Journal of Teaching and Educational Research

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The works must be unpublished and refer to topics of methodology, sociology of education, language and culture, history of education, adult education, language science, compared education, special education and other topics related to Humanities and Behavioral Sciences
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Presentation of the content

In the first article we present *The motivation to study of the student in security sciences and forensic sciences* by LUCIO, Rodolfo & SESENTO, Leticia, with adscription in the Universidad Michoacana de San Nicolás de Hidalgo and Colegio Primitivo y Nacional de San Nicolás de Hidalgo, in the next article we present *Validity and reliability of a rubric to assess didactic lesson planning of preservice teachers*, by BRITO-LARA, Maribel, LÓPEZ-LOYA, José and TOBÓN, Sergio, with adscription in the Escuela Normal Superior Oficial de Guanajuato, Servicios Educativos del Estado de Chihuahua and Centro Universitario CIFE; in the next article we present *Learning strategies mediated by technology: students' perception,* by FLORES-GONZÁLEZ, Efigenia & FLORES-GONZÁLEZ, Norma, with adscription in the Benemérita Universidad Autónoma de Puebla, in the next article we present, *Tutoring fundamental tool for university students,* by PONCE-CONTRERAS, María Guadalupe, GONZÁLEZ-ÁLVAREZ, Mireya del Carmen, PÉREZ-BRIONES, Nancy Griselda and TELLO-GARCÍA, María Ascención, with adscription in the Universidad Autónoma de Coahuila.

Content

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Article   **Page**

</div>

The motivation to study of the student in security sciences and forensic sciences

La motivación al estudio del estudiante en ciencias de la seguridad y ciencias forenses

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Abstract

Motivation has been indicated as the engine for the success or failure of learning processes, although its origin continues to be a topic of permanent discussion. The objective of the present work was to know the level of motivation to study in the students of the Bachelor of Science in Security of the UMSNH. The applied methodology was quantitative and correlational with a non-experimental design. The instrument used was the Educational Motivation Scale (EME). The results show, the main intrinsic school motivations are: "I find satisfaction and I like to learn new things", followed by "I like to see that I surpass myself" and finally "it will allow me to choose a job in the branch that I like. ". Based on the extrinsic motivations they are: "to lead a comfortable life later", "because education better prepares me to pursue a career later" and finally "Why do I think that more years of studies increase my professional preparation". Teachers have a decisive role to provide confidence to the student, be empathetic and be in constant training that allows us to teach motivating classes for our students.

Resumen

La motivación ha sido señalada como el motor para el éxito o el fracaso de los procesos de aprendizaje, aunque su origen sigue siendo un tema de discusión permanente. El objetivo del presente trabajo fue conocer el nivel de motivación al estudio en los estudiantes de la Licenciatura en Ciencias de la Seguridad de la UMSNH. La metodología aplicada fue cuantitativa y correlacional con un diseño no experimental. El instrumento que se utilizo fue la Escala de Motivación Educativa (EME). Los resultados muestran, las principales motivaciones escolares intrínsecas son: "encuentro satisfacción y me gusta aprender cosas nuevas", seguido de "me agrada ver que me supero a mí mismo" y por último "me permitirá escoger un trabajo en la rama que me guste". En función a las motivaciones extrínsecas son: "llevar una vida cómoda más adelante", "porque la educación me prepara mejor para hacer una carrera después" y por último "Por qué creo que más años de estudios aumentan mi preparación profesional". Los docentes tienen un rol determinante para brindarle confianza al alumno, ser empáticos y estar en constante capacitación que permita impartir clases motivadoras para nuestros alumnos.

Motivation, University, Intrinsic, Extrinsic

Motivación, Universitarios, Intrínseca, Extrínseca

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Introduction

School motivation reaches a special care since the role of the teacher in the XXI century will be increasingly complex; It is important to recognize that we all need to be motivated to live. When we transfer this natural need to formal environments and contents of institutionalized education, the motivation to learn is not always specified or shown with intensity. Everyone is concerned with knowing cases of more or less motivated students or more motivated students at some moments than others.

It has been recorded that motivational processes have a precise influence on successful school performance and on the initiative to promote learning that consolidate lasting motives, establishing interests and values that lead students to reflection and autonomous development (Aebli, 1991).

Motivation has been recognized as the engine for the success or failure of learning methods, however, its principle continues to have an argument for permanent discussion. In the special case of university students, who have chosen a career that they will practice during their existence, the argument between the supposed will to learn and the limited usefulness of doing so is even more surprising.

School dropout is a social educational problem, which is showing more and more incidence in Higher Level Institutions. For this reason, it is intended to know the level of motivation to study presented by upper-level students of the Security Sciences and Forensic Sciences career.

It has been established that motivational methods assume substantial dominance in successful school performance and in the disposition to attenuate learning that strengthens lasting motives, forming benefits and values that move students to reflection and free progress (Aebli, 1991).

Numerous authors have ventured into the definition of motivation towards university studies.

Motivation, according to Valle et al. (1997) is what causes an individual to decide to pursue university studies and stay in the classroom and is given by the pursuit of certain academic and personal goals. Motivation means movement towards the achievement of goals, and according to González (2005) this movement is conditioned by attitudes, which he defines as the capacities to respond favorably or not to certain stimuli, in this case related to learning, success academic and acceptance by teachers and fellow students.

Educators have to reflect on their process of teaching motivation; conceive that, if their students are not motivated, it would probably be one of the sources of school failure; so much so that motivation clearly influences learning; That is why it is one of the main objectives of teachers to motivate their students, since their success or frustration in university classes depends on that (Polanco, 2005).

From a historical approach, Abarca (1995), shows motivation as a phenomenon developed by several elements, which are manifested and absent according to the articulation determined by economic, social and cultural phenomena, for which, it concerns relate specifically to each of the subjects.

Development

It is important for the university student to be motivated, when the benefit of their learning is provided in the contour of knowledge, since the learning achieved provides them with extension in their designated profession and gives them one more step in the goal to achieve the academic end. (Polanco, 2005). A motivated student is a scholar who manifests constancy in the benefit of her career or when carrying out her university task. It is essential that the student is motivated to learn and a teacher who loves his subject, with excellent tools to teach it (Rinaudo, de la Barrera & Donolo, 1997). However, the situation of being motivated or not to learn significantly not only rests largely on the will of the students, but also in an indisputable part by the authority of the environment that surrounds them. It is essential to point out that the school context and the teacher have an essential role in motivation, therefore, the necessary measures must be considered to consolidate the management of the aspects that manage to specify the motivational fabric of the student's action.

Motivation is considered as the level that students have to strive to achieve academic goals.

For some teachers, motivation is appreciated as the level at which students work to achieve academic goals that they see as beneficial and meaningful. From the perspective of the teacher, it means motivating the student to do something, through promotion and awareness (Campanario, 2002). Motivating means inclining the student to actively participate in class commitments. The purpose of motivation is to move profit and control energies to achieve certain goals.

Characteristics of low motivation

Low motivation generates, in the first place, a state of anxiety, which has been evaluated by Rinaudo et al. (2003). The cause of this concern lies in the fact that students consider themselves poorly prepared for their academic performance, and it is a manifestation that has been scarcely studied since it is found on a psychological level, so it is not easy to quantify. Instead, one of the easily recognizable traits in poorly motivated students is absenteeism. Camargo (2010) notes the causes that originate absenteeism, and it is interesting that many of them can be attributed to the role of the teacher, and corrected with motivational actions:

- The methodological preparation of the subject does not correspond to the proposed objective; activities are not aimed at achieving goals; the classes are monotonous and boring for lack of the presentation of concrete cases that conform to the theory seen; there is no appropriate tone of voice from the teacher, which prevents students from being distracted; the time the subject is taught is not appropriate.

- There is no credibility in the teacher's abilities; he does not inspire respect or authority and his behavior is fearful, or he has no experience in managing groups, he has doubts in what he expresses; does not use an adequate teaching methodology and does not adequately prepare the classes; the explanations to the questions posed by the students are confusing and unsatisfactory.

- The teacher lacks an open and participatory method of presentation; does not give the student the opportunity to honestly express the reasons for their disagreement and lack of interest; it does not determine states of satisfaction among students; the student shows fear towards the teacher because of the way he directs academic practice; there are harsh criticisms of the teacher towards the student, who ridicule the latter.

- The excess of confidence between the teacher and the student makes the latter attend when he pleases; there are no levels of demand on the part of educators; the teacher constitutes a bad example because of his lateness or absence.

- Students are pressured to achieve the objectives established in some subjects, presenting excessive drasticity in teaching practice; the student obtains negative results and rejects the subject and the teacher.

- The student fixes the idea that the subject he is attending is not of great importance and suffers from an excess of confidence to pass it.

Other students with poor motivation do not adopt absenteeism as behavior; however, they show apathetic behavior: they remain silent in the activities, they refuse to answer questions or they try not to be designated to answer them, they do not deliver the assigned tasks on time. This type of behavior is fully conscious, and aims to avoid group rejection (Polanco, 2005). For what has been called avoidance.

The avoidance strategies that students develop have been analyzed by Hayamizu and Weiner (1991) and have as a common denominator the distrust of the negative judgments of teachers and classmates (Rodríguez et al., 2001). Faced with a motivational stage that forms tension, the avoidance of the unpleasant scenario is sought, and the affected person engages in explicit work and tendencies to reduce tension. In the best of cases, students are more anxious to pass than to learn (Míguez, 2005).

Avoidance is grouped with a negative pattern of motivational beliefs (Urdan and Schoenfelder, 2006; Gámez et al., 2008). The ordinary propensity of this type of student, in the long term, is the abandonment of the race, but at this end it is reached by the path of learning problems.

Types of motivation

Intrinsic: intrinsic motivation is based on internal factors such as self-determination, curiosity, challenge, and effort, which emerge spontaneously due to internal tendencies and psychological needs that promote behavior without any extrinsic rewards (Reeve, 1994). Thus, intrinsic motivation will decrease if own feelings of competence and self-determination are reduced, which leads to two types of intrinsically motivated behavior, one occurs when the person is comfortable but bored and therefore motivated to find stimulation, and the another involves mastering challenges (Good and Brophy).

The cognitive approach to motivation emphasizes the intrinsic principles of motivation, such as research, profit for the job itself, a taste for learning, and a recognition of success. In other words, intrinsic motivation is that motivation associated with activities that are in themselves their own reward. Therefore, the student would prefer a career based on the aspiration to learn, by a recognition of firm success in knowledge, etc., is guided by internal rewards. Finally, humanistic approaches to motivation emphasize self-independence, autonomy, and particular effort, the theory emphasizes intrinsic motivation. One of the most notorious authors of the approach is Abraham Maslow who has enjoyed formidable recognition in motivational psychology. Specifically, he proposed that human needs are hierarchical and that they tend to be satisfied according to their order. (Fadiman and Franger, 1979 p, 355-356).

Extrinsic motivation: this changes in relation to the autonomy that the subject has, categorized from less to more self-determined, which allows making a distinction between external, introjected, identified and integrated (León, 2010). Therefore, a person is extrinsically motivated towards an activity when there is a benefit from it.

Methodology

To know the level of motivation to study in students of the Bachelor of Science in Security of the UMSNH. A mixed methodology with a qualitative and correlational inclination was used with a non-experimental design. The instrument used is the Educational Motivation Scale (EME), which is a quantitative technique that is made up of 28 items distributed from 4 items that evaluate the 3 types of intrinsic motivation (MI) to knowledge, achievement and experiences stimulatory, 3 types of extrinsic motivation (EM) external regulation introjected regulation, identified regulation and motivation. For the application of the instrument, a non-probability sampling was applied to 149 students. The systematization of the information consisted in the elaboration of frequency tables to identify the needs to work in the coordination of tutorials.

In the data analysis, the intrinsic motivation of the students is predominantly observed, as shown in the following graph the main intrinsic school motivations are: "I find satisfaction and I like to learn new things", followed by "I like to see that I improve myself "and finally" it will allow me to choose a job in the branch that I like".

INTRINSIC MOTIVATION
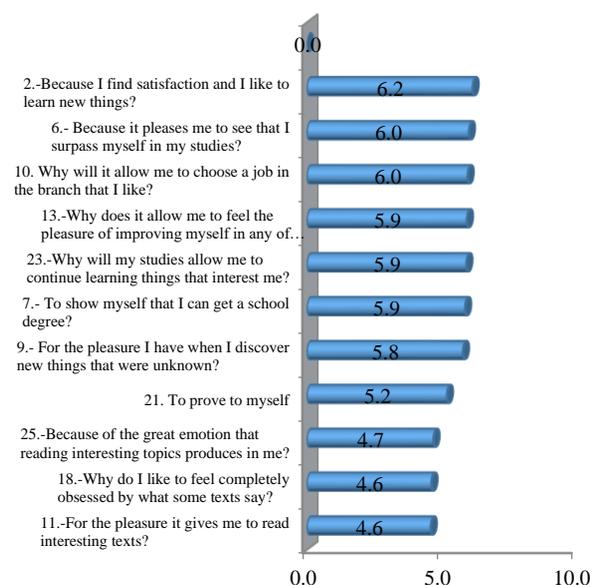
Graphic 1

On the other hand, based on extrinsic motivations, according to the data we can highlight that the three main ones are; "Lead a comfortable life later", followed by "because education prepares me better for a career later" and finally "Why do I think that more years of studies increase my professional preparation".

EXTRINSIC MOTIVATION
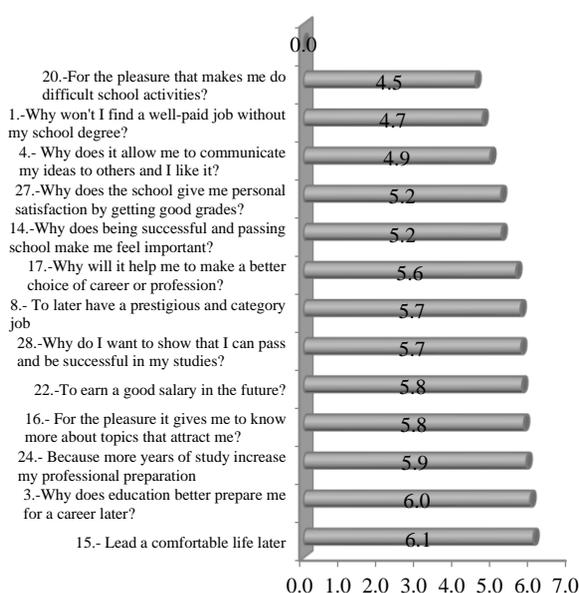
Graphic 2

Regarding non-motivating behaviors in young people, the perspective of "before I was encouraged, but now I don't know if I should continue" stands out, followed by "honestly, I have the feeling of wasting my time here".

NON-MOTIVATING BEHAVIORS
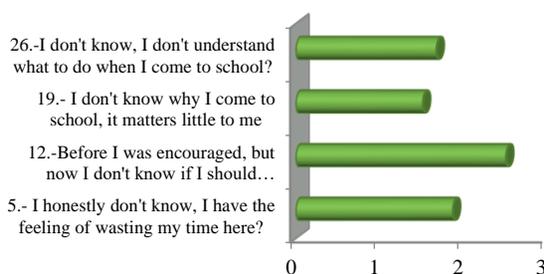
Graphic 3

Results

The intrinsic motivation of the students, the main intrinsic school motivations are: "I find satisfaction and I like to learn new things", followed by "I am pleased to see that I surpass myself" and finally "it will allow me to choose a job in the field that I like".

Therefore, there is an area of opportunity for teachers of this career that corresponds to be used by teachers and the appropriate option would be the application of active strategies.

In terms of extrinsic motivations, according to the data we can highlight that the three main ones are; "Lead a comfortable life later", followed by "because education better prepares me for a career later" and finally "Why I think that more years of studies increase my professional preparation." To enhance this type of motivation, teachers have a decisive role as they must provide confidence to the student, be empathetic and be in constant training that allows motivating classes for students; It is essential to include educational resources with which students are familiar in the classroom.

Regarding non-motivating behaviors in young people, the perspective of "before I was encouraged, but now I don't know if I should continue" stands out, followed by "honestly, I have the feeling of wasting my time here". It is essential that the coordination of tutorials work with the students who present this type of answers since they will be the ones who possibly abandon the degree.

Discussion

Most of the surveyed students report a high level of motivation and self-efficacy beliefs; They are distinguished capable and competent to solve actions that are posed to them, possibly, a greater assignment to tasks and cognitive responsibility will help them to have better achievements (Huertas, 1997). The university teacher is challenged at this time to an atmosphere of change that demands to take a different role (Rodríguez, 2002); It not only belongs to him to be a scholar in his field, an expert in methodologies and, but he demands to be a guide and reviewer of the student's intellectual formation. It is essential to transform the traditional role of teachers to a role of transmitter of knowledge, to achieve the role of organizer and guide of learning, facilitator who prepares contexts, originates, locates on methods, shows basic research, raises databases for consultations, tutelage and appreciate the preparation of exercises (Álvarez and García, 2002; González and Wagenaar, 2003).

In university tutoring it is recognized as a dynamic connection point of the academic, specific and professional pedagogical matter of the student, focused on forming entrepreneurial students who know and manage to organize their adequate work as students and future independent professionals.

The pedagogical support is essential to form this knowledge, since it is presumed that they do not develop spontaneously (Vélez, 1999). Thus, the need to teach how to use learning strategies is proposed, since, however, students also learn, despite the fact that they are not taught, the fact of doing so manages to benefit quality learning. Burón (1996) argues that it would be appropriate to provide a 'turn in instruction', so that it not only lies in teaching disciplinary content, but also offers to teach students to develop effective learning strategies.

The university professor is forced by a combination of tasks inherent to his function and, at this moment, it seems utopian to reconsider that complying with all of them requires time and effort to dedicate to rethinking about how to help in aspects such as motivation and the use of learning strategies by students. The instructional effort required by this approach is considerable, but the favorable theoretical foundations and the favorable results that are stored in research exploited in the educational field stimulate to prolong the energies in this sense (Vélez, 1999). Furthermore, we conceive that it is not a question of worrying about perfect teaching or expecting teachers to be perfect. In their context, they would have to work towards excellent teaching, one that enjoys the motivations and thoughts of others, and that provides significant experiences and achievements both from an emotional, professional and cognitive point of view.

Conclusions

It is essential to know the level of motivation to study in the students of the Bachelor of Science in Security of the UMSNH, so that the coordination of tutorials can work with them, the type of motivation in which they are low and raise awareness among teachers so that they assume a precise role since it is important to give confidence to the student, to be empathetic and to be in constant training that allows sharing motivational classes for students.

This can be, as a simple example, the incorporation of the use of social networks, applications, websites, subject web, among other technological educational resources. To maintain the interest of the student, the natural energy of the student must be harnessed to appreciate herself capable and oriented towards the achievement of goals. It is necessary that you do voluntarily what you are expected to do; and develop your skills to achieve the desired goal. Thus, the more capable a student feels to develop an activity, the more motivated he will be to persist in it, in turn, it will give him the feeling of success or improvement and help him stay motivated. The teacher must bear in mind that the student needs the possibility of exploring options; receive positive feedback on your strengths and weaknesses.

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Validity and reliability of a rubric to assess didactic lesson planning of preservice teachers

Validez y confiabilidad de una rúbrica para evaluar planeaciones didácticas en la formación docente inicial

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Abstract

It is presented the results of a study whose purpose was to reliability and validity of building an analytic socioformative process rubric to evaluate didactic planning in Teachers during their training process for Basic Education. The study involved 226 teachers. At first, reliability was determined through the Alpha Coefficient by Cronbach, having as a result .703. Results show that the instrument is reliable. Afterwards, an exploratory factorial analysis (AFE in Spanish), was carried out through the Maximum Authenticity Method with promax rotation and cluster analysis. This analysis showed the existence of a factor that explains 53.046% of the variance and is consistent with didactic planning. There was no need to eliminate any item according to the results of the factorial analysis. From these studies on, it can be conclusive that the target rubric of study has the adequate levels of reliability and construct validity. It is necessary to carry on new studies to confirm the results.

Resumen

Se presentan resultados de un estudio de confiabilidad y validez de constructo de una rúbrica socioformativa analítica para evaluar planeaciones didácticas en docentes en proceso de formación inicial para la educación secundaria. Participaron 226 docentes. Primero se determinó la confiabilidad mediante el Coeficiente Alpha de Cronbach, la cual fue de .703, este resultado muestra que el instrumento es confiable. Posteriormente, se hizo un análisis factorial exploratorio (AFE) mediante el Método Máxima Verosimilitud, con rotación promax y con análisis de clúster. Este análisis mostró la existencia de un factor que explica el 53.046% de la varianza y es consistente con la planeación didáctica. No hubo necesidad de eliminar ningún ítem de acuerdo con los resultados del análisis factorial. A partir del estudio, puede concluirse que la Rúbrica objeto de estudio posee adecuados niveles de confiabilidad y validez de constructo. Es preciso realizar nuevos estudios para confirmar los resultados encontrados.

Didactic lesson plan, Reliability, Rubric, Teacher training, Validity

Confiabilidad, Formación docente, Planeación didáctica, Rúbrica, Validación

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Introduction

The professional practice of teaching implies a high degree of responsibility because through it, actions are materialized whose purpose is the achievement of the educational goals set out in the curriculum. In the case of Mexican basic education, from the initial training of teachers and their entry into the professional teaching service, there is a demand for the development of a series of competencies which will enable them to carry out such a relevant social task (DOF 2000, 2003, 2004, 2012a, 2012b, 2012c, 2012d; SEP, 2017), understanding as a competence the mobilization of diverse knowledge to face a specific challenge, situation or problem (Perrenoud, 2008). Such requirement is increasingly a priority in view of the need to have better pedagogical preparation of teachers (OECD 2010 in Nava & Rueda, 2014) and as an element to overcome the challenges that education represents in diversified contexts and even with adverse conditions (UNESCO, 2014).

In the case of Bachelor's degrees for the initial training of teachers in the last stage of basic education in Mexico[1], one of the competencies foreseen in the graduation profile refers to the design and organization of didactic strategies and activities "adapted to the needs, interests and forms of development of adolescents, as well as to the social and cultural characteristics of these and their family environment, so that the students reach the purposes of knowledge, development of skills and value formation established in the plan and programs of study of secondary education" (DOF, 2000, p.). 3), as well as the implementation of these.

Such design and organization, known as planning or didactic planning, is a fundamental element of the educational task that teachers carry out in their professional practice (Díaz, Ruiz-Tagle, Tagle & Alarcón, 2016; DOF, 2011; Perrenoud 2008; Tobón, Pimienta y García, 2016); it is also part of the observation and teaching practice activities carried out by student-teachers in training from the third to the eighth semesters of their studies (SEP, 2002a; SEP, 2002b).

This is articulated from the knowledge that they are building with the treatment of the subjects that make up the curriculum map of that degree, although they have a course aimed at the systematic study of didactic planning and the evaluation of learning in secondary education. Such planning is constituted as a reference for the evaluation of the learnings, as well as for the follow-up of the operation of the mentioned educational program of teacher training. But, how are we conceiving the didactic planning? In terms of the proposals made, we are not referring to a bureaucratic requirement or administrative element (Abdullah, Idris, Grani & Sembak; 2015; Dueñez & Barraza, 2015), but rather to an academic resource of the teachers (in service and in the process of formation) without which it would be unviable that the educational goals set forth in the curriculum be transformed into meaningful experiences to promote learning in the students. In this sense, didactic planning is an intentional, complex, reflexive, creative, dynamic and flexible process whose goal is to propose the best possible learning scenario to help students achieve the educational goals set for a given course or subject, considering the context in which the teaching activity takes place as well as the diversity of the students being served, their needs, their previous knowledge and their potential (Amer, Jamil & Ayaz, 2014; Caballero, Briones & Flores, 2014; Dueñez & Barraza, 2015; Pino, Hernández & Hernández, 2015; Young & Luttenegger, 2014. This planning can be short or long term; the first one implies preparing one or several class sessions articulated around a topic, the second one implies the preparation of a complete subject or course (Koni & Krull, 2015). It is the first one that is carried out by the student-teachers in training.

From the socio-educational point of view, didactic planning demands integral actions from the teacher to generate and organize significant situations so that students achieve an integral education by tackling the problems of the context, through collaborative work and the use of information and communication technologies, considering entrepreneurship through transversal projects, the management and co-creation of knowledge and metacognition (Tobón, Pimienta & García, 2016).

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[1] Mexican basic education comprises three educational tracks: preschool, primary and secondary. The first and third are three years long each, and the second is six years long.

In addition to comprehensive performance, suitability is required based on previous criteria established in the context of the action that account for the effectiveness and relevance of the execution; likewise, ethical commitment and continuous improvement through permanent reflection is required (López & García, 2012; Tobón, Pimienta & García-Fraile, 2010; Tobón, 2013).

The process of educational planning is made concrete in a design or written document known by the same name or as a class plan (Ascencio, 2016; Trevizo & Heiras Islands 2015; Dueñez y Barraza, 2015; Pino, Hernández & Hernández, 2015). This document is a tool that provides guidelines for continuous improvement because it allows reviewing, analyzing and reflecting on the intervention in the classroom before, during and after it (DOF, 2011; Mendoza, 2011 in Pino, Hernández & Hernández, 2015; SEP, 2011; Tobón, Pimienta & García, 2016); it also represents a device to infer the development of skills, as a result of a complex process of didactic configuration, which helps in the evaluation of learning (Marín, Guzmán, Márquez & Peña, 2013).

In the didactic planning (document) it will be necessary to express what the students are expected to learn, how and with what the didactic process will be carried out, and how the achievement of learning will be verified (Guzmán, 2013; Moreno, Irigoyen, Acuña & Yerith, 2016; SEP, 2011; Tobón, Pimienta & García, 2016). As a procedural knowledge, it demands to consider a series of criteria, among them: to select didactic strategies that propitiate the mobilization of knowledge oriented to the achievement of the expected learning and the development of competences; to design the adequate didactic situation or situations to generate such achievements and with it, the most adequate type of activities; to define performance evidences that provide information regarding the students' learning; to select the necessary resources; to define pertinent evaluative strategies and with it, the selection of techniques and the design of pertinent instruments to value the learning.

This requires relevant, reliable and valid instruments that help teachers in training to elaborate the didactic planning and make possible the continuous improvement. However, in the literature, there are no instruments that have adequate levels of validity and reliability in Mexico (Madrigal & Solís, 2016; Brito, Herrera & Florez, 2016). Although there are multiple resources for evaluation with a formative sense (Marín, Guzmán, Márquez & Peña, 2013), a socio-educational rubric was chosen because it represents an alternative that favors the evaluation of performance and contributes to the improvement of people's performance when faced with problems of the context, based on evidence, as shown by recent studies (Cardona, Vélez & Tobón, 2015, 2016; Hernández, Tobón, González & Guzmán, 2015).

In consideration of the above, the goals of the study that is the object of this article were the following: 1) to determine the reliability of a socio-educational rubric for the evaluation of didactic planning in the initial training of secondary school teachers; 2) to carry out a factorial analysis of the rubric to establish its validity as a construct; and 3) to determine if it is necessary to eliminate indicators from the rubric according to the reliability and validity analysis. In this way, it is expected to contribute to strengthen the necessary instruments to improve teaching practice, considering the challenges of the knowledge society and the application of the socio-educational approach.

Methodology

Type of Study

An instrumental study (Montero & León, 2007) was carried out on the psychometric properties of an analytical socio-educational rubric to evaluate and improve teachers' didactic planning. Specifically, a study of reliability and construct validity was made. Reliability refers to the consistency of the scores given by evaluators to a test and indicates the degree to which the instrument's items are correlated (Celina & Campos, 2005); construct validity refers to the degree to which an instrument represents and measures the theoretical concept or variable it is intended to measure (Hernández, Fernández, and Baptista, 2014).

Instrument

An analytical socioformative rubric was used for the study. This type of instrument consists of a double-entry table in which each of the criteria of the competence is related to levels of mastery of the performance indicators, whose specification of the components allows a punctual and detailed feedback on the evidence being evaluated (Hernández-Mosqueda, Tobón-Tobón & Guerrero-Rosas, 2016; Tobón, 2017). The heading used is composed of four axes 1) formal data, 2) didactic activities, 3) educational resources, and 4) evaluation of learning (Annex 1). Each dimension is evaluated through four levels of mastery, following the socio-educational taxonomy: receptive, resolutive, autonomous, and strategic. The rubric was validated from its use in the evaluation of two didactic plans for secondary schools: project for the subject of Spanish II and didactic sequence for Mathematics III.

Participants

This study involved 226 teachers (185 teachers in initial training and 41 teacher trainers) from the Escuela Normal Superior Oficial de Guanajuato (ENSOG), Mexico. This institution has two campuses, one in the capital city of Guanajuato and the other in the municipality of San José Iturbide. The participants were selected for their experience in the design of didactic plans. Of the teachers in training, 31% are women and 69% men; of the teacher trainers, 49% are men and 51% are women.

Statistical Analysis

The reliability analysis was carried out by means of Cronbach's Alpha Coefficient, which evaluates the magnitude of correlation between items. A coefficient of 0 means no reliability and 1 represents maximum reliability. In order to establish construct validity, exploratory factorial analysis (AFE) was carried out using the Maximum Likelihood Method, with promax rotation and cluster analysis to determine the grouping of items. There was one missing data (the participant marked all the descriptors of each indicator) which generated that the analysis will be carried out with 225 cases.

We began by determining whether the items are sufficiently interrelated, a necessary condition for applying the AFE (Martínez, Hernández & Hernández, 2014; Pérez & Medrano, 2010). For this purpose, Pearson's correlation coefficient 'r', Bartlett's sphericity test and Kaiser-Mayer-Olikin's (KMO) sample adequacy measure were used. In this test, the null hypothesis H0 "variables are not correlated" and the alternative hypothesis H1 "variables are correlated" were considered, with a significance level of .05. Subsequently, to identify the number of underlying factors, the percentage of variance explained by the factor structure was calculated and to confirm the factor extraction, the sedimentation plot or Scree test was used. For the statistical analyses, the software SPSS 24.

Ethical Aspects

The participation of teachers in training and teacher trainers was requested on a voluntary basis, indicating that the information they provide would be used for research purposes and that their data would be protected, in accordance with the Law on the Protection of Personal Data in force in the Mexican Republic (DOF, 2010).

Results

Reliability

The results shown in Table 1 indicate that the 4 items present in their entirety an ac = .703 and an ac st = .704, which indicates that the instrument is acceptable (George & Mallery, 2003). The intercorrelation is xintercorrelational, which indicates that the items present good interdependence, with oscillation of r^2 .303 to r^2 = .428.

Variables	Ac	αc st	Xintercorr.	Os – R^2
4	.703	.704	.373	.303 to .428
αc = Cronbach's Alpha. αc. St = Cronbach's Alpha standardized Xintercorr. Intercorrelational mean Os- R^2 =Minimum and maximum R^2				

Table 1 Cronbach's Alpha results

Validity of construction

Regarding the correlation between variables, in terms of Pearson's Correlation Coefficient 'r' and based on the data presented in table 2, it is identified that there is significant correlation between the variables (Perez & Medrano, 2010).

Pearson Correlation	Ind.1	Ind.2	Ind.3	Ind.4
Indicator (Ind.)1	1	.368**	.303 **	.380**
Indicator (Ind.)2	.368**	1	.364**	.396**
Indicator 3	.303**	.364**	1	.428**
Indicator 4	.380**	.396**	.428**	1
Sig. Bilateral = .000				N= 225

Table 2 Correlations (Pearson's correlation coefficient 'r')

As for the Bartlett KMO Test and Sphericity Test, based on the data presented in Table 3, we can identify and confirm that the correlation of the items is acceptable (KMO = .744). Likewise, the results of the Bartlett sphericity test allow us to reject the null hypothesis H0 "the variables are not correlated" and to accept the alternative hypothesis H1 "the variables are correlated", identifying that such correlation is significant.

Kaiser-Meyer-Olkin measurement of sampling adequacy		.744
Bartlett Sphericity Test	Approx. Chi-square	147.896
	gl	6
	Sig.	.000

Table 3 KMO and Bartlett test

The above results support the relevance of the exploratory factor analysis.

Variance explained

The factorial analysis presents only one latent factor (hypothetical variable) that explains 53.046% of the variance, which shows a factor with considerable weight in the evaluation of didactic planning. The other percentage (17.590, 15.474 and 13.889, respectively) would show the weight of the other variables in the subjects' responses.

Sedimentation graph

As shown in Figure 1, according to the inflection point of the graph, there would only be one significant factor (main component).
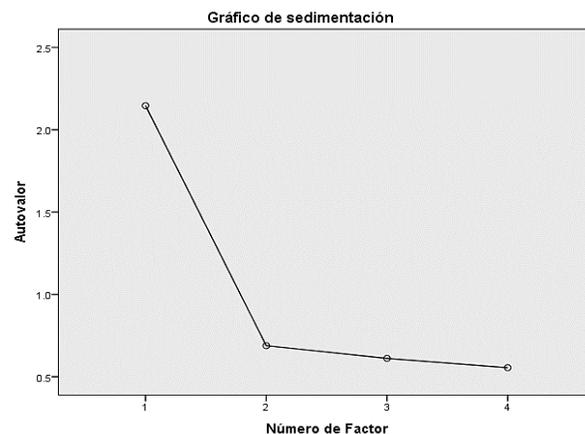
Figure 1 Sedimentation graph

Factorial analysis

Based on the factorial analysis, whose results are presented in table 4, it is identified adequate factorial load of all items, so it is not necessary to eliminate any.

Indicator 1	.694
Indicator 2	.732
Indicator 3	.718
Indicator 4	.767

Table 4 Component Matrix

Promax rotation

As only one component has been removed, the solution cannot be rotated.

Cluster analysis

Based on the dendogram (figure 2), we identify that the variable "indicator 1" is widely separated from the others. This leads us to point out that it is a variable with independence from the others, which could be explained because the aspect considered by this item has to do with data that frame the didactic planning (name of the school and of the participants in the teaching-learning process, curricular data - name of the subject, theme, expected learning, etc.-) which, in general, are formal aspects (except for the expected learning that is directly related to the contents of the other items). The second cluster (integrated by indicators 2, 3 and 4) represents that the values of these are closer to each other and their link is less independent; however, a subgroup is observed in the latter with items 2 and 3 themselves, which maintain a close proximity between their values.

BRITO-LARA, Maribel, LÓPEZ-LOYA, José and TOBÓN, Sergio. Validity and reliability of a rubric to assess didactic lesson planning of preservice teachers. Journal of Teaching and Educational Research. 2020

This interrelationship between the last three items is consistent with the postulate of the construction of the instrument, and so is the relationship between items 2 and 3, which correspond to the aspects of educational activities and resources for the development of these.
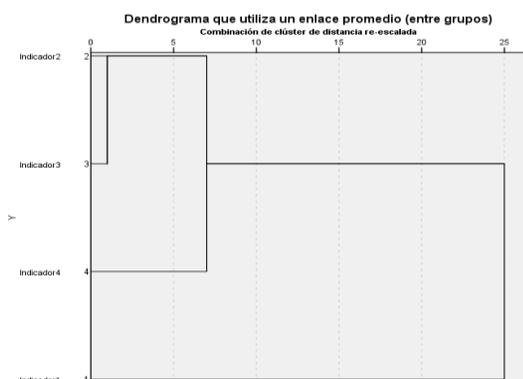
Figure 2 Dendogram of items of the heading

Discussion

The results of the study show that the analytical social-formative rubric to evaluate the didactic plans of secondary school teachers in initial training has adequate levels of reliability and validity. These are two essential aspects of the research instruments to ensure that the information they provide is useful and reliable. According to George & Mallery (2003) and DeVellis (2003), values between .70 and .80 indicate that an instrument has acceptable to good reliability. On the other hand, regarding construct validity, correlation values above .300 are reasonably high and an item is considered to identify a factor well when it has a weight of at least .700 (Morales, 2013). Therefore, in general, the aforementioned heading complies with these references in the literature.

Other instruments have been proposed to evaluate didactic planning in initial teacher training, such as the Double Entry Matrix to evaluate didactic planning of students in the last grade of the Bachelor of Arts in Secondary Education with a Specialty in Telesecondary Education (Brito, Herrera & Flores, 2016); Rubric of evaluation of teacher candidates. Appropriate Practice Model (Bryant, Maarouf, Burcham & Greer, 2016) and Instrument to evaluate the teaching practice of students in the Bachelor of Primary Education (Sariñana, 2016).

However, the analytical social-formative rubric that is the object of this study has several benefits over the referenced instruments, such as 1) it addresses the essential aspects of planning in a simple manner, focusing on the essential axes of the process, without too many details that make planning tend to be addressed in a bureaucratic manner by teachers; and 2) is based on a taxonomy focused on training people for the knowledge society, based on four levels of mastery -receptive, decisive, autonomous and strategic- (Tobón, Pimienta & García, 2016; Tobón, 2017).

The proposed rubric addresses planning from the perspective of socio-education, the latter being a training approach of Latin American origin focused on forming people with a solid ethical life project who, through transversal projects, undertake actions through collaborative work that contribute to improving and transforming the adverse situations they face in the region (Tobón, González, Nambo & Vázquez, 2015; Tobón, 2016). However, further studies are needed to help determine its validity and reliability in other settings, such as the case of teachers versus groups in secondary schools, since this research was done in the framework of a normal school that offers initial training programs for teachers at that level of education.

Appendix 1

Rubric for evaluating educational plans of SLE students

Instructions: Review the didactic planning. In the "Assessment" row of each indicator mark, using ✓, the level of achievement you consider. Finally, write down the main achievements identified, notes and specific suggestions to improve the didactic planning reviewed.

BRITO-LARA, Maribel, LÓPEZ-LOYA, José and TOBÓN, Sergio. Validity and reliability of a rubric to assess didactic lesson planning of preservice teachers. Journal of Teaching and Educational Research. 2020

Indicators	Descriptors (Levels of achievement)			
	Under	**Acceptable**	**Well**	**Excellent**
1. The formal data that frame the didactic planning correspond to the curriculum and the program of the subject established by the educational authorities.	At least it contains: name of the participants in the didactic process (group, teacher in training and tutor), subject and expected learning.	It contains the information required by the high school. It includes: name of the high school, the subject and the participants in the educational process; expected learning; name of the way of working (educational sequence, project, etc.); and number of sessions in which what is planned will be developed.	There is a correspondence between the expected learning expected and the other curricular elements described. There is a title (of the project, teaching sequence, etc.) that corresponds to the expected learning.	In the formal data, the curricular elements (expected learning, competencies that are favored, block, contents, etc.) correspond to the curriculum and program of the subject - in force - established by the educational authorities, both in content and writing. The title is creative and helps to capture the students' attention.

Weighting (optional)

Rating

| 2. The didactic activities promote the development of competences, are congruent with the didactic approach of the subject and the characteristics of the students. | The activities correspond to an external work proposal (textbook, other teacher, etc.) in which the foreseen programmatic contents are addressed; or they are oriented to the learning of disciplinary knowledge (know how to know). | The activities correspond to a proposal integrated by the teacher in training; they are congruent with the expected learning and involve addressing problems of the context - real or simulated. They are articulated, at least, in three didactic moments: 1. Beginning (framing and analysis of previous knowledge), 2. It indicates what the students will do and what will be left to the teacher. | The activities correspond to the didactic approach of the subject, the characteristics of the students and the needs of the context. There is an interdependence between them and they are written in a clear, precise, concise way without spelling errors. Strategies are included that encourage the integrated mobilization of knowledge. For its approach, diversified forms of organization are proposed -individual, group, team- that allow strengthening and following up individual and interpersonal processes. | The activities encourage collaboration and inclusion, and consider the specific learning needs of each student. They address transversality and linkage with other subjects, and encourage the participation of different actors. They have an impact on the resolution of the problem with one or several relevant evidences. |

Weighting (optional)				
Rating				
3. The educational resources are congruent with the didactic activities and diversities of the students.	Educational resources available in the classroom are indicated. It is proposed to use them as teaching means or oriented to the learning of disciplinary knowledge (know how to know).	Classroom educational resources are indicated according to the teaching activities.	Diverse educational resources are indicated, taking into account the interests of the students, their multiple intelligences and learning styles. The use of information and communication technologies is established for the achievement of expected learning and the development of competencies.	Actions are indicated to manage, create and/or adapt one or several resources by the teacher in training and/or students, considering special needs and inclusion. The resources are diversified, and accessible inside and outside the high school.
Weighting (optional)				
Rating				
4. The evaluation of learning is established, through evidence and instruments, within the framework of formative evaluation.	Instruments are noted that evaluate mainly quantitative aspects; or it is proposed to evaluate only at the end of the didactic process.	Evidence and tools congruent with the expected learning are noted.	The evaluation is proposed as part of the didactic activities, it allows the emission of judgments and the assertive feedback to improve what has been done. It is proposed to evaluate at the beginning, development and closing of the didactic process. Evidence and instruments are noted (the latter are attached) that allow the evaluation of the diverse knowledge of the competencies based on performance levels, considering the qualitative and quantitative.	Evaluation is proposed with continuous improvement activities, metacognitive and inclusive actions, as well as collaborative processes between students and student-teachers. The appropriation of the instruments by the students is sought.
Weighting (optional)				
Rating				
EVALUATION	**Achievements**		**Note**	**Suggestions for improvement**
Self-evaluation				
Co-Evaluation				
Heteroevaluation				

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Learning strategies mediated by technology: students' perception

Estrategias de aprendizaje mediadas por tecnología: percepción de los estudiantes

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Abstract

Nowadays, the incorporation of technology in the educational field has transformed the scenario of the teaching-learning process, generating a change in the role of its actors, where it determines the vertices of the perfect triangulation between teachers, students, and content (Coll, 2011). Therefore, it is crucial to explore the virtual universe and implement technology-mediated learning strategies that promote the appropriation of knowledge and assess students' perceptions to contribute to new virtual teaching proposals. This research aims to explore the students' perceptions of the Regional Enrique Cabrera Barroso High School, BUAP, regarding the use of strategies applied in the Schoology platform to promote Biology learning. For this, a descriptive quantitative study was carried out in a focus group using a Likert-type scale questionnaire, obtaining the following results: the students demonstrated a high level of satisfaction with the virtual course evaluating virtual strategies as an ad hoc complement to achieve the learning objectives. They also stated that the assimilation and appropriation of knowledge depend on those technology-mediated strategies, contributing to a highly positive perception.

Resumen

La incorporación de la tecnología en el ámbito educativo ha transformado el escenario del proceso de enseñanza aprendizaje en la actualidad, generando un cambio en el rol de sus actores, donde los vértices de la triangulación perfecta entre docentes, alumnos y contenidos está determinada por esta (Coll, 2011). Por ende, es crucial explorar el universo virtual e implementar estrategias de aprendizaje mediadas por tecnología que contribuyan a la apropiación del conocimiento; además de valorar las percepciones que poseen los estudiantes para contribuir a nuevas propuestas de enseñanza virtual. Esta investigación tiene como objetivo explorar las percepciones de los estudiantes de la Preparatoria Regional Enrique Cabrera Barroso de la BUAP con respecto al uso de estrategias utilizadas en la plataforma Schoology para promover aprendizajes de Biología. Para ello, se realizó un estudio cuantitativo descriptivo en un grupo focal utilizando un cuestionario de escala tipo Likert, obteniendo los siguientes resultados: los estudiantes demostraron un alto nivel de satisfacción con el curso virtual evaluando las estrategias virtuales como un complemento *ad hoc* para alcanzar los objetivos de aprendizaje y afirmaron que la asimilación y apropiación del conocimiento dependen de las estrategias mediadas por la tecnología, contribuyendo así a una percepción altamente positiva.

Learning strategies mediated by technology, Perception, Virtual environment

Estrategias de aprendizaje mediadas por tecnología, Percepción, Entorno virtual

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Introduction

Currently, it is impossible to glimpse the learning process without the presence of technological tools, which requires a modification to the educational scenario, specifically in the dynamics and interaction of its actors (Sigalés, 2002).

That change contributes to the development of virtual learning environments and the way of producing and socializing knowledge by experimenting with different alternatives for information management and learning as well as modifying the time and space within educational systems (García, 2015).

In addition to the above, the applications used in the virtual environments advances and renewed by leaps and bounds, taking different nuances, and on few occasions, the way students live and face changes are valued or considered (Blocher & Sujo, 2002; Peña & Nicholls, 2004). Moreover, making decisions to guide the online teaching process and differentiate between meaningful and mechanical learning is vital to solving problems regarding the implementation of educational technology at schools.

At this point, the Regional Enrique Cabrera Barroso High school requires to evaluate a techno-pedagogical course to design or redesign it according to students' demands. Thus, it is fundamental to investigate the perception that students have regarding the use of strategies on the Schoology platform and identify their benefits and difficulties.

Based on the above, the present study seeks to answer the following research question: What are the perceptions that students of the biology subject have regarding the use of operable strategies on the Schoology platform?

Literature review

The following section addresses the key concepts that give theoretical support to the study.

Learning strategies mediated by technologies

The selection and implementation of strategies are necessary to define a teaching model for a specific area like biology and conceptual change to achieve the learning process in a virtual modality.

There are different definitions of the term learning strategy. However, for the present study, it is a tool that promotes the deconstruction of knowledge to guarantee meaningful long-term learning.

Types of learning strategies.

According to Monereo & Castelló (1997), there are cognitive strategies that let students analyze, classify, distinguish, and synthesize during their learning process. For Pozo & Postigo (2000), instructional strategies are to search, analyze and choose whereas, for Mayer (2014), learning strategies are classified based on learners' purpose as to recover, systematize and integrate information. Moreover, Oxford (1990) considers the metacognitive strategies that regulate students' learning process by planning, monitoring, and self-evaluating.

Taking into account Dembo et al. (2006) and Ally (2004), self–regulation strategies are essential in the virtual learning context because they foster students' autonomy, organization, and responsibility to accomplish their work. Finally, Osses (2007) distinguishes the metacognitive strategies as the actions that guide students at knowing their mental processes.

The previous conceptions are neither antagonistic nor exclusive. On the contrary, they interact in the learning process according to the students' purposes. That is why incorporating technologies in teaching is another strategy to actively engage students in the learning process through the use of applications, which help them to learn concepts by visualizing new information.

Perceptions towards implementing technology for the teaching-learning process

Due to the time that we are experiencing, online learning has become the principal medium of teaching. Then, all levels of education are investing time in designing courses, developing teachers' and students' ICTs knowledge and skills, looking for new applications or digital tools to provide a suitable learning process according to students' needs and demands.

Besides, there are different studies which point out the outstanding results of using platforms and a big variety of apps to teach, as well as methodologies and approaches to do so (Flores-González, 2019; Dorup, 2004; Flores-González, & Fernández-Crispín, 2019).

Other studies state that the prosperity and effectiveness of integration and implementation of technology through online learning or blended learning modality depend to some extends on teachers' attitudes and decisions of how to use it in or outside their classrooms (Van Reijswoud, 2009; Jackson, 2013; Roach, 2010; Bullock, 2004).

The following lines describe perceptions of technology implementation in education.

Perceptions	Authors
The inclusion of technology in education is related to the teachers' attitudes towards computers.	(Yuen & Ma, 2001)
Implementation of technology motivates and engages students in their learning process.	(Halat, 2013; Godzicki, Godzicki, Krofel & Michaels, 2013; Heafner, 2004)
Students use technology for educational purposes.	(Ehrlich, Sporte, & Sebring, 2013)
The use of technology and social networking sites promote learning not only in students' mother tongue but also in a foreign language at students' pace.	(Flores-González, Castelán-Flores, Zamora-Hernández & Flores-González, 2019)
Technology, in its multiple varieties (platforms, applications, digital tools, web pages, and in general web 2.0 and 3.0 tools), allows teachers to innovate their teaching process.	(Eckstein, 2009; Zimlich, 2015; Mulrine, 2007)
Technology is seen as a medium to promote inclusive education.	(Futurelab, 2009; Floyd & Judge, 2012)

Table 1 Perceptions of technology implementation in education

However, what happens when students and teachers face the change of moving their traditional classroom and their face-to-face sessions to virtual or blended learning modalities?

There are many aspects to work on to achieve meaningful learning, which is one of the final purposes of the teaching performance since there are many studies based on educational technology, but an enormous gap in the research related to students' adaptability towards online education.

At this point, various factors are essential to make decisions regarding instructional designs. For instance:

- What to include in an instructional design.

- How to implement it.

- What resources are necessary to work on this modality.

- What strategies are suitable to guide the instructional model.

- The most important, what the students' perceptions are towards the use of such modality so that students' characterization of perceptions provide the guidelines for improving, designing, and redesigning it.

Virtual environment

Virtual learning spaces are knowledge management networks that contribute to the comprehensive training of students. They are considered scenarios with a formative and active purpose that contributes to face-to-face, online, and blended learning (Silva, 2011).

According to Benítez (2000), the virtual environment must take into account a techno-pedagogical design that contributes to the mobilization of conceptual (thematic contents), attitudinal (behavior, and values that the student possesses), and practical knowledge (skill development).

Besides, the active role played by educational actors in virtual education privilege the construction of learning from interactive processes.

Therefore, the objective of a virtual environment is to promote an ideal environment for interaction between educational actors, evaluation, and monitoring of the learning process that guarantees the achievement of the purposes of a study program.

This space favors the mobilization and socialization of knowledge efficiently and at low cost since the economic value of traditional (face-to-face) training is significant compared to the virtual one (Chan, 2004).

All in all, a virtual learning environment offers a space for accessing secure information (it has a username and password), where interactions between educational actors, strategies, and resources take place (Bustos & Coll, 2010; Belloch, 2012). Then, this space contributes to tasks developed in class thanks to the availability of tools, which displace face-to-face environment adaptable to the users' needs.

Methodology

The present educational research is based on a quantitative approach with a descriptive scope since it investigates the students' perceptions about the use of technology-mediated strategies on the Schoology platform.

This methodology provides clear answers to specific questions and allows us to understand the object of study from the subjects' perspective and their interaction in a given context (Flick, 2015).

Instrument

In this case, Casal's instrument (2010) was recovered and analyzed to select and adjust items to the context and needs of the research. Based on it, the questionnaire for collecting data in the present study consisted of 10 closed-response items with a Likert-type scale to identify the perceptions regarding the quality of the learning strategies operable in the Schoology platform and their impact on behalf of students. Moreover, this focussed group took a treatment that comprises an instructional model based on technology-mediated strategies for three months. After it, they answered a questionnaire to measure their perceptions towards such an instructional model.

Sample

The target population was second-grade students from the Enrique Cabrera Barroso Regional, BUAP.

The sample consisted of 36 students whose ages were between 16 and 17 years old, and they share interesting crucial specific features for the present research like:

- Lack of scientific previous-knowledge in biology.

- Alternative ideas or mistaken concepts about the evolution of biology.

- Lack of scientific knowledge.

- Similar socio-cultural context.

The next section analyzes the results based on each item from the questionnaire.

Results

Thirty-six subjects answered the questionnaire to know their perception regarding the use of strategies to promote conceptual changes in Biology on the Schoology platform. It allowed not only to identify the results of the application of these strategies but also to characterize subjects' perception as followed.

Item 1

Virtual strategies are a complement that helps to achieve learning objectives
**N=36**
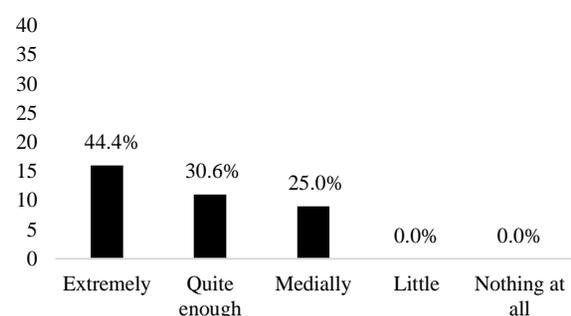
Graphic 1 Virtual strategies as a complement to achieve learning objectives

As can be seen in graphic 1, the majority of the sample evaluates it with a high perception since subjects affirm that virtual strategies are a complement that helps them a lot (44.4%) or quite enough (30.6%) to achieve their learning objectives.

Besides, any student perceives the use of virtual strategies as a means or complement not useful, so this corroborates what several authors have concluded regarding their usage and recommend them as potential learning tools (Hernández, 2015; Nóbile, 2015; Castevich et al., 2015). The subjects' perceptions also match with the Marqués' assumptions (2000), who conceives virtual strategies as a means for the appropriation of knowledge and development of skills that contribute to achieving learning objectives.

Item 2

**To what extent virtual strategies contribute to the appropriation of knowledge**
N=36
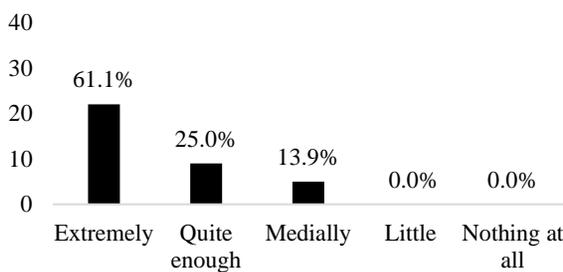
Graphic 2 Appropriation of knowledge

61.1% state that virtual strategies contribute a lot and (25%) quite enough to the appropriation of knowledge. Additionally, 13.9% mention that it only helps them medially. These findings corroborate what Flores-González et al. (2019) concluded in their study by describing learning strategies as generators of discussion, reflection, and analysis for the apprehension of knowledge.

Item 3

The quality of the strategies compensates for economic investment
N=36
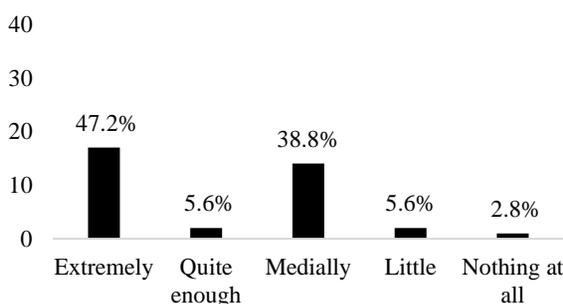
Graphic 3 Quality of strategies in comparison to subjects' economic investment

It is essential to mention that due to the geographic region and location of the sample while implementing this project, it implies an economic students' investment regarding access to the platform and commuting from their house to an internet center and vice-versa.

That is why it is crucial to know if the quality of the strategies and work on the platform compensated for such economic investment.

As can be seen in the graphic, 47.2% are satisfied and equate the investment made as acceptable due to the quality of strategies and work on the Schoology platform.

It corroborates Chan's affirmations (2004), who considers that appropriate knowledge through an instructional design mediated by technology has a real and accessible economic value. Besides, 38.9% perceive it as something acceptable, 5.6% as quite acceptable, 5.6% as very unacceptable, and finally, 2.8 as not acceptable at all. However, more than half of the sample perceives it as something positive and valuable.

Item 4

The strategies implemented in the virtual space are versatile
N=36
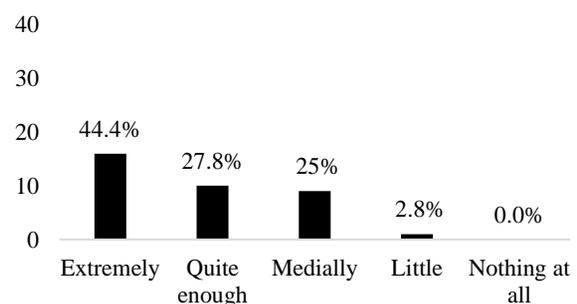
**Graphic 4** *Variability of strategies implemented in the virtual space*

The activities hosted on the platform foster the appropriation of subjects' new knowledge through the implementation of a great variety of strategies.

It also allowed them to develop autonomy, self-regulation of their pace learning through their alignment of their learning styles and practices in immediate contexts, obtaining meaningful learning.

To the extent of maintaining the previous parameters, the activities demand the use of different strategies, which was perceived by the subjects as positive. Indeed, 72.2% of the sample recognized them as quite enough or extremely versatile, while 25% not entirely different.

These results are favorable because Sangra (2001) mentioned that the use of different strategies provides a symbiotic regulation with the way students assimilate the concepts in the learning process, contributing to long-term learning and avoid rote learning.

Item 5

**Strategies promote conceptual changes**
N=36
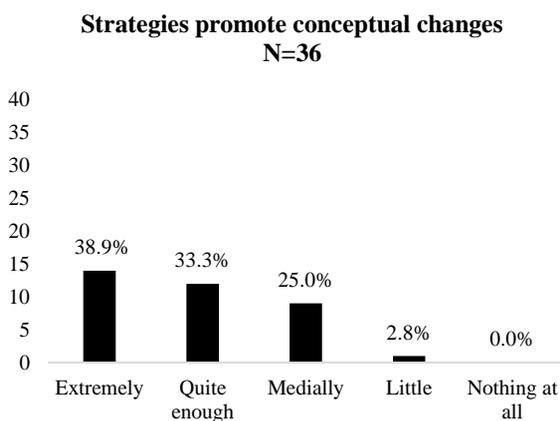
Graphic 5 Promoting conceptual changes

72.2% of the sample considers that the strategies do promote conceptual changes. Proof of this is the deconstruction of erroneous concepts or alternative ideas that guide to the understanding and assimilation of acceptable scientific concepts in biology. Therefore, conceptual clarity is decisive for metacognition by permitting subjects to migrate into an active and prepared scenario to build new knowledge.

It also confirms the information from different studies where strategies are an elementary component in the design of the educational process because they generate conceptual structures with relationships of meanings. Besides, they detonate subjects' interest to explore, access to prior knowledge, and comparison patterns, privileging the associative learning through readings and hosted material on the platform.

Item 6

**Strategies promote interactive activities**
N=36
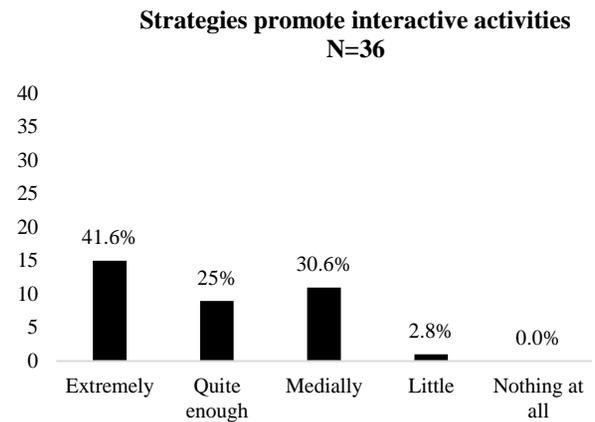
Graphic 6 Promoting interactive activities

As can be seen in the graphic, more than half of the sample (66.7%) identifies that the strategies do promote interactive activities. It means that said virtual strategies allow the development of exercises or practical assumptions where students actively interact in tasks applying their knowledge to transfer them into something operative and dynamic in their immediate contexts (García, 2001).

Applying strategies in interactive activities guides and organizes subjects' learning process by reaching and consolidating what they learned. Furthermore, they review outstanding aspects of the unit, self-regulate their learning, assimilate new ideas by integrating them with their previous ones, favoring the transfer of what they had learned in other situations critically.

Item 7

Virtual strategies allow clarity and accuracy in the learning process
N=36
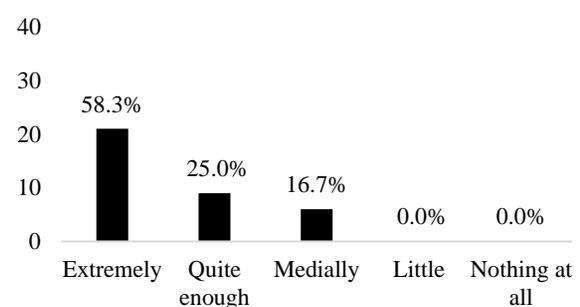
Graphic 7 Clarity and accuracy in the learning process

In the following graphic, the results show that 83.3% perceive that virtual strategies provide clarity and accuracy to their learning process.

It implies that subjects consider those virtual strategies as a guide in their process of building knowledge because they help them to plan and organize their time, space, and interaction according to the resources they have.

The results also show that this techno-pedagogical design leads students' learning process because of its essential features to promote conceptual changes that are the following:

-        Definition of purposes.

-        Specification of generic and disciplinary competencies.

-        Identification and implementation of cognitive, metacognitive, and self-regulatory strategies mediated by technology.

-        Elaboration of instruments to evaluate according to the interactive activities.

-        Selection of a virtual environment.

It is essential to mention that these results corroborate what different authors have concluded regarding the importance of virtual strategies in terms of their impact on the appropriation of knowledge (Alarcón, 2014; Lozano, 2010).

Item 8

The didactic methodology addresses different learning styles
**N=36**
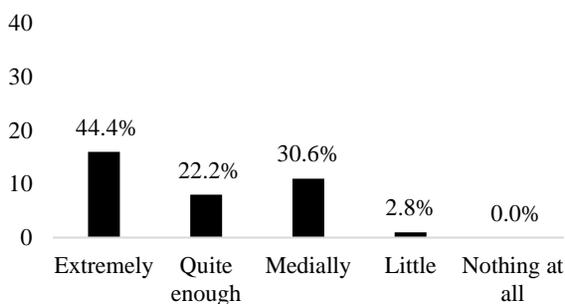
Graphic 8 Learning styles

Taking the above into account, 66.6% of the sample affirms that the didactic methodology used in the platform match their learning styles due to the flexibility of the instructional design in terms of schedules, distance, scenarios, and ways of learning.

According to Díaz and Hernández (2001), a didactic methodology based on the variability of virtual strategies allows satisfying different learning styles, content structure, and the relationship between materials and activities.

Moreover, the learning patterns in online teaching provide visual and audiovisual activities, motivational and comfortable environment to reinforce or acquire new concepts, and biology contexts to practice what they learned by participating actively and interacting with the teacher to solve doubts or get feedback.

Item 9

The didactic methodology used in the strategies encourages active learning
N=36
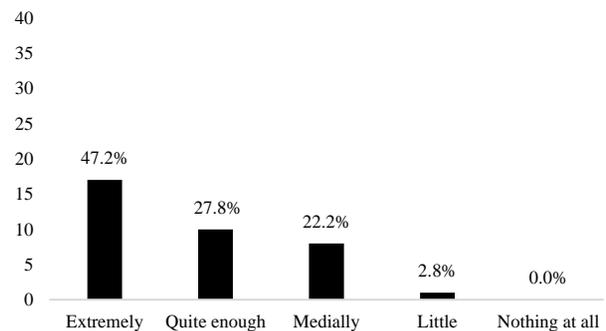
Graphic 9 Active learning

In the following graphic, 75% of the sample indicates that the techno-pedagogical model based on strategies mediated by technology promotes active learning, and therefore, a conceptual change, which implies that the subjects' performance allowed great actively communicational interactivity between the variety of digital resources and their learning process.

Besides, virtual scenarios generate a change in the student's role that encourages active learning because the design of the activities demands characteristics as the ones mentioned below.

-        Deep content analysis.

-        Collaborative word.

-        Socialization of knowledge.

-        Critical and scientific thinking.

-        Decision making.

- Critical and reflective argumentation.

- Knowledge for life.

- Management of resources, space, and time.

It is crucial to mention that active learning fosters a link between what subjects' experience while working with the platform and the concepts that the teacher wanted to convey (Díaz, 2005).

Item 10

The didactic methodology used in the strategies encourages constructive learning
N=36
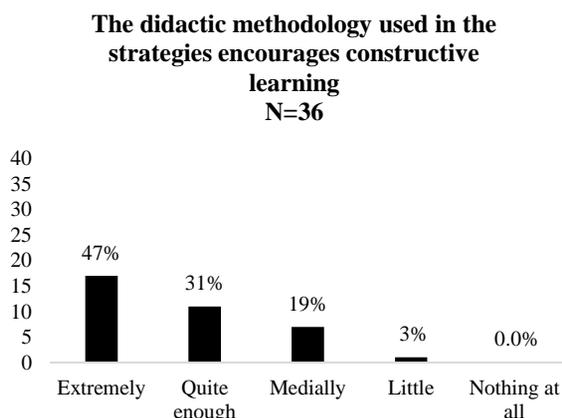
Graphic 10 Constructive learning

78% of the sample states that the techno-pedagogical model with virtual strategies promotes learning based on constructivism, which means that the subjects achieve situated learning, building their knowledge through cognitive interaction with virtual learning activities.

On the one hand, 19% consider that this methodology and strategies promote constructive learning to some extend.

On the other hand, 3% say that only a little. However, it is concluded that the techno-pedagogical proposal does promote constructive learning because more than half of the sample indicates this.

According to Nóbile (2015), this happens because both the methodology and the activities demand from the subjects multiple representations of reality, reflection, authentic tasks, generation, and construction of their knowledge.

Conclusions

The instrument used to collect the data provides a model to characterize subjects' perceptions towards the strategies used in the Schoology platform from which theoretical modifications could be made in the classroom to achieve positive learning, where subjects' expectations, learning styles, and cognitive demands met.

Based on the findings, it is concluded that virtual strategies help learners to achieve their learning goals and appropriation of knowledge.

In the activities hosted on the Schoology platform, subjects found the variability of strategies that let them develop autonomy and self-regulation by making the learning strategy come to their lives across their whole organization. These findings match results from other authors who pointed out that they also foster responsibility (Dembo et al., 2006; Ally, 2004).

Another conclusion is the affordability of this proposal since subjects expressed their satisfaction due to two main features: the quality of strategies and work.

Subjects also recognize strategies as mediators during their learning process in virtual environments because of the following reasons:

- Those strategies helped them to understand, integrate, and monitor their cognitive process through reflection and evaluation.

- They are resource managements and control guides to organize students' time, space, context, and interaction.

The use of this instructional design based on learning strategies operable on the platform influences subjects' interest and motivation. Indeed, students assure that it lets them manage their time, solve activities autonomously, participate in asynchronous and synchronous performances, which contributed significantly to their self-regulation for the apprehension of knowledge in biology. These findings corroborate what Chiecher, Donolo, and Rinaudo (2005) affirm about the high acceptance of virtual modality among students.

Finally, this new alternative of administering and managing the subject of biology implies a change in the traditional dynamics during on-site sessions as it shows new paths for learning, taking into account students' expectations and needs to provide them with ideal learning scenarios and rich in materials.

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Tutoring fundamental tool for university students

La tutoría herramienta fundamental para el discente universitario

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Abstract

The objective is to analyze whether or not there is a relationship between learning, tutorials, and the values presented by the students of the Faculty of Nursing. Population: made up of 480 students. The sample was 178 students and it is non-probabilistic. Instrument, consists of 66 reagents and is divided into 4 sections, a centesimal scale is used. Cronbach's Alpha Reliability of .87. Results, are analyzed: frequencies and percentages, integrational level and all possible regressions. The ages range from 18 to 26 years, the majority are women. The learning that occurs in this is closely related to the reflection that takes place, strengthening in the subject values such as friendship, happiness and trust, improving in the same way personal growth and the development of skills, intelligence is another of the learning values that are improved in the subject when we link it with the tutorials and their tutors. What is intended with the results is to bring together managers and teaching staff and show the results so that relevant decisions are made, especially that it is given the relevance that this program has and the benefit that students obtain by providing them.

Resumen

El objetivo es analizar si existe o no relación entre los aprendizajes, las tutorías y los valores presentados por los estudiantes de la Facultad de Enfermería. Población: compuesta por 480 estudiantes. La muestra fue de 178 estudiantes y no es probabilística. Instrumento, consta de 66 reactivos y se divide en 4 secciones, se utiliza una escala centesimal. Fiabilidad alfa de Cronbach de .87. Se analizan los resultados: frecuencias y porcentajes, nivel integracional y todas las regresiones posibles. Las edades oscilan entre los 18 y los 26 años, la mayoría son mujeres. El aprendizaje que se da en esta está íntimamente relacionado con la reflexión que se produce, fortaleciendo en la asignatura valores como la amistad, la felicidad y la confianza, mejorando de igual manera el crecimiento personal y el desarrollo de habilidades, la inteligencia es otro de los valores de aprendizaje que se mejoran en la asignatura cuando la vinculamos con los tutoriales y sus tutores. Lo que se pretende con los resultados es acercar a directivos y profesorado y mostrar los resultados para que se tomen decisiones relevantes, especialmente que se le dé la relevancia que tiene este programa y el beneficio que obtienen los estudiantes al brindarlos.

Students, Tutoring, Learning   **Estudiantes, Tutoría, Aprendizaje**

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Introduction

Tutoring arises as a companion to formal and informal education. Etymologically, tutela (from the Greek tutelae) means protection. However, the meaning of tutor has had variations throughout history, from the ancient Greeks, who used it to define the responsibility acquired by a "respectable" person, until it constituted the materialization of an effort to reduce failure rates, academic backwardness and desertion, as well as promoting the comprehensive education of students in Higher Education institutions Soto (2020).

The central element of tutoring is the elucidation, from the communicative interaction, of the student's resources to face different situations, assuming an active position in front of the world. Thus, the tutor-tutored communication assumes the form of change and assumes prior knowledge of both parties, where the tutor will be the one who promotes, through reflection, clarification in the teaching-learning process. Orientation at the university, in general, and university tutoring, in particular, is and should be considered as an essential factor for improving the quality of teaching. Abad (2020) states that college tutoring is related significantly with study habits, which leads us to recommend, the tutoring program covers specific topics of study habits and study planning strategies

Rodríguez, (2019), raised the need for a different tutor according to the level of what has to be learned and the characteristics of the ward; establishing a connection between the purposes of the university (teaching, research and extension) and the type of teacher it needs.

The National Association of Universities and Institutions of Higher Education (ANUIES) proposed in 2000, as a viable and strategic resource to improve the quality of student performance, a methodology to establish tutoring programs in its affiliated institutions, based on the recognition that their situation was far from what was stated in the objectives of a higher education system of the magnitude and importance of ours.

Thus, the institutions undertook arduous work to incorporate the proposal, supported by a training process that has evolved, not only in function of their particular needs, but also in recognition of the new perspectives for training professionals and the current concept about a fundamental actor in this process: the teacher.

At the university as at any academic level, tutoring, through various modalities and applications, has been settling in the world of education at any of its levels and stages, both the student and the teacher must acquire a commitment so that the objective After the tutoring is fulfilled, the tutor must create a climate of trust to favor the teaching-learning process, must motivate the student so that their academic training improves and becomes active and constructivist, must support the student in the development of the use of strategies for their studies and to stimulate the student to develop competencies that help them integrate into a society. In an investigation carried out in 2017, it is mentioned that accompanying a student during the course of his university life leaves the great experience of being friends in a situation of support and guidance, and at the same time the satisfaction of being academic when we show ourselves as the guide of knowledge that dispels the concerns of our youth.

The following research is carried out with the aim of analyzing the relationship that exists between tutorials, values and learning presented by students of the Faculty of Nursing, this arises from observing that students and tutors do not take responsibility for carrying out the accompaniment process. Some factors that were taken into account to determine how the tutoring program is carried out are: how often are the sessions and duration. The methodology that was used started from the design of an instrument, in which the participants, according to their experience, gave their point of view about the tutoring program carried out in the Faculty, then the database was created in order to perform the statistical processing of each level. The benefit that will be given to the institution will be to let the staff in charge of the tutorials know, if both tutors and students take responsibility for the process that must be carried out in the program.

To finalize an important point that will be developed within the research project, it will be the intervention proposal that will be proposed as possible solutions to the problems that are detected in the research development. Overall objective. Analyze the relationship between tutorials, values and learning presented by students of the Faculty of Nursing.

Theoretical Framework

Tutorials: The need to implement alternatives to improve school quality and efficiency is a concern in all societies. Thus, arises a proposal to generate new changes; The Institutional Tutoring Program is oriented in two aspects: qualitative and quantitative. From a quantitative level, it seeks to reduce school failure or dropout, reviewing and analyzing the factors, influences and statistics of school failure, dropout, low productivity and, on a qualitative level, it is proposed to respond by attending to the socio-affective needs of the students. students who favor or not academic achievement. Instead, for Abad, K. (2019). He affirms that university tutoring is significantly related to study habits, which leads us to recommend that the tutoring program covers specific topics of study habits and study planning strategies.

In this sense, the priority orientation towards self-directed learning (learning to learn, learning to undertake and learning to be) and comprehensive training with a humanistic vision, constitute a great value to achieve the objectives, with which the adaptation of the student the school environment and the strengthening of the work study, are specific elements to which importance is given. One of the most important quality indicators in education is to have efficient and timely individual and group care services for students through tutorials (Villanueva 2015).

According to ANUIES (2019), tutoring consists of a process of accompaniment during the training of students, which is specified through personalized attention to a student or a group of students, by academics who have been trained for this function, conceptually based on learning theories.

The author Sánchez (2013) explains that: A tutorial is an aid or guidance to the student or a group that the teacher and / or tutor can carry out with a systematized set of educational actions focused on the student and that is complementary to teaching compared to group (pp. 30).

The Technological University of Nezahualcóyotl, cited by Villanueva (2015) reveals the characteristics that a tutoring should have:

1. It is considered a substantive task that includes a set of educational activities to promote the integral development of the student.

2. Guides and accompanies the student during his teaching-learning process.

3. Supports in situations related to the psycho-emotional development of the student.

4. Guides and channels the student to address psycho-pedagogical, socio-cultural, socio-economic and academic factors.

5. Implements structured activities based on the development of a Tutorial Intervention Plan, based on the Tutoring Program as appropriate.

6. Carries out organized and systematic work, supported by instruments for diagnosis, monitoring and evaluation, which allow for qualitative and quantitative measurement of the impact of the tutorial actions on student performance.

7. It involves various levels and models of intervention within the teaching activity.

8. Plans educational actions centered on the student.

9. Tutoring can be individual or group.

10. It is done in moments.

It is important to highlight the difference between a tutoring and academic advising. The latter is an activity assumed by teachers for very precise objectives, such as thesis directions, project directions, coordination of professional practices and resolution of doubts by the student.

On the other hand, the tutoring aims to guide and monitor the integral development of students in the cognitive, affective and social aspects of learning, it is for this reason that the tutor must always be attentive to the development of student learning and channel the student in case You have trouble getting your child specialized care. Tutoring is a guiding process in which teachers participate to help students in their learning process, which has become a possibility to improve school achievement. In the tutorials, the teachers are directly in charge of attending to the students about the process they follow to learn, and they can design methodological strategies that allow them to attend to the learning style of each student. (Nando, 2010).

For Sánchez (2013) mentions that tutoring in an academic accompaniment process during the training of students, tending to improve their academic performance, achieve graduation profiles, develop study and work habits, whose basic tool is found in the tutorial orientation processes and channeling to other support entities. This accompaniment is specified through personalized attention to a student or a group of students by teachers, who for this purpose have been trained and appointed as tutors. It offers students:

1. Reinforce the teaching-learning process and study habits.

2. Channel counseling for subjects that the institution provides, and offer reinforcement options that are organized to support the leveling of basic knowledge in subjects with a high failure rate.

3. Channel the psychological support that the institution provides, or where appropriate to external institutions.

4. Guide and advise on the definition of their study plan, that is, on the planned choice of their reticular sequence throughout their career.

5. Guide and inform about its organization and institutional procedures, such as scholarships, school insurance and other benefits that the institution offers its students.

Nezahualcóyotl Technological University (Op.Cit) and mentions that there are two classifications of tutoring which are: Individual Tutoring. Activity that facilitates the identification of the particular needs of the student to evaluate, guide, channel and follow up on their academic trajectory that allows them to take advantage of their individual strengths.

Group Tutoring. Activity through which group needs are identified to evaluate, guide, channel, monitor and propose alternative solutions to the problems detected, in order to promote an integration that positively affects academic achievement, in addition to favoring interpersonal relationships (2015, pp. 8)

Based on the foregoing below, an analysis of the tutoring process carried out in different universities and technological ones is shown. Citing the example of the UAdeC, it can be seen that the approach goes beyond establishing a link between the student and the teacher as their program is conceived in the CEA program, we can see how they seek to reduce dropout rates and their failure rates within your students through personalized monitoring of your students. The Monterrey Technological Institute seeks to strengthen its students by having the participation of parents within the teaching-learning process, providing them with information, academic support, means and stimuli necessary for their comprehensive training and that they can have all the necessary tools for their performance in the labor field. As can be seen, each campus presents variables in its tutoring programs, however all seek the integral development of it by educating through the support of the teaching staff to reduce the dropout rates from schools and the failure rates. Instead, for the authors. Ceniz Soto, L., Colunga Santos, S., & Ortiz Pérez, R. (2020). In his research "Professionalization of the guiding function of the tutor in Higher Education" he states that in the primary results of the study they showed that the need for training for the guiding function in tutors of Higher Education is fundamental. For this reason, it is considered extremely important to prepare teachers to play this fundamental role in supporting their students.

Regarding the concept of Learning: When we hear the word learning, study and school come to mind for most of us. We think of subjects or skills that we are trying to master, such as algebra, Spanish, chemistry. However, learning is not limited to academics. We learn every day of our lives. Babies learn to move their limbs; teens learn the lyrics to all their favorite songs; Middle-aged people learn to change their diet and exercise habits, and every few years we learn to find a new attractive dress style. Likewise, it continues to be mentioned that learning occurs when the experience generates a relatively permanent change in the knowledge or behaviors of the individual. The change can be deliberate or unintentional, for the better or for the worse. To be considered learning, this change should occur through experience: through the interaction of a person with their environment. Changes caused only by maturation Woolfolk (2014).

According to Ardila (2015), he says that learning is a process that is manifested by adaptive changes in individual behavior as a result of experience. It is a relatively permanent change in behavior that occurs as a result of practice (pp. 17-18). The author Ruiz (2012), refers that learning can also be a stable change that exists as a result of experiences in people, this cannot be explained by a transitory state of the organism, which is maturation, through which new ones are assimilated information be it facts, concepts, procedures, values etc. We think that we can all build new meaningful and functional mental representations that are called knowledge, which over time can be applied in different contexts where we learn. In addition, it says that all new learning is by definition dynamic, which is why it is susceptible to being revised and readjusted from new cycles. That is why it is said that learning is an unfinished and spiraling process. It can be said that learning is the progressive qualification of the structures with which a human being understands his reality and acts in front of it (starts from reality and returns to it). (pp. 30)

However, Warren (2016) mentions that: Learning can be an individual activity that takes place in a social and cultural context.

This is the result of individual cognitive processes through which new information (facts, concepts, procedures, values) are assimilated and internalized, new meaningful and functional mental representations (knowledge) are also built, which can then be applied in situations other than those contexts where they were learned. Learning not only consists of memorizing information, it is also necessary other cognitive operations that involve: knowing, understanding, applying, analyzing, synthesizing, and evaluating. In any case, learning always involves a change in the physical structure of the brain and with it its functional organization (2016, pp. 19-20).

For Bowel (2017), the definition of learning ensures that there are certain processes that take place when a person is about to learn; For example, students, in their activities, perform multiple cognitive operations that make their minds develop easily. These operations are when the person perceives, observes, reads and identifies, once this is done a retention process is carried out where it is memorized or remembered and finally, it is reflected, that is, it is analyzed, compared, ordered, interpreted and criticize what he has perceived. One can also speak of creative, expressive, symbolic and expressive operations of the kind of practices; in the former, it is explored, transferred and predicted as it is created or imagined; in the latter it is represented or communicated through the use of languages. And in the last one, what has been learned is applied using the necessary tools (pp. 12-14).

Learning also tells us about learning theories, which helps us understand, predict and control human behavior, in turn developing learning strategies and trying to explain how subjects access knowledge. Its object of study focuses on the acquisition of skills and abilities in reasoning and in the acquisition of concepts (Conceptions About Learning, 2017).

On the other hand, from the perspective of these authors Pozo-Sánchez, Santiago; López-Belmonte, Jesús; Fuentes-Cabrera, Arturo and Moreno-Guerrero, Antonio-José. (2020). In their research called "Incidence of retro-innovation in higher education. Radio and television as complementary tools in the use of the teaching model known as flipped learning".

The study focuses on analyzing the scope of two methodological approaches to verify their impact on various academic indicators. The experimental design is quantitative, descriptive and correlational. The study includes a control group and an experimental group in a sample of 60 Spanish university students. The control group has followed a traditional training methodology, without using technological resources. The experimental group has developed a pedagogical action through flipped learning supported by classic resources such as radio and television. For data collection, a questionnaire has been used that has been designed and validated for this research. The results reflect that the experimental group has obtained better evaluations in collaboration, motivation, active role, interaction, digital competence and learning achievements, over the control group. It is concluded that the combination of flipped learning together with innovative retro media is effective in improving academic indicators in higher education. What makes us reflect on what we are doing with our university students.

Instead, from the perspective of the author Valencia Morocho, C. A. (2020). In his research called "Virtual education in critical thinking in students of a private university in Lima" he refers to the fact that the application of virtual education today significantly influences the critical thinking of students.

Currently in the academic-educational process due to the COVID-19 pandemic, he has conceived a pedagogical turn in his traditional conception of learning; As it has been necessary, to avoid massive contagions in schools and educational institutions, to adopt the virtual modality as a development point of the current academic period initially scheduled, planned, designed, to be carried out in person, which forces to re-plan based on the use of the various resources in relation to communication and information technologies (ICT) available in various social contexts (Londoño, 2020).

In this period of confinement due to COVID-19, part of psychopedagogy should not only be limited to managing processes in accordance with the generation of learning in the virtual modality, assumed as an emergency approach substitute for face-to-faceity.

Also, it must consider the situation of students who do not have sociological conditions such as internet connectivity, technological equipment, together with those who have some type of disability that minimizes or prevents their participation in an active way. In this sense, Vohlonen (2020), states:

In Ecuador, only 37 percent of households have internet access, which means that 6 out of 10 children cannot continue their studies through digital platforms. The situation is more serious for children in rural areas, only 16 percent of households have this service. However, in the country 9 out of 10 households do have a television or cell phone, which is an alternative to reach children through these means (p. 1).

A situation that deserves due attention because it breaks with the idealism of achieving a uniform education and under equal conditions, when it comes to addressing the educational emergency caused by COVID-19, through the virtual modality. A similar cause is raised by (Fernández-Enguita, 2020), when indicating that there are gaps that cause distancing between Spanish students, among which are:

1. Access gap (having or not having access to connection and technological devices). The distribution is very unequal according to the socioeconomic level of the students: at the low level, 14% of the students do not have a computer at home, while 44% only have one. These figures contrast with those of the high socioeconomic group, where 61% have three or more computers at home, 31% have two, and only 8% have only one. Access gap (having or not having access to connection and technological devices). The distribution is very unequal according to the socioeconomic level of the students: at the low level, 14% of the students do not have a computer at home, while 44% only have one. These figures contrast with those of the high socioeconomic group, where 61% have three or more computers at home, 31% have two, and only 8% have only one.

2. Use gap (time of use and quality of this). Spanish students are at similar levels of use compared to other countries. And although differences are barely shown by autonomous communities, they are found by socioeconomic level with respect to the use of ICT devices at home

3. School gap (teacher skills, availability of resources and adaptation of online teaching support platforms). According to the management teams, approximately 50% of them affirm that their teachers have the professional capacities and resources to learn to integrate digital devices in teaching; The same percentage as that of students who are in centers that have an effective online platform.

This scenario, coupled with the fact that the World Bank of Education (2020) indicates that education was already in crisis before the pandemic, makes the situation more challenging for those who are in charge of the responsibility of training future students. generations, more in a context of uncertainty because there is no certainty as to how long the educational isolation due to COVID-19 will last. Therefore, teachers must resort to educational innovation as an ally to promote adequate tools to promote learning (Jiménez-Galán, 2017). Which also implies researching the course of events to learn by doing in a global and dynamic society.

As for Values, which is another axis of the research: We value and are valued. We value the actions of others, we value the people around us and we value the objects that surround us; simultaneously, others value our actions and value our person. Humans do not know how to live without valuing; We do not have an indifferent and passive attitude towards reality, but we feel it beautiful or ugly, good or bad, pleasant or painful (Larroyo, 2015, pp. 187). Talking about values, ethics, training, value or moral seems easy. However, throughout history we see that there have been and are many schools, and their positions in this regard. For the purpose of this contribution, we include in general terms a definition of value, as well as some of the theories that have contributed to studying the moral development of the individual and that in some way could be used as support or guide when implementing some didactic or methodological strategies (Secretary of Public Education of Coahuila, 2019).

On the other hand, the Secretary of Public Education (2019) defines values as: VALUE: it is the character, quality or characteristic for which a being, fact or thing awakens appreciation, esteem or admiration. Based on the above, we can affirm that in our daily life there are different types of values: economic, nutritional, artistic, ethical, and so on.

Fundación Televisa (2013) mentions that, if education wishes to form upright human beings, its task is to strengthen the individual and socio-cultural values indicated in article 3 of our constitution. We attribute a value to an action when we affirm that it is good, we attribute a value to a person when we say that it is beautiful, we attribute a value to an object when we affirm that it is useful.

Values can vary greatly across cultures, families, or individuals. There are different types of values:

Family values: They refer to what the family considers to be good and what is bad. They have to do with the personal values of parents, those with which they educate their children, and those that children, as they grow, can contribute to their family. Family values are the first that our will learn.

Sociocultural values: These are the values found in society at the time we live. These values have been changing throughout history and may or may not coincide with family values.

Personal values: Are those that the individual considers essential and on which they build their life and their relationships with others. They tend to be a combination of family values and sociocultural values, in addition to those that the individual himself contributes to himself according to his personal experiences.

Material values: Material values are those that allow us to survive and are important insofar as they are necessary. At present, we are experiencing a rise at a social level, in material values: money, cars, houses and what is associated with all this, such as prestige, good economic position, etc.

Ethical and moral values: They are those that are considered essential for the proper coexistence of individuals in society. Education in these values depends, to a large extent, on their being contemplated in those values that the family considers essential, that is, that among the family values transmitted to the children are these essential ethical-moral values such as those shown then:

Respect: It has to do with accepting others as they are, with their virtues and defects, recognizing their rights and needs. Saying things politely, without hurting, violent or insulting anyone, are signs of respect.

Sincerity: Sincerity is the pillar on which trust is based. So that our children do not lie, we must not abuse punishment: children lie out of fear of punishment.

Courtesy: It has to do with respect, consideration and manners. It does not have to do with not being able to do some things because it is not polite, but in doing them saying "please", "thank you" and "can I?"

Tolerance: It has to do with acceptance and respect for people who are different, what is strange, unknown or unusual.

Responsibility: It has to do with the confidence we have that our children will know how to take on some tasks and will fulfill them. It has to do with the awareness that actions or non-compliance with them have consequences for other people or for our own child.

Equality: Right of all human beings to be treated equally before the law.

Self-esteem: Valuing attitude towards oneself. The responsibility that parents have in transmitting these values to our children is crucial. Values are not transmitted through genetics, which is why it is so important to take them into account in education. But we must know that values are not taught independently of the rest of things, neither through great explanations or by giving a list of what we consider correct and what not, hoping that our children will memorize it (Vázquez, 2017, pp. 19- twenty)

Values are transmitted through practical example, through everyday life, our behavior on a daily basis, in what children observe their parents doing. Today, we try to educate our children in respect, tolerance, renouncing violence, consideration and courtesy, but we live in a society in which our children soon discover that other very different values also prevail, such as leadership. , selfishness, the accumulation of money, the lust for power, and even racism and violence. Family values will determine, to a large extent, the good judgment our son has to consider these other values as acceptable or despicable, or to know how to adapt them to his good opinion in the best possible way.

Methodology

Population: The population is made up of 480 students from the Faculty of Nursing, which are divided into a degree in nursing, a leveling course and a master's degree in older adults.

Sample: In this research, the sample that will be used is the non-probabilistic one since the choice of elements does not depend on probability, but on causes related to the characteristics of the researcher. The sample consists of 178 students from the 4th, 6th and 8th semesters, these students were chosen since the entrance of the generations the tutoring program was in force.

Instrument: The instrument of this research was designed to analyze the impact of tutorials, values in the learning of students in the Bachelor of Nursing Unit Saltillo, this instrument was applied to 178 students of the Bachelor level of the aforementioned school, it was It consists of 66 reagents which are divided into 4 sections. In the first section, in the upper part of said instrument the shields of the 2 institutions that endorse this research are located and the name of each institution, later the instruction is located to answer the part of general data in which variables such as sex, age, if carried tutorials or not among others. These variables will be answered according to the experience of each participant. In the second section you will find the instructions on how that part will be answered where it is indicated that to answer the questions a centesimal scale (0-100) will be used, this section is intended to know to what extent the tutorials that are carried out in the faculty comply with aspects such as: help, guidance, monitoring, among others.

In the third part it is questioned whether the values by the students and teachers are related to the tutoring program, in this section there is a table with the values of the students and another with the teachers in which the answer will be a scale from 0 to 100. In the fourth part it is asked whether carrying out the tutorials benefits the students' learning with elements such as experience, skills, memorizing information, among others. Finally, thanks are shown for having collaborated in answering the survey.

Statistical Analysis Plan: Before carrying out the readings of the present investigation, the statistical processing of the descriptive level (Frequencies and percentage) was carried out, here the general data of the people surveyed is analyzed, then the integrational level (Factor analysis) was carried out, this level is used to the study and interpretation of the correlations between a group of variables and finally the integrational level (regression analysis) this level is used for the study and interpretation of the correlations between a group of variables.

Results and Discussion

Summary of results: This chapter shows the results extracted from the statistical processes. Crombach's Alpha reliability analysis was .87. To objectify the elements of statistical processing, in which the levels of statistics, frequencies and percentages, integration level and regression were analyzed.

Frequencies and percentage: Regarding the level of frequencies and percentage, it can be observed that the participants who answered the survey, their ages ranged from 18 to 26 years, the majority were women (82%), the rest were men. The Faculty of Nursing has the tutoring program, however, there are people who do not know this information. There is an irresponsibility on the part of the tutors since the sessions that the students must attend have never attended and the tutors have never assigned a date for the activities, a minority mention that each month they attend the sessions for the duration of each session lasts from one hour to two hours, the way the tutorials are carried out is face-to-face.

Likewise, it is highlighted that tutoring is considered an educational strategy for the attention of students, in which the student helps the student in the academic activities they carry out in their institution such as: development, personal growth, among others, understanding of information between others. The tutorials deal with problems related to study, reading and comprehension skills, learning difficulties, test anxiety, emotional stability, attitudes towards the profession, career options, among others. When students perceive that they have the learning skills and strategies to be successful, they are more likely to want to continue and finish their studies, in addition to the impact that tutorials have on learning, the student takes values as a main role when they are present In tutoring the values that stood out the most in this process are those of respect, responsibility, tolerance, and patience.

The tutor must promote the learning of the students, be a guide, guide and provide the necessary tools for them to generate their own knowledge. The priority activities of the tutorial action is the development of strategies, such as the organization of the text, programming of study activities, application of techniques that strengthen cognitive skills, among others, that contribute to facilitate the adaptation of the student to the school environment to improve their study skills and increase their school performance.

Integrational level: Factor analysis. Problem solving despite being steps below orientation shows the great inference that it has when interacting with the learning processes, teaching, academic activities and help showed high values showing the great interaction they have with intelligence in the subjects . Therefore, we can see how the tutoring program, together with the variables that characterize it, strengthen the links with learning at all times.

Relational level: Regression analysis. Multiple regression: This statistical analysis begins with the multiple selection of variables, considering intelligence as the dependent variable, which in this case was chosen based on factor analysis with the intention of looking for possible proposals for the sustaining approach.

The tutor must create a climate of trust to favor the teaching-learning process, must motivate the student so that his academic development improves and becomes active and constructivist, must support the student in the development of the use of strategies for their studies and stimulate the student. student to develop competencies that help them integrate into a society.

Multivariate selection of variables: This statistical analysis begins with the multivariate selection of variables, considering as dependent variables, study, academic interest, teaching-learning process, teamwork, which in this case were chosen based on factor analysis with the intention of look for possible proposals to the sustaining approach. According to what is observed in the tutoring program, the tutors carry out the function of accompaniment, help, guidance, training and in the event of needing help for some kind of problem, the tutor channels the student to a specialist, the attention that the tutors They give is personalized and during the tutorials they develop personal growth and study habits.

Conclusions

Regarding the general objective of this research (to analyze the relationship between tutorials, values and learning presented by students of the Nursing Degree, it can be mentioned that it was verified by factor 3 within the factorial analysis since it mentions that within the framework of the tutoring program, the learning that takes place in it is closely related to the reflection that takes place strengthening in the subject values such as friendship, happiness and trust, improving personal growth and development in the same way of skills, intelligence is another of the learning values that is improved in the subject when we link it with tutorials. On the other hand, with respect to the basic questions, it can be highlighted that the values of honesty, respect, responsibility, and patience are the values that the students take into account at the time of being in the tutorials, this could be known through the Factor analysis in factor 1. In the Nursing Degree tutoring program, the academic support given by the tutors benefits the student to develop study habits using didactic resources to understand the information that is given, this gives an answer to the benefit that tutorials have on student learning.

Among the findings that were found in this research are that it was thought that the tutoring process was not carried out, but at the time of making the results everything came out the opposite of the tutoring process being carried out properly.

Recommendations

That the tutoring process be monitored so that all students attend their sessions. That the tutorials are managed as professional practices so that the student and the tutor take their role and carry them out. Carry out more research on the subject of tutoring so that the educational institution knows how effective this program is. That the parents sometimes be part of the tutoring sessions, this to support the students and that they feel motivated to continue with their studies and help them in their personal development. According to the results of this research, it is intended a posteriori to carry out a comparative study with another educational institution at the Bachelor's level of the same Autonomous University of Coahuila.

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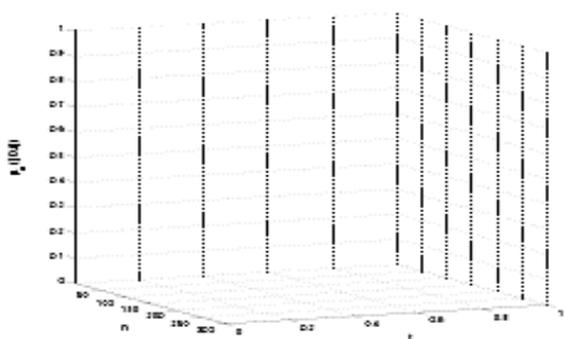
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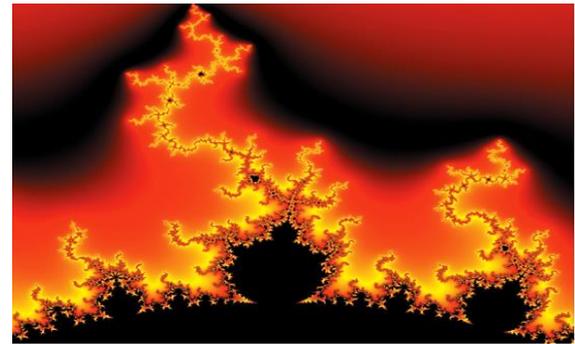
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