

## Identificación de obstáculos para el logro académico en una secundaria de Santa Clara del Cobre, Michoacán

*Identification of obstacles to academic achievement in a high school of Santa Clara del Cobre, Michoacán*

*Identificar obstáculos à realização acadêmica na escola Santa Clara del Cobre, Michoacán*

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### Resumen

Con el fin de identificar los factores que obstaculizan el logro académico de los adolescentes de acuerdo a los objetivos de la ley federal de educación del gobierno mexicano, se analizaron de manera cuantitativa los factores sociales, económicos y escolares de los jóvenes de una escuela secundaria en un municipio del estado de Michoacán. El presente trabajo está fundamentado en la información que se obtuvo de las entrevistas realizadas a alumnos, docentes y padres de familia, con una postura postpositivista de carácter descriptivo y documental. Los resultados fueron interpretados desde una perspectiva psicológica y pedagógica, para lo cual se consideraron principalmente las teorías psicoanalíticas de Ana Freud, Aberastury y Vigotsky, dentro del marco teórico motivacional y de necesidades básicas de Abraham Maslow. Asimismo, se analizó la influencia de la motivación en el desarrollo del adolescente y su aprendizaje, y se propuso la estrategia didáctica de modelación para mejorar el proceso de enseñanza

aprendizaje, la cual, de acuerdo con Arrieta, Canul, Martínez, Suárez et al., puede ayudar a que los jóvenes encuentren utilidad a las materias que se imparten.

**Palabras clave:** motivación, modelación, superación académica, obstáculos.

### Abstract

In order to identify the factors that hinder the academic achievement of adolescents according to the objectives of the federal law of education of the Mexican Government, were analyzed quantitatively the social, economic and educational factors of young people from a high school in a municipality of the State of Michoacán. This paper is based on information that was obtained from interviews to students, teachers and parents, with a post-positivist position of descriptive and documentary character. The results were interpreted from a psychological and pedagogical perspective for which were considered primarily psychoanalytic theories of Ana Freud, Aberastury and Vygotsky, within the theoretical framework of motivational and basic needs of Abraham Maslow. It also analyzed the influence of motivation in the development of the adolescent and their learning, and didactic Modeling strategy was proposed to improve the teaching-learning process, which according to Arrieta, Canul, Martínez, Suárez, and others, can help young people to find utility to the subjects that are taught.

**Key words:** motivation, modeling, academic improvement, obstacles.

### Resumo

A fim de identificar os fatores que impedem a realização de adolescentes em conformidade com os objetivos da lei federal de educação do governo mexicano, eles foram analisados fatores quantitativamente sociais, econômicos e educacionais de jovens em uma escola secundária em um município no estado de Michoacan. Este trabalho é baseado nas informações obtidas a partir de entrevistas com alunos, professores e pais, com uma postura pós-positivista descritivo e documental. Os resultados foram interpretados de uma perspectiva psicológica e educacional, para que considerou principalmente teorias

psicanalíticas de Ana Freud, Aberastury e Vygotsky, motivacionais dentro do quadro teórico e necessidades básicas de Abraham Maslow. Além disso, foi analisada a influência de motivação em desenvolvimento e aprendizagem adolescente, e estratégia de modelação ensinamento foi proposto para melhorar o processo de ensino-aprendizagem, que, de acordo com a Arrieta, Canul, Martinez, Smith et al. você pode ajudar os jovens a encontrar útil as matérias ensinadas.

**Palavras-chave:** motivação, modelagem, desempenho acadêmico, obstáculos.

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## Introduction

This study seeks to identify the problems faced by young students in their academic achievement in a secondary school in the town of Santa Clara of the copper, municipal seat of Salvador Escalante, Michoacán, Mexico.

According to Zorrilla (2004), the secondary education in Mexico is defined as the last stage of compulsory basic education, which consists of pre-school (with income of 3 to 5 years of age), primary level (from 6 to 11 years old) and secondary (12 to 15 years of age) level, which is considered a bridge between basic education and higher school education.

Since this school is the only public one in the population, accepts students up to 17 years of age, which in other schools of surrounding populations does not allow since SEP<sup>1</sup> marks as requirement have less than 15 years of age when you will enter the first grade. However, the mentioned high school offers "waiver of age", term that the SEP uses when it must be combated the educational backwardness caused by the insufficient number of schools. And

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<sup>1</sup> SEP. Secretaría de Educación Pública. Organismo Gubernamental encargado de la aplicación de la Ley General de Educación en México, así como de aquellas funciones de carácter educativo, científico, artístico, deportivo y cultural, programas de estudio y calendarios no reservados a los estados.

the majority of students attend school with worn shoes and uniform, indicating a low socio-economic level. This gives rise to the following questions: Why there is a difference in age between students enrolled in the same school year? Does social factors affect their academic performance? How do older students impact on the younger ones at school? How could they improve their achievement?

### **Methodology**

This research follows an approach quantitatively, in an postpositivista paradigm, opposed the dogma and rigidity, as well as descriptive and documentary, with a cross base. The data were collected at a time only, not experimental, since the phenomenon is studied in a natural way. The survey with a questionnaire which was applied in February 2017, supported on-the watch was used for data collection. The sample was of the type non-probability since so it suited the interests of research, respecting the anonymity of participants. The Likert scale was used to measure the variables. Three experts were consulted, who evaluated items in the questionnaire (Barraza, 2007) with a reliability of 0.850 at Cronbach's alpha. The items were presented through forms on Google, that were not ordered in dimensions to avoid that prior decisions were considered.

**Figure 1.** Items used in the student survey.

item	Totalmente desacuerdo	Desacuerdo	Indeciso	De acuerdo	Totalmente acuerdo
Me gustaría emigrar al extranjero porque se gana muy bien					
Amo a mi novi@ por eso tengo relaciones sexuales					
Tener sexo me hace ser popular con mis compañeros					
Cuando me aburro, tengo sexo					
Si tuviera sexo sería para saber qué es lo que se siente					
Busco en internet videos pornográficos					
Mis compañeros me han invitado a tener actividades sexuales					
Compañeros mas grandes que yo, me dicen como excitarme					
Me gusta entrar a facebook porque veo contenido sexual					
He dejado la escuela para ganar dinero					
Me gusta entrar a facebook porque veo contenido sexual					
Mis compañeros mayores me enseñan de sexo cuando platicamos					
He tenido problemas de conducta en la escuela					
Dejaría la escuela si me ofrecieran mucho dinero					
Cuando trabajo les ayudo a mis padres en el negocio familiar					
Me gustaría robarme a mi novi@ y vivir juntos					
He dejado de asistir a clases por ir a trabajar					
El tener un título universitario me permite ganar mucho dinero					
Me gustaria casarme, la escuela no es lo mío					
Estudio para tener una carrera universitaria					
Creo que la beca Prospera es para darme la oportunidad de estudiar					
Si tengo un título universitario tendré un empleo					
Soy beneficiario de una beca Prospera					
He iniciado relaciones sexuales					
Me iré a vivir a los Estados Unidos con un familiar para tener un auto					
He reprobado un año escolar					

## Development

Adolescence is one of the most complex stages of the human being, a period of transition from childhood to adulthood and in which men and women define their affective, psychological and social identity. It is a period of evolution that involves numerous physical, psychological and social changes. For Gesell, this stage extends from 10 to 19 years of age (Gesell, Bates, and Frances, 1997).

## The stage of coexistence

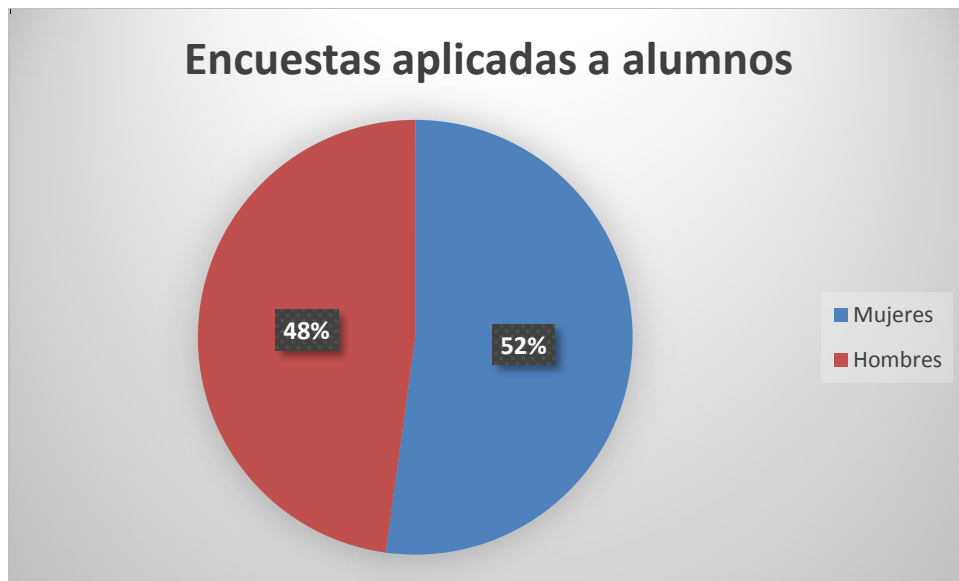
Young people experience various moods: anxiety, despair, sudden enthusiasm, school concern, desire for freedom, loneliness, rebellion, anger, intolerance; And begin to feel erotic attraction and in some cases to have suicidal fantasies. According to Freud, the adolescent experiences an emotional struggle in which his libido is no longer oriented towards his parents, but towards other types of objects; According to his theory, it is inevitable that the young man has narcissistic feelings when no external object is characterizing him (Freud, 1992).

Other emotions that appear in the adolescent are the urgency to satisfy his needs and very little tolerance to the frustration. The adolescent often presents emotional conflicts, for example, wanting to lock himself in his room and isolate himself from the outside world; So it can be affirmed that he begins to present a sign of maturity when he can spend time alone without feeling loneliness (Aberastury and Knobel, 1993).

In the sexual aspect, she is interested in autoeroticism and touching her genitals in an exploratory exercise, and along with genital development her interest in the opposite sex begins to appear.

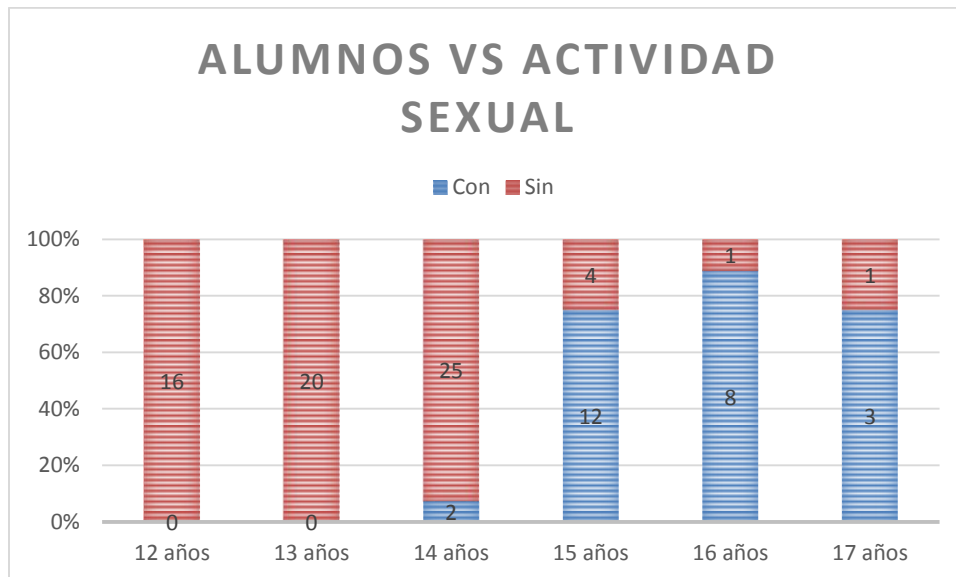
During the survey, 92 students of the institution (50 of the morning shift and 42 of the evening) were interviewed with the purpose of knowing their behavior in the stage of the secondary school.

**Figure 2.** Surveys applied to students.



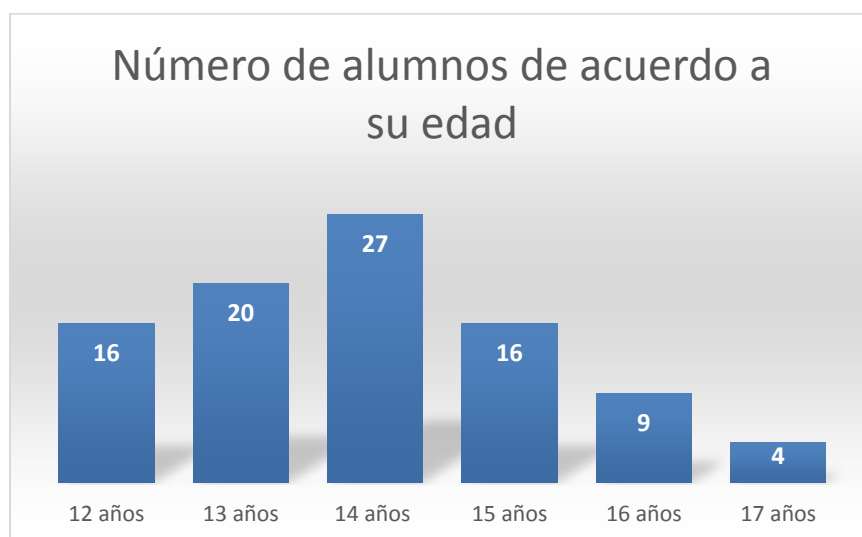
The results showed that the older students already started their sexual activity.

**Figure 3.** Students vs. sexual activity



They also said that their partners often invite them to engage in sexual acts, that the elders tell them how to play for pleasure, and that they also learn it through social networks, videos or talks with peers. They said that they often perform these practices to show off among themselves or out of curiosity.

**Figure 4.** Students grouped by age

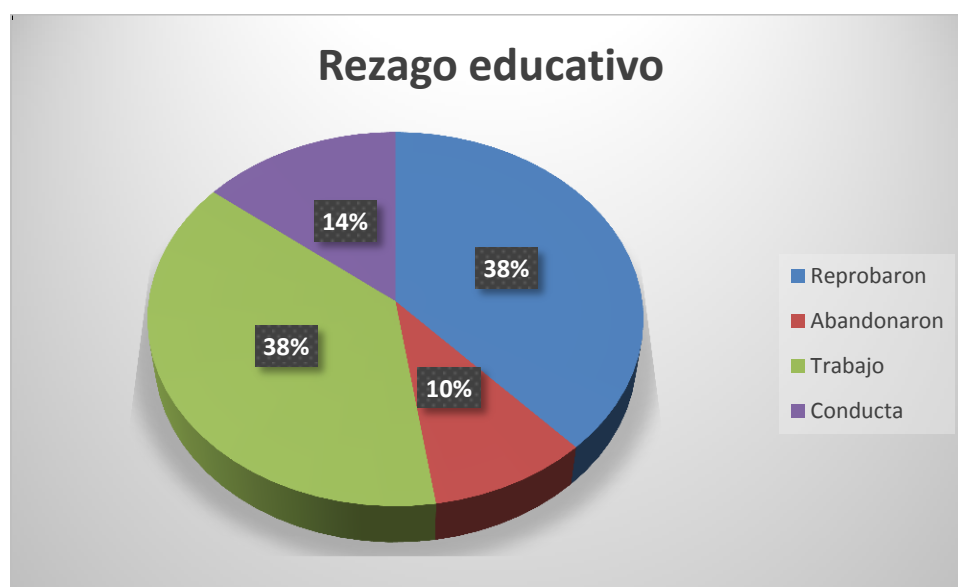


This leads them to the precocity and to put more interest in the sexual aspect, which entails situations like to live in pair or unwanted pregnancies, thus increasing the index of school dropout.

**Educational context**

This secondary school attends children of the municipality, as well as of surrounding communities; Those who attend on foot are generally on the morning shift, while those on the evening shift do so by public transport, although they are not allowed to leave for safety because of violence in the state of Michoacan. On the other hand, there are students whose chronological age does not correspond to their academic degree.

**Figure 5.** Causes of educational backwardness manifested by students



If the student has repeated a year only once, there is not much difference in his behavior in relation to his classmates, but if he is more than a year older than the others, he will be more likely to show different behaviors, which was corroborated by one of the school teachers , Blanca Estela Villagómez Salgado. For this reason, the age limit was set at 17 and the option of attending secondary school was given in a CEBA.<sup>2</sup>

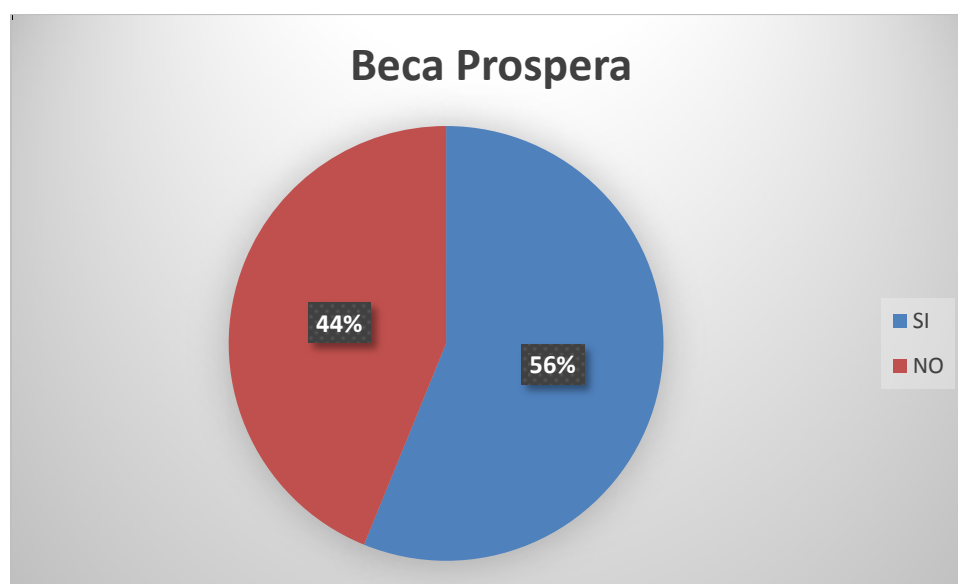
<sup>2</sup>CEBA. Centros de Educación Básica para Adultos que brindan los servicios educativos en alfabetización, educación primaria y educación secundaria, en modalidades, a todas



### *Economic context*

In elementary schools, support is provided to low-income students with the PROSPERA scholarship, which designates SEDESOL<sup>3</sup> after a socio-economic examination. More than half of the students have this scholarship, which is 175 and 1 350 pesos per month in the primary and high school levels respectively.

**Figure 6.** Students who claimed to be creditors of the Prospera Scholarship



In an interview, Medina Cruz (2016), mother of the family, said that thanks to this support, her children can continue to attend school, because otherwise she would have to put them to work in the field or copper. On the other hand, 13 students from the 92 who were interviewed acknowledged that they had to leave school to support their families financially.

### **Social context**

In recent years, a wave of violence has been unleashed in Michoacán and drug trafficking cartels recruit young people of low resources and schooling, promising them in return a life of luxury that easily dazzles them; In addition, they have the opportunity to belong to a

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aquellas personas que no ingresaron a la escuela en la edad reglamentaria o que habiendo ingresado en tiempo y forma la abandonaron sin haber concluido el nivel correspondiente.

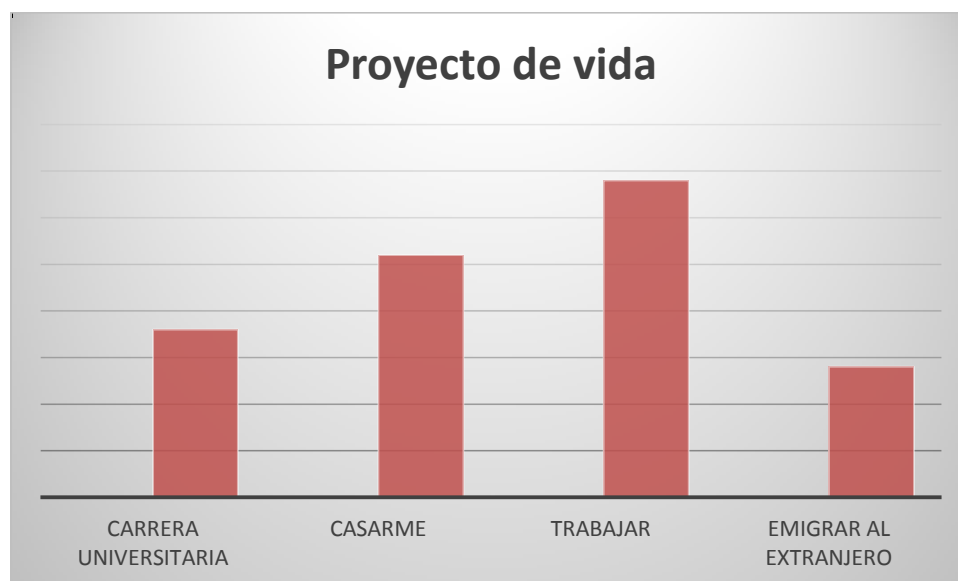
group and because they are minors it is believed that the laws do not punish them so harshly. However, many young people who enter this environment become addicted to drugs and become fugitives from justice, so they must flee to the United States.

Much of the population of this municipality lacks the basic studies, that is, it does not know how to read or write, while the rest studied only until high school, which has generated disinterest on the part of the parents in sending their children to the school; In general, do not see the benefit of academic preparation because they usually get involved in some family business or inherit it, which is traditionally copper in crafts. Many families make them their family business and, therefore, their way of support, thus neglecting academic preparation;

In certain seasons and in the nearby rancherías, the young people dedicate themselves to works of the field like the harvest, which generates absenteeism and school desertion.

Another problem that affects the state of Michoacán is migration. Much of the population, especially in the municipalities with the least resources, whole families risk their lives to emigrate to the neighboring country. They do it to improve their economy, since many live in precarious conditions, or simply to follow the family tradition.

**Figure 7.** Interests shown by students for the future



## **Proposal**

### **The theory of motivation in the student**

From the perspective of educational lag, failure or underachievement at school responds to the lack of "motivation." This means that motivation influences the success or failure of what is done since it is directly related to the behavior.

According to Aguado (2005), the motivation has an internal sense in the individual, because normally it is related to internal states of the individual, like desires, appetites, impulses or needs. In itself, the motivation contains those internal states that have to do with the different manifestations of the behavior. Motivation is what drives behavior. A behavior sustained by strong motivation is less likely to be overcome, so having a high level of motivation increases resistance to the negative effects of not getting what is expected or desired.

Aguado also points out that the motivation can be intrinsic, that is to say, when the impulse to do is born of the interest to obtain something; On the other hand, extrinsic motivation arises when one has the purpose of achieving something external or avoiding punishment; That is, that the motivation can have a different orientation depending on each case. This orientation is situational, that is, it refers to the motives underlying the behavior shown.

From his research, Vázquez defines motivation as that which drives the organism to action, and separates it into two motives: inborn or primary motives and secondary or learned motives. Inborn motives are understood as the physiological needs, ie, hunger, thirst, cold and heat, in order to find a balance between the medium of the internal and external organism, while the secondary motives are those that depend on an organism in particular and that are learned from stimuli that are transmitted from one culture to another. An example of secondary motive is the taste for music (Vázquez y Molina, 1968).

Vázquez also states that motivated behavior is directed towards the fulfillment of certain objectives, for example, if the student wants to approve a subject must study what is necessary to fulfill his objective, directing his behavior toward what satisfies said need.

Maslow's theory (1991), called the basic needs theory, presents a pyramid of 5 levels; For him an individual becomes motivated only when the needs of each rank are satisfied. Maslow classifies them according to their order of importance: in the first place appear the physiological necessities relative to the survival, like breathing, to drink, to feed, et cetera; Then there are the security needs, for example, feeling safe and protected, having a shelter from the inclemency of the climate, ensuring health, future food, money, transportation, among others; Then there are the social needs that refer to the need for love and belonging, friendship, social acceptance and group inclusion. Then the need for esteem, which has to do with the need for respect for oneself and which includes feelings such as trust, competence, mastery, achievement, independence and freedom. And finally there is the self-realization at the last level, where the growth motivation begins, the need to be and the self-realization. This is the highest psychological need of the human being, so he is at the top of the hierarchies, and it is through his satisfaction that a valid meaning is justified or given to life through the potential development of an activity, Which is reached when all previous levels have been reached and completed at least to some extent.

Vázquez and Molina (1968) mention that there are two ways in which motivation affects learning: drive (hours of deprivation) and incentive (quantity and quality of reward). The drive is the need to perform an act and the incentive is anything that provokes interest in the reward, which can decrease or increase a drive.

From the point of view of Abarca (2006), motivation can be created by external acts when awards are used (stars, gifts, a rating, etc.), or punishments (low qualification, no gifts, no exits, among others ) To provoke interest or need, although when applied the person can fall into the end of performing the action only to not be punished.

Teachers should provide experiences to young people who are related to their needs and tastes, so that they can be interested in learning activities in the classroom and keep them motivated.

If it is desired to motivate, it is important to consider the language of the individual to whom it is addressed. Language is expressed in different ways, so it is key to choose the appropriate readings and activities that allow the student to express their ideas. "The

student needs to find the right methods to approach the objects of knowledge" (Abarca, 2006).

For its part, Sonia Abarca (2006) mentions that all those responsible for education, parents, educators, church, among others, should be more committed to the mental health of young people in supporting the right to information, Free expression, care for the environment, use of new technologies, respect for life, among other aspects.

In order to be able to motivate, it is important to know the aptitudes and aspirations of each individual, and so assign work to them according to their possibilities, needs and preferences.

When talking about motivation it is also necessary to talk about motivation. In the academic area, it is very common for schools to regulate young people through rules that force them to complete a program, perform a large amount of homework and avoid punishment. Learning in this way is not seen as pleasurable but as an obligation, which causes young people to act only so as not to receive punishment. Many occasions are not taught methods of study and students passively wait for the teacher to tell them what to study and how to do it, while the teacher expects them to do what he tells them without giving them tools to follow new paths.

The youth is also discouraged when he is punished by taking away activities that are important to him, such as recess, when he is spoken with severity or contempt when he says that he does not have a certain level of intelligence, or when he is ridiculed or exposed In front of his companions.

All this happens because indifference is shown in knowing and satisfying their interests or needs.

Student Eduardo Pureco Aguilar, third grade, said that he stopped attending classes because of constant reprimands he received from a teacher. He claimed that he had failed several subjects and that aside from that the teacher punished him when he did not do the work, taking away the right to go to recess or play soccer. This caused him a great lack of interest

in studying, so he seriously considered dropping out of school. El alumno continued his studies, although his school performance is still low and may fail again.

### **Cognitive theory: socio-historical learning of Vigotsky**

Vygotsky's theory studies two lines of mental development: natural (spontaneous, biological) development and artificial (social, cultural) development, which are closely related to each other. In the field of education the most important is artificial development. Education is the artificial development of the child, as it is not only limited to cognitive development activities but also to the functions of behavior. Education is not only about the acquisition of information, but also a source of artificial development.

Among them is the Zone of Near Development (ZDP), which is interpreted as "the space in which thanks to the interaction and help of others, a person can work and solve a problem or perform a task in a way and with A level that would not be able to show individually" (Martínez, 2008).

There are multiple forms of adult care in the area of proximal development; These include imitation of attitudes, examples presented to the child, questions of a maieutic nature until concepts are discovered, the effect of adult supervision, and collaboration in shared activities as a factor in development. "In each student and for each learning content there is an area that is about to be developed and another that is out of reach at that moment" (Reinoso, 2009).

"The teacher takes as its starting point the knowledge of the student and based on these provides the necessary help to carry out the activity. When the point of departure is too far from what is intended to teach, the student has difficulty intervening with the teacher, is not in a position to participate and therefore can not learn" (Carlos Lorenzo, 2003).

The student can not ignore everything, because at least it presents a knowledge base, of own experience that allows him to develop ideas, thoughts, reasonings and, from them, learning. When this learning is pointed out and linked to an aspect of everyday life or gives it meaning, it becomes meaningful learning. But for this he has already passed the stage of metacognition, that is, the regulation of his own learning.

## **Modeling**

Modeling is a teaching method at all academic levels, as it allows students to learn in an applied way the other areas of knowledge and improve their reading, interpretation, formulation and problem solving skills (Biembengut and Hein, 2004).

This is due to the enormous social need to find practicality in the knowledge imparted in the school, that students have the ability to relate each subject to daily life and find its utility, which is not far from reality, That is not obsolete and that this knowledge serves to pose alternative solutions to real and current problems.

Modeling should be integrated into teaching and learning because:

- Allows to enrich the understanding of extra-mathematical phenomena, since it provides diverse representations of these phenomena and gives meaning to the different mathematical activities (Suárez, 2008).
- It does not simply attempt to expand knowledge but to develop a particular way of thinking and acting, producing knowledge, coupled with abstractions and formalizations interconnected with phenomena and empirical processes considered as problematic situations (Bassanezi, 1994).
- Motivates the learning process and helps to establish cognitive roots on which to construct mathematical concepts; Has as purpose to analyze events that are lived day by day and thus to see to the mathematics like a tool to describe, to analyze and to understand situations of the daily life. Blomhoj points out that it is important to add modeling for different purposes, such as the culturalization of mathematics and to form a critical attitude towards established models (Blomhoj, 2004).

Modeling has the function of incorporating all the knowledge to analyze, reflect, argue, give a reactive and proactive solution to problems formulated in the school environment and with the other individuals with whom it coexists. It helps to understand the world around us and in greater depth when we present mathematical concepts.

Arrieta, Canul, and Martínez (2005) assume that the social context within the classroom is enriched when the arguments that propose the structure of a phenomenon interact.

The teacher can rely on modeling to relate mathematical concepts to the real world so that students can appreciate mathematics more. It is possible that in modeling they find a way to modify reality by posing real and current problems that touch their sensitivity (Castro and Castro, 2000).

## **Conclusions**

This leads us to think about the problems that would arise if young people of different ages are mixed in the same grade level. If the student enters the secondary level with more than fifteen years of age will be very focused on their sexual changes, which will cause mental confusion in their peers, who still do not cross that stage. In adolescence is when curiosity tends to appear for pornographic magazines and interest in clothing, hairstyles and certain dances.

The majority of the students expressed great disinterest for striving in their academic formation, since they lack motivation to enter to the classes, that consider nonsense. It is more important for them to become independent from their parents and to form their own family even before finishing high school; Many leave school to devote themselves to housework in the case of women, or to a job that helps them to earn an income, being very common the desire to emigrate to the United States in search of a better life. In order for the motivation to have a good academic preparation to thrive, it is necessary to convey the benefits of study and knowledge, because only then can they become interested in them. The above can be done through didactic sequences, learning theories linked to applications in daily life, learning modeling in order to make learning meaningful, collaborative work with psychologists, social workers and teachers who seek and interact with appropriate teaching strategies And innovative for young people from rancherías. The teacher must make plans, always updated, based on the needs of each student in charge. In addition, new teaching strategies, for example, innovation in textbooks, should be taken into account in such a way as to be attractive to self-study.

According to OECD reports (2015), Mexico is stuck in reading and comprehension skills, and has shown little improvement in math skills. It is well known that the subject of mathematics is one of those that has historically presented the highest rates of reprobation;



The student finds difficulty in applying his theorems, axioms and definitions in everyday life. International tests on learning indicate that students show deficiencies in reading and writing, as well as in thought and mathematical reasoning, the basis of learning other sciences: history, chemistry, physics, biology, and so on. If the student lacks the ability to interpret a text or perform operations, it will be difficult to understand and learn the rest of the areas of knowledge.

The modeling strategy can link the theoretical with the practical. For this reason, teachers should be trained in this area. While it is true that many international tests are based on problem solving, the modeling strategy acts in the opposite direction, but with greater anchoring of learning, thus allowing the construction of knowledge.

Many schools in other Michoacan communities and in the rest of Mexican territory are in a very similar situation to that of the federal secondary in study, so the strategies mentioned here could also be applied in those places.

We believe that SEDESOL, in addition to encouraging parents through scholarships, should provide them with awareness-raising talks so that they become involved in the academic development of their children. The support of psychologists, physicians and teachers from the same high school can help guide parents to cooperate in the vocational training of their children, who ultimately must contribute to the development of the community. At the moment these awareness talks are being held, however, we must expect the results of their impact on the young and the parents. It is planned to evaluate the modeling of a group of this secondary to complement the present study.

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