulation in the future. In the research carried out by Elvira-Valdes & Pujol [11], with a sample of 172 volunteer students of both genders, students of the first trimester of the University Initiation Course of the Simon Bolivar University (Venezuela), it was determined that the sampled students present a moderate use of strategies of Academic Self-Regulation, Planning and Control Strategies and present greater use of Reflection strategies, indicating that there is a better execution of the tasks and prompt changes in achieving learning objectives.

Likewise, slight differences were obtained in the use of self-regulatory control strategies for students from Public Institutions with respect to Private Institutions, indicating that these students exercise a greater selection regarding the study environment, study time and effort in the tasks academic. There is also no significant correlation between college entrance scores and high school grades, demonstrating that previous academic performance could be associated with college success, as indicated by several studies where it is shown that if there are deficiencies in the strategies of academic self-regulation, the student may have an inadequate development during the first years of his university education.

This study carried out with high school students in Spain, showed that the subjects make an important use of reference strategies and there is a notable difference between the use they declare to be doing of each other strategies. However, the use of evaluation, writing, planning, regulation and repetition strategies can be appreciated By Del Caño Sanchez, Roman Sanchez, & Foces Gil [12] .

At a national level, the research of Acosta [13] realized out the study called "The learning processes and their incidence in the student desertion in the Pharmaceutical Chemistry Program of the University of Cartagena", within whose objectives was to evaluate the learning strategies employed by the students.

The results indicate that deficits in the learning strategies used are found in all the subjects evaluated and the author concludes that the problem of dropping out has a causal origin in the learning strategies used by the students by Acosta [13] .

2. Methods

The design of the research was cross-sectional descriptive, which responds to the objective of identifying the state of the learning strategies, in the 10th-grade students, showing how they were when the study collected the data. The study sample was formed with a group of 30 10-grade students, all the active students participated in the process, for which the following inclusion criteria were taken into account: Students enrolled and active in the first semester of 2017, old and new students were included. Students who decided to participate voluntarily, with signed informed consent from them and from parents who voluntarily accepted to participate in the research.

Two instruments were used to the data collection: Diagnostic Questionnaire for Learning Strategies-CEDEA, that measured the learning strategies of the students and a questionnaire, designed to identify the psychoeducational characteristics of the students. The Diagnostic Questionnaire for Learning Strategies-CEDEA is based on the fact that all human beings have a great capacity to learn, along with the intellectual potential that each individual develops, essential elements to solve any type of problem they face, so that the proper use of different learning strategies can achieve learning successful. Several studies in the field of cognitive psychology agree that learning strategies interventions, helps the cognitive learning and motivation to learn, likewise, motivational beliefs not only influence the inspiration to learn, but also in the form and quality in which students process the information, selecting and using certain learning strategies by Torrano Montalvo & Gonzalez Torres [14].

However, as indicated by Solis Uribe [15] , all people have the ability to learn, the difference lies in the way and effectiveness in which learning strategies are used, as they correspond to tools for thinking , are resources that help improve reasoning and especially enable the student to develop the

ability to "learn to learn." With adequate training and selection of appropriate learning strategies, all students can improve their level of control over learning and performance, so those students with low academic performance can overcome the learning difficulties they present.

According to Gutierrez [5] cited by Solis Uribe [15], the possibility of learning through learning strategies facilitates meaningful learning, as well as allowing students to establish relationships between what they already know (their own knowledge) and the new information (the objectives and characteristics of the task to be performed). In this way the student learns to use the necessary procedures at the time of studying, he will also know when and why he should use them, and how they will benefit if they use them.

With the instrument of the Diagnostic Questionnaire for Learning Strategies-CEDEA, it was sought to assess the existence and mastery of procedures, techniques, dispositions and other aspects that allow the student to be regularly successful in carrying out the task or in his study according to Solis Uribe [15].

According to what is explained in the technical file by Solis Uribe [15], within Group A are the metacognitive - evaluative strategies whose function is to consciously control and evaluate the functions, processes and characteristics that influence learning together to the following strategies: Evaluation, Planning, Valuation of own resources.

Within Group B are the information processing strategies and are defined as all those that work with the information that is the subject of learning and are also composed of the following strategies: Transfer, Comprehensive Memorization, Organization of information, Acquisition of Information and Elaboration.

Within Group C are resource management strategies that include control over those external aspects located in the environment that influence learning and presents the following strategies: Group work and interaction, Context control and Resources.

Finally within Group D are the dispositional strategies that are all those strategies that do not manipulate directly with the learning material but that try to favor positive personal conditions of the student that favor learning, is composed of the following strategies: Perceived self-efficacy, Attention - active disposition, Physical and emotional state and Control of anxiety. In this questionnaire it was taken into account that the high scores higher than the 60th percentile considered as strengths that the subject possesses are desirable. When the score obtained is lower than the 20th percentile, it indicates a weakness. The average scores to give statistical significance are not considered.

Respect to the psychoeducational Questionnaire, this instrument was adapted for the adolescent sample that attends 10 baccalaureate degree. The questionnaire has as a background of validity and reliability, its previous use in university students. The questions of the questionnaire come from the instrument built by the psychologists PhD. Leonardo Ortega Murillo y Mg. Patricia DíazGordon about the motivation of students in the course of basic psychological processes of the psychology program of the UNAB, presented in a presentation of the National Node of psychological processes, sponsored by the Colombian Association of Faculties of Psychology in 2014. To this same instrument, some questions were modified for its application in an inter-university project with 700 students of psychology, belonging to 17 universities of the country with the purpose of determining psychoeducational characteristics of young people. The questionnaire was also used by Gómez and Arenas (2015), who investigated the learning strategies in a group of nursing students of the UNAB and used the questionnaire to identify the psychoeducational characteristics of these.

The adequacy of the questionnaire, with this sample of 10th-grade students, was made through the process of validity and reliability with pilot test to three 10th-grade students of a private school in Piedecuesta - Santander that was not part of the sample. Likewise, validation was also carried out by expert judges, the rector of the Educational Institution where the sample was applied, the academic coordinator and the psychologist of the same Institution. The application allowed to obtain reliable data, correct ambiguous data in order that the resulting questionnaire was clear and understandable for its later application in the students of the sample. To correct the validation by judges of the psychoeducational questionnaire, the Expert Judgment Template provided by Escobar Pérez & Cuervo

Martínez [16] was used.

The questionnaire is applied with the digital format in Google Forms, where information about the psychoeducational characteristics of 10th-grade students, data on institutional background, questions about academic support, study motivation and study habits was collected. The statistical analysis was descriptive, for the psychoeducational questionnaire through the data obtained through the Google Forms tool. While in the case of analysis on agreement of judges, the SPSS program was used for the Kendall index to establish correlations between them, "Offers the value that makes it possible to decide the level of agreement between the experts.

The value of W oscillates between 0 and 1. The value 1, means an agreement of total agreements and the value of 0, total disagreement, being 1 the desired score " By Cuesta Santos.

3. Results

(i) Sociodemographic characteristics in 10th-grade students.

In the Table 1 we can evidence regarding the distribution of ages there is no difference between the sexes, because 50% of the students (men and women) are in the age range of 14 to 15 years old, the other 50% make up (men and women) ages 16 and 17 years old. Of the 30 students who participated in the research, there was a high tendency of men 56.6% (23.3% between the range of 14 to 15 years old and 33.3% between the range of 16 to 17 years old) and women they make up 43.3% (26.7% between the range of 14 to 15 years old and 16.7% between the range of 16 to 17 years old).

Table 1. Age, Seniority and social stratum distrubution.

Sex	Age %		Seniority %		Stratum %			
	14 - 15	16 - 17	2013 - 2015	2016 - 2017	1	2	3	4
Male	23,3	33,3	23,3	33,3	3,3	3,3	16,7	33,3
Female	26,7	16,7	23,3	20,0	3,3	6,7	16,7	16,7
Total	50	50	46,6	53,3	6,6	10	33,4	50

Source: Recolected data

Regarding the years of seniority that the students have in the school object of study, showed that 53.3% of the students (men and women) are of recent entry (2016 - 2017), while the 46.6% are older. Regarding the socioeconomic strata, 6.6% of the students correspond to stratum 1 (3.3% men and 3.3% women), 10% to stratum 2 (3.3% men and 6.7% women)), 33.4% are from stratum 3 (16.7% men and 16.7% women), with 50% of students corresponding to stratum 4 (33.3% men and 16.7% women). In general, men predominate, recent students (2016 - 2017) and socioeconomic stratum 4.

In the sociodemographic data collected from the families of the students we verify that 40% of the students (men and women) do not have siblings, 36.7% have at least one sibling and 23.3% have 2 siblings. In relation to the people with whom the sample under study coexists, it can be seen that 63.3% of the students cohabit as a two-parent or nuclear family, being understood as those formed by parents and children, 3.3% of students live together only with the father, while 13.3% of the sample resides only with the mother. 6.6% of students live with relatives (uncles and / or grandparents), 10% of the sample live as extended family (father, mother and grandparents, mother and grandparents or mother, grandparents and aunt) and finally the 3, 3% of the students live as a compound family (mother and stepfather).

Table 2. Number of siblings and people who lives with the student distribution.

Sex	Number of siblings %			Who lives with %					
	Only child	1	2	Nuclear Family	Single parent, Father family	Single parent, Mother family	Relatives	Extense family	Compound family
Male	23,3	20,0	13,3	40,0	3,3	3,3	3,3	3,3	3,3
Female	16,7	16,7	10,0	23,3	0,0	10,0	3,3	6,7	0,0
Total	40,0	36,7	23,3	63,3	3,3	13,3	6,6	10,0	3,3

Source: Recollected data

Table 3. Age and sex distribution for the parents of the students.

Sex	Age %					Householder %	
	30 – 35	36 – 41	42 – 47	48 – 52	> 53	Mother householder	Father householder
Male	1,7	11,7	16,7	13,3	6,7	0	1,7
Female	6,7	15,0	15,0	11,7	1,7	10	0
Total	8,3	26,7	31,7	25,0	8,3	10	1,7

Source: Own construction based on the recollected data.

We reviewed that there is a high population with 31.7% of the parents that are in the age range between 42 to 47 years old (16.7% men and 15% women). Corresponding to the adult phase late, within this same phase is the 25% who are in the range of 48 to 52 years old (13.3% men and 11.7% women) and finally 8.3% belonging to the parents of the students over 53 years old (6.7% men and 1.7% women). Within the intermediate adult phase correspond 26.7% that are within the range between 36 to 41 years old (11.7% men and 15% women) and 8.3% that are in the range of Age between 30 and 35 years old (1.7% men and 6.7% women). It can also be seen that there is a greater female population that is the head of the household (10%) compared to men, which corresponds to 1.7%.

Regarding the academic background of the parents, it was evident that 30% (16.7% men and 13.3% women) are professionals, 11.7% are technologists (3.3% men and 8.3% women), 13.3% are technicians (6.7% men and 6.7% women). The 1.7% that corresponds to the men are with incomplete university studies, the 1.7% corresponding to the women are studying university studies; 3.3% of parents are professionals with some type of specialization (1.7% men and 1.7% women) and 1.7% corresponding to women are professionals with a master's degree. On the other hand, 26.7% of parents studied until high school (15% men and 11.7% women), 1.7% corresponding to men did not finish high school; 6.7% studied up to fifth grade of primary school (1.7% men and 5% women) and 1.7% of men did not finish primary school.

Table 4. Parents scholarship distribution

Sex	Scholarship										
	Incomplete Primary	Primary	Middle school	High school	Tecnic	Technologic	Professional	Incomplete university	Current university	Specialized professional	Master professional
Male	1,7	1,7	15,0	1,7	6,7	3,3	16,7	1,7	0,0	1,7	0,0
Female	0,0	5,0	11,7	0,0	6,7	8,3	13,3	0,0	1,7	1,7	1,7
Total	1,7	6,7	26,7	1,7	13,3	11,7	30,0	1,7	1,7	3,3	1,7

Source: Recolected data

Regarding the academic background of the parents, it was evident that 30% (16.7% men and 13.3% women) are professionals, 11.7% are technologists (3.3% men and 8.3% women), 13.3% are technicians (6.7% men and 6.7% women). The 1.7% that corresponds to the men are with incomplete university studies, the 1.7% corresponding to the women are studying university studies; 3.3% of parents are professionals with some type of specialization (1.7% men and 1.7% women) and 1.7% corresponding to women are professionals with a master's degree. On the other hand, 26.7% of parents studied until high school (15% men and 11.7% women), 1.7% corresponding to men did not finish high school; 6.7% studied up to fifth grade of primary school (1.7% men and 5% women) and 1.7% of men did not finish primary school.

It was also observed that 38.3% of parents are former employees (23.3% men and 15% women). 15% are freelancers (8.3% men and 6.7% women). 13.3% are merchants (10% men and 3.3% women). 10% are administrators (1.7% men and 8.3% women). The other 10% that correspond to women are housewives; 6.7% are drivers (5% men and 1.7% women); the 3.3% corresponding to women perform various jobs, within the population 1.7% is a pensioner own of women and only 1.7% is unemployed that corresponds to men.

Table 5. Parent's civil status.

Civil status	%
Single	3,3
Free union	11,7
Separates	8,3
Divorced	1,7
Married	23,3
New union	1,7

Source: Recolected data

There was a high tendency for parents of family in marital status corresponding to 23.3% of the population, 11.7% are living together in a free union, 8.3% are separated, 3.3% are consider singles, 1.7% are divorced and 1.7% are in a new union.

(ii) Psychoeducational characteristics in 10th-grade students.

The psychoeducational characteristics are composed of several categories such as: institutional background, academic support, study motivation and study habits.

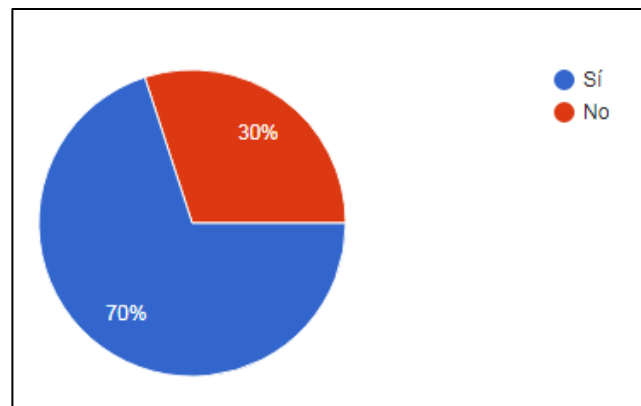


Figure 1. Institutional background

Institutional Background: It is noted that 70% of students come from another school within the baccalaureate, only 30% of the sample, comes from the same school object of study since he started his baccalaureate, that is, sixth grade.

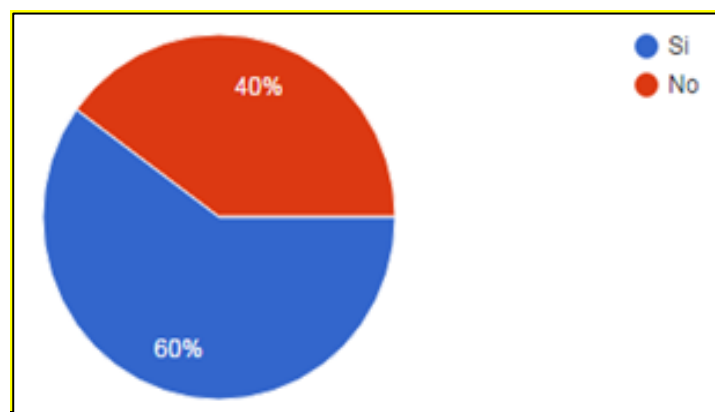


Figure 2. Academic support

Academic support: 60% of students receive some type of academic support to better understand the subjects that are difficult and have good academic performance, while 40% of the sample does not receive any academic support outside the school.

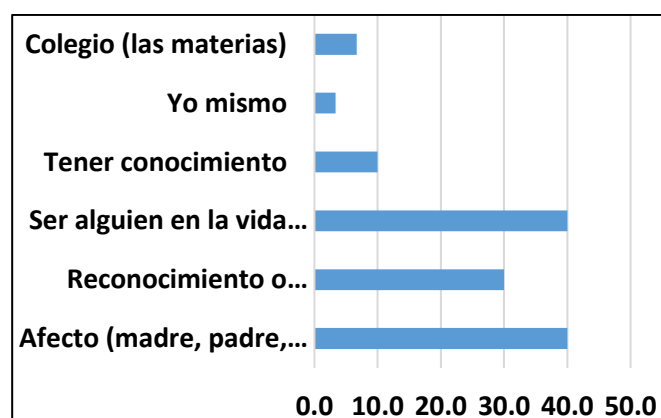


Figure 3. Motivation to study

Motivation to the study: what motivates to study at present in 40% of the students is the affective from their relatives (mother, father, brothers, girlfriend), also emphasizes that 40% motivates them to be someone in life (get ahead, become professional). 30% of students do it for recognition or rewards (of parents, prizes, money, satisfy tastes, etc.). 10% is motivated by the distinction of own knowledge. 6, 7% of the sample are stimulated by the materials of the Educational Institution and 3.3% are self-motivated.

Table 6. Pshycoeducative characteristics. Questions regarding studying habits.

Questions	Fully agree %	Agree %	Not agree, not disagree %	Disagree %	Fully disagree %
I usually prepare for the evaluations by studying with time	3,3	23,3	46,7	16,7	10
Normally when I do not understand what has been discussed in the course, I look for help	13,3	63,3	23,3	0	0
I tend to study regularly, not only when I have to prepare for an evaluation	3,3	13,3	43,3	26,7	13,3
When I get bad grades, I feel sad, but I continue studying	20	30	26,7	16,7	6,7
The readings that teachers put in their classes have a difficult vocabulary to understand	6,7	16,7	50	16,7	10
I find several interpretations to the same text within the readings proposed in the course	10	36,7	46,7	3,3	3,3
When doing the readings established in the course, I find that everything is important	10	50	23,3	16,7	0
In the development of a reading, I often fail to understand what certain parts of the text refer to	10	36,7	33,3	13,3	6,7
To prepare the subject assessments, it is preferable to rely on the material assigned by the teacher, which in the notes	23,3	30	36,7	6,7	3,3

Source: Results questionnaire psychoeducational characteristics

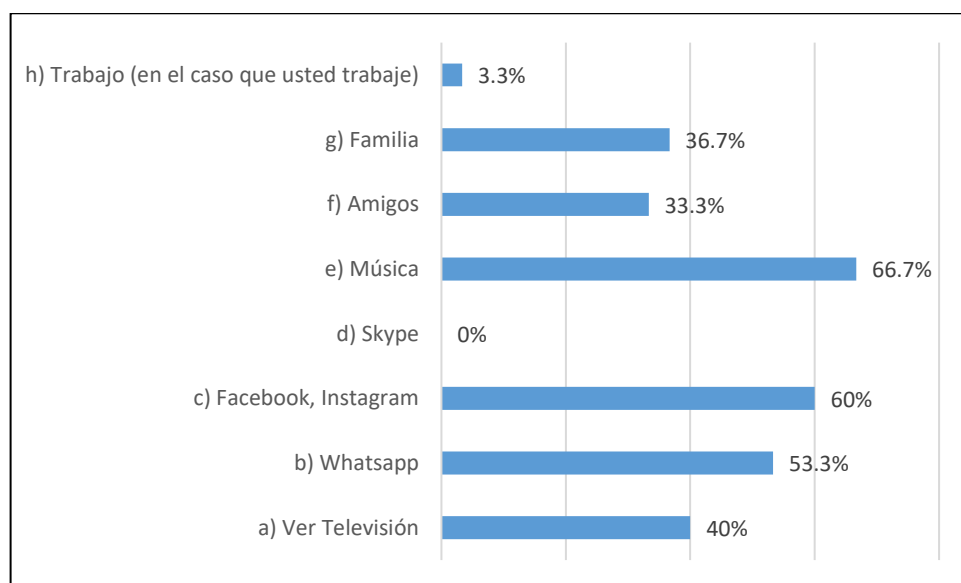
Study habits: It is evident that there is not much preparation for the evaluations since there are few young people who study regularly, not only for the evaluations as it happens with 3.3% completely agree and 13.3% agree . Otherwise is observed on the majority of the students, that they do not usually study prior to the evaluations, as it happens with the 43.3% that do not assume position in front of it, (neither agreement, nor in disagreement); 26.7% disagreed and 13.3% completely disagree.

Table 7. Most used studying form

Read (High Voice)	10,0
Read and repeat	3,3
Read and analyze exercises	3,3
Read and research	6,7
Read and write	10,0
Summarys	3,3
Draws	6,7
Concept map	3,3
Underlined	3,3
Video	3,3
Internet	26,7
Seek in Relatives, teachers among others	13,3
Take notes	3,3
Transcribe	3,3
Memorize	3,3
Focus and practice	3,3
Silent study	3,3
Manual and theoretical	3,3

Source: Results questionnaire psychoeducational characteristics

It indicates the form of study that students use most to learn the contents of the subjects. it is reflected that for the sample there is little search, investigation and deepening of the topics since 26.7% use the internet which is not a reliable source to expand or understand the topics, 13.3% support or resolve doubts with family, friends, teachers or colleagues, 10% read and write as a form of study, 10% are facilitated to read aloud to study and learn, 6.7% read and investigate, 6.7% make drawings as a form of study and for the rest of the sample statistically distributed equally (3.3%) use the following forms of study: reading and Repeat, read and perform exercises, perform summaries, conceptual maps, underlining, use of videos, take notes, transcribe, memorize, concentrate and practice, study in silence without any noise finally also study in a theoretical and manual.

**Figure 4.** Most frequent activity while they are studying.

The study evidenced that 66.7% of students frequently listen to music when they are studying. 60% of the sample reviews social networks such as Facebook and Instagram, 53.3% reviews WhatsApp, 40% watches television while who studies, 33.3% speak or relate in some way with friends, 36.7% interact with the family while they are studying and 3.3% of the students work at the same time they study.

4. Diagnostic Questionnaire for Learning Strategies-CEDEA

With the test, we evaluated four strategy factors: Metacognitive - evaluative strategies, information processing strategies, resource management strategies and dispositional strategies. The metacognitive - evaluative strategies contain three subfactors such as: evaluation, planning and valuation of own resources. The Information Processing Strategies includes five Subfactors: transfer, comprehensive memorization, organization of information, acquisition of information and elaboration. Resource Management Strategies dominates three Subfactors: group work and interaction, control of context and resources; finally the dispositional Strategies possesses four Subfactors: Perceived self-efficiency, attention - active disposition, physical and mental state and finally control of the anxiety.

For proper questionnaire interpretation, it was taken into account that the high scores higher than the 60 percentile considered as strengths that the subject possesses are desirable. When the score obtained is lower than the 20th percentile, it indicates a weakness. The average scores to give statistical significance were not considered.

In the metacognitive - evaluative strategies, the strengths and weaknesses at the group level were analyzed, as well as between the sexes of the course and between the date of entry of the old students vs those of recent entry, with little strength and greater weakness in the factor being appreciated. Metacognitive Strategies-Evaluative of the sample, indicating that the strategies to control and consciously evaluate the functions, processes and characteristics that influence learning are not the domain in each of the students that show weakness, being few cases in the shows that they are aware to control their learning.

Table 8. Percentage distribution of the strengths and weaknesses that students present in the Metacognitive-Evaluative Strategies factor.

Subfactors	Percentage of students with scores under 20	Percentage of students with scores between 21-59	Percentage of students with scores over 60	Total
Evaluation	50%	23,3%	26,6%	100
Planification	66,6%	20,0%	13,3%	100
Valuation of resources	53,3%	20,0%	23,3%	100

Source: Results questionnaire learning strategies.

In relation to each subfactor, we reviewed the contribution of each one in the use of strategies for learning. The evaluation subfactor (EV) occurs as strength in 26.6% of the opposite sample with the 50% having it weakly. The Planning Subfactor (PL) is a strength for 13.3% and weak for 66.6%. The subfactor Valuation of resources (VR), becomes a strength only for 23.3%, and 53.3% has it weakly.

In the Information Processing Strategies it is evident that the students present greater weakness and insufficient strengths in the Information Processing strategies. Scores lower than 20 are higher than scores greater than 60 for the Subfactors. It is demonstrated that the strategies that work with the information that is object of learning, that is, those that are oriented to make analogies of knowledge, organize and structure the information for its comprehension, highlight the relevant information and integrate the contents with the techniques of information for learning are weak in

students who scored less than 20.

Table 9. Percentage distribution of the strengths and weaknesses that students present in the Information Processing factor

Subfactors	Percentage of students with scores under 20	Percentage of students with scores between 21-59	Percentage of students with scores over 60	Total
Transfer	63,3%	0%	36,6%	100
Comprehensive Memorization	40,0%	23,3%	36,6%	100
Organization of Information	56,7%	30,0%	13,3%	100
Acquisition of Information	50,0%	20,0%	30,0%	100
Elaboration	40,0%	26,6%	33,3%	100

Source: Results questionnaire learning strategies.

In the Table 9, Of the Subfactors characteristic of the Information Processing Strategies. The Subfactor Transfer (T), 63.3% of the students show weakness and 36.6% of the students present strength. That is to say that students with difficulty in the subfactor Transfer do not relate previous knowledge with new knowledge. The Comprehensive Memorization Subfactor (MC) is a weakness at 40% and strength at 36.6%. The Information Organization Subfactor (OI) occurs as a strength in 13.3% of the students, contrary to the 56.7% who present it as a weakness. In the Subfactor Acquisition of Information (AI), it is a strength for 30% of the sample and a weakness for 50%. The Elaboration Subfactor (EL), in the sample 40% presents it as weakness and 33.3% as strength.

It was shown that male students and female students have higher weak scores in information processing strategies, there being no significant difference between men and women.

Table 10. Percentage distribution of the strengths and weaknesses that students present in the Resource Management Strategies factor

Subfactors	Percentage of students with scores under 20	Percentage of students with scores between 21-59	Percentage of students with scores over 60	Total
Teamwork and interaction	33,3%	23,3%	43,3%	100
Context control	46,7%	26,6%	26,6%	100
Resources	50%	33,3%	16,6%	100

Source: Results questionnaire learning strategies.

In the table 10, the Assessment of Resource Management Strategies shows greater weakness and little strength in students. Scores below 20 which shows that those students who obtained low percentile fail to control external aspects located in the environment that influence learning, that is, they cannot avoid distractions that may affect their learning process, such as noise, space, light, heat, etc. For the subfactor group work and interaction (TG), it is a bit higher as strength (43.3%) and lower as weakness (33.3%). The Context Control Subfactor (CC) is a bit higher as a strength (43.3%) and

lower as a weakness (33.3%). The Context Control Subfactor (CC), is found as weakness in the sample with a score of 46.7% and few students present it as strength obtaining a score of 26.6%. Indicating that those who present it as weak (<20) have no control over the place of study, the environmental conditions of it (light, temperature ...), the layout of study materials, etc. The Subfactor Resources (R) becomes a strength for 16.6% of the students and as a weakness for 50%.

Based on the study, male and female students have insufficient strengths (23.3% - 20%, 6.6% - 20% and 10% - 6.6%) and greater weakness (13.3% - 20%; 23, 3%; 26.7% - 23.3%) in the Resource Management Strategy factor, there being no difference between men and women.

Table 11. Percentage distribution of the strengths and weaknesses that students present in the Dispositional Strategies factor

Subfactors	Percentage of students with scores under 20	Percentage of students with scores between 21-59	Percentage of students with scores over 60	Total
Perceived Self-Efficiency	43,3%	30,0%	26,6%	100
Attention - Active Disposition	30,0%	46,7%	23,3%	100
Physical and psychic state	20,0%	43,3%	36,6%	100
Anxiety Control	23,3%	43,3%	33,3%	100

Source: Results questionnaire learning strategies.

Dispositional Strategies show little strength and greater weakness on the part of the students. It is evidenced, higher percentage of students (men and women), for the Subfactors: Perceived Self-Efficiency (AP), Attention - active disposition (AD), Fitness and Mood (FA), Anxiety Control (CA), with scores below (20%), which shows that students do not master self-motivation, persistence, perception of achievement, voluntary attention, control of nervousness and anguish.

5. Conclusion

From the results of the investigation, we concluded that no differences were found in the results of the tests of learning strategies and questionnaire of psychoeducational characteristics applied to the students. The data obtained were low in the learning strategies without significant differences between men and women, as well as on the dates of entry of students to the educational institution.

Within the sociodemographic characteristics of the students, it is generally found that male students prevail, 56.6% of the sample, 53.3% of the students (men and women) are recent additions (2016 - 2017) and 50% belong to the socioeconomic stratum 4 (33.3% men and 16.7% women). The sociodemographic characteristics of the parents, such as the primary and incomplete baccalaureate levels and the socioeconomic level between 1 to 4, can influence the academic performance of the students. Authors such (Martínez González & Álvarez Blanco, 2005) [17] indicate that the social class and educational levels of the parents can also be factors that condition school failure. These authors affirm that the belonging to one or another social class is determined, above all, by the level of studies and the profession performed by the parents, as well as by the level of income received by the family unit. Pérez-Díaz, Rodríguez and Sánchez (2001) [12] have shown that there is a direct relationship between social class and the resources acquisition such as

reference books, computer, etc. This relationship of stratum and education of the parents raised by the authors, is confirmed by the academic performance of the sample of students of the present project.

Regarding to learning strategies, students with weakness in the Metacognitive - Evaluative Strategies are identified at a general level. It means that students, both men and women, whether they are from old (2013-2015) or recently admitted (2016 - 2017) in the institution, have learned little to control and consciously evaluate the functions, processes and characteristics that influence learning. From the theoretical point of view, this aspect of the strategies is related to self-regulation in the student, Pintrich & De Groot establishes its objectives based on the evaluation criteria, which correspond to the standards under which it will be evaluated. the activity that the student wants to achieve in the task. The students in the sample are not aware of their learning process. Have little time organization and do not identify the forms of study that are best adapted to facilitate their learning. This also implies gaps in the routine and studying habits.

The weakness of the Information Processing scores in students is notorious, so they do not manage to work with the information that is the object of learning. Likewise, there is evidence of weakness in the students, to orient themselves to make knowledge analogies, organize and structure the information for their comprehension, highlight the relevant information and integrate the contents with information techniques for learning. According to Panadero and Tapia (2014) [8] the strategic planning, is to develop an action plan and choose the right strategies to succeed in the task. Zimmerman (2008) [7], indicates that planning is a self-regulatory process par excellence, and is also a predictor of the success that will be achieved in the task: the longer planning time, the better results. By having weak information processing strategies can affect their expectations of self-efficacy producing demotivation and negatively affect their results. There is no difference between men and women independent of seniority in the institution. Little identify the form of study that best adapts to facilitate their learning for example the use of conceptual maps, underlining, identification of main and secondary ideas, summaries, drawings, perform exercises, take notes, etc.

In Resource Management Strategies, they are weak in students. That is, they can not control external aspects in the environment that influence learning because they can not control distracting factors such as noise, lighting, networks, music, space, temperature, among others, from the environment at the time of study, so that not being controlled by the student, affect their learning in some way. The resource environment control, is achieve creating an environment with the least number of distractions, and that facilitates the development of the task, increasing its effectiveness. Corno, likewise according to Panadero and Tapias (2014) [8], it is important that the student keep focused and use proper learning strategies for two reasons: first, so that they do not diminish their interest and motivation and, second, to achieve the learning objectives.

The position of young people with respect to dispositional strategies, is of little control over the study for self-motivation, persistence, perception of achievements (goals), voluntary attention, control of nervousness and distress. Attitudes towards learning and motivation are taken by parents and teachers, indicating that students do not learn because they are not motivated or are not motivated because they do not learn. Motivation directly influences the type of cognitive processes and learning strategies that the student sets in motion when faced with a learning task by Gonzalez Torres [14]. The author Ausubel (1983) also explains that motivation is necessary for learning, for the author the motivation for achievement is made up of various dimensions such as the cognitive impulse, the affiliative drive and the motivation for improving the self.

The research showed that the students in the sample have few conditions to achieve meaningful learning, they do not organize the information, they present insufficient relationships between previous knowledge and the new ones, since the important thing is not how the information is presented, but how the information is presented. New information is integrated into the existing knowledge structure. The students show little disposition towards learning, presenting little interest and belief in the study.

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