

# Evaluation of the Institutional Tutoring Program in a Polytechnic University of the State of Mexico

# Claudia Alejandra Hernandez Herrera<sup>1</sup>, Martha Jimenez Garcia<sup>1</sup>

#### ABSTRACT

The aim of this article is to evaluate the perception of the alumni on tutoring in a public university in Mexico to analyze the way tutoring has contributed to the integral development of students. A questionnaire was applied to a sample of 312 students; the data obtained were analyzed with the IBM SPSS software. In the results, it was found that the students perceive positively the professors' competences for tutoring. However, just over 50% of the students feel satisfied with the assigned tutor; in so far as 60% consider that their tutor canalize them to regularization courses; in addition, only 50% admit to have a major and life project, also half of the students believe that tutoring has supported to increase their performance and integration to university; and only two thirds think that their professor has pedagogic knowledge. In conclusion, the data indicate that it must be worked on the implementation of educational policies which contribute to strengthen tutoring programs that encourage the youth in Mexico to successfully complete school, thus, prevent scholar underachievement.

Keywords: Higher education, student perception, teacher-tutor. Available Online: May 30, 2015. This is an open access article under Creative Commons Attribution 4.0 License, 2015.

### 1.0 INTRODUCTION

The National Development Plan (NDP) 2013-2018 in Mexico establishes, as a strategy, decreasing school drop-outs and improving terminal efficiency at each educational level (Federal, 2013). Likewise, The Sectorial Program of Education (SPE) 2013-2018 proposes, as its strategies, boosting new educational actions to prevent and decrease school drop-out from middle school on, as well as mentioning the importance of boosting the Academic Tutoring Program, strengthening mentoring; and training directives, teachers, and tutors in the use of tools that will help to avoid school drop-outs (SEP, 2013).

In Mexico, the National Institute of Statistics and Geography (INEGI), in its last population census of 2010, points out that the State of Mexico has a population of 15,175,862 inhabitants, 27% of whom are young people between 15 and 29 years old; of these, the Ministry of Public Education, through its own statistics,

<sup>1</sup> Instituto Politécnico Nacional - UPIICSA - Sección de Estudios de Posgrado e Investigación

#### http://www.thejournalofbusiness.org/index.php/site

indicates that there are 355,443 people studying higher education in the 2012-2013 school period, for a 21% coverage (INEGI, 2010).

Efforts by the government of the State of Mexico regarding coverage in undergraduate education are aimed at the creation of subsystems of colleges such as Technological and Polytechnic Universities, nine of the latter, five recently established. Something that highlights the educative model of Polytechnic Universities is that they work under a scheme based on competences, foregrounding the valuable presence of the teacher as a facilitator and the vigorous permanence of students in the industry, defying the complex process of what entailment with other sectors where the youth will be employed means. Thus, the tutor is required to be familiarized to every process involving the academic permanence of students. (Vizcaya, 2003).

It is a fact that due to the increase of young people in Mexico, and the excessive demand for undergraduate education has caused several institutions in the country to quickly increase their enrolment capacity, without considering the academic burden on the teachers and the number of students that they have to attend to; all together with experience in tutoring the tutor has to deal with, as part of his work as a teacher.

There are many causes that lead teachers to become tutors, and these are evaluated for several reasons, among these are: those who do it for altruistic reasons, others do it to gain fundamental points for the acquisition of economic benefits as Full Time (T.C.) teachers, and occasionally, the tutoring function of the teacher is evaluated through the integral formation of the student; identifying the latter's potential with regard to strengths and weaknesses, which in turn, help obtain support such as scholarships for academic stays, national or international.

It is important to point out that tutoring is a tool which allows to solve students' problems of immediate interest, as well as, facilitate the knowledge about the curricular and alternatives in case of presenting academic difficulties, as it contributes to maintain a rigorous tracing of the students; finally, facilitates learning throughout life (García and Troyano, 2011). Additionally, tutoring links to the guidance a teacher performs with a group of students, such that the teacher-tutor is the commissioner of the development, maturation, guidance and learning of a group of students entrusted to the teacher, who knows and considers the school and familiar environments the students live in, and procures to maximize their integral development (Ortega, 2011).

Significantly, tutoring contributes to a good communication, therefore, benefits the interaction between the involved parties in education and allows network collaboration. Hence, it is possible that compromise and reflection increase on the practice in benefit of the college experience (Lapeña Sauleda & Martínez, 2011).

Tutoring is essential for new students who come from diverse environments and social contexts; it is indispensable that those who count with an accompanying tutorial from the beginning of their major and throughout their academic trajectory, which help decrease doubts and fears related to university life. Hence, the conventional teacher must shift from being a facilitator to becoming a tutor, in this process; the tutor provides students their meaning in the educational context (Ariza & Ocampo, 2005).

It is important to consider that tutoring is becoming even more popular in undergraduate education in different countries (Collings et al., 2014). In Polytechnic Universities are working with an educational model based on competences, incorporating two systems: advisories and tutoring. The tutoring system consists of a process of accompaniment and follow-though of the academic trajectory of the students.

Tutoring, according to Fresan and Romo (2011), allows the student to: a) solve problems in the school context, b) recognize the study plan, c) identify trajectories, d) to develop study strategies, e) support to solve learning problems, and f) adapt and integrate into university.

By studying the phenomenon of tutoring in a university located in the State of Mexico; the inquietude of knowing the perception its students have on the tutoring program arises, which has been implemented despite of having few years in operation. The effort and compromise of the teachers and the university itself result fundamental to achieve the operation of the tutorial action in benefit of the students. The university starts operating in 2010 and is, until 2013, that it has an enrollment of 430 students distributed in five majors, attended by 48 academicians of which, six who work full-time and the rest part-time.

In this context, the objective was to evaluate the perception of the alumni on the academic tutorial action in a public university in Mexico to analyze the impact tutoring has had on the integral development of students.

### 2.0 TUTORING IN UNIVERSITY

The Institutional Tutoring Programs can be a powerful machinery to help students maintain accompaniment and follow-through in their academic trajectory. The efficient application of tutoring allows students, from the beginning, to adapt to a university environment and to learn its functioning. Graffigna, Hidalgo, Jofré, Berenguer, Moyano and Esteybar (2014) presented an analysis of tutoring as a strategy for institutional retention, from which, can be identified the different dimensions affecting student retention, as well as the underlying factors of student permanence in the institutional context which can be categorized.

The actors of the tutoring models are the students, teachers, and authorities, who all together, try to help students achieve competences based on integral and quality education. The evaluation of the tutoring programs is an essential action that leads to the understanding of good and bad practices in the functioning of tutoring. The main client of tutoring is the student, so it is through his perception that information is got, analyzed and developed for the research.

Researches dealing with tutoring in universities were located. Tejada and Arias (2003) recognize the significance of academic tutoring in students newly enrolled in university. Other studies have been carried out on the concept of tutoring, analyzing its organization and discussion in the field of undergraduate education (De la Cruz, Chehaybar & Abreu, 2011).

Additionally, according to Bean et al. (2014), research was carried out in the Mentor Program of the Faculty of West Chester University and found that the program needs to become part of the culture and expectations of the university. Likewise, Martina, Mutrie, Ward, and Lewis (2014) points out that a program between mentors and disciples has a great level of general satisfaction; specifically regarding research, conversation, professional promotion, and acceptance in the mentor-protégée relationship. Also, Eller, Lev, and Feurer (2014) confirm the existence of a dialog in the mentor-disciple tutoring relationship, which guarantees positive results in the learning process.

On the other hand, from the point of view of effectiveness of the emission of university degrees, tutoring is a process that should answer to the quality standards, and that student follow-up is a relevant stage in obtaining a degree (Nuñez & Rodriguez, 2011).

In Dubai, tutoring has been studied realizing the comprehension of tutors towards international students, recognizing the cultural and language diversity (Kadiwal & Rind, 2013). There are also studies that analyze how they relate, student bonding and the mentor's disposition. Therefore, in Canadian universities, much emphasis is given to first year students who have academic weaknesses (Bernier, Larose, & Soucy, 2005).

Likewise, there are studies that deal with the importance of the relationship, communication, and first contact with the tutor in the first year of university studies, locating the relevance of mentoring on the institutional practice and its significance to the student (Fuentes, Alvarado, Berdan, & DeAngelo, 2014).

Good practices are also analyzed in tutoring and their influence the student's intrinsic motivation, selfdetermination, needs, and the type of tutoring required in order to achieve success (Lechuga, 2014). Tutoring has been also analyzed considering urban and non-urban students, finding that mentors working in urban environments are better graded (Dappen & Isernhagen, 2006).

The concept of tutoring, according to Perez (2012), is a set of actions, both formative and orienting, whose fundamental objective is to develop and increase experiences that help students obtain generous learning opportunities allowing them to acquire basic competences linked to the graduation and professional profile of the students, besides, helping in the creation of a long term university career project.

In this sense, tutoring can be considered as an interactive interchanging process between the student and the teacher with the ultimate goal of helping the academic, professional, and personal development of the students by giving them a guide that promotes autonomous learning in students, adapting it to specific situations (García Nieto et al., 2005).

It is, pedagogically, a formative activity where the leader is the teacher functioning as the tutor. It is evident that tutoring is a guide that promotes and facilitates the development of students by strengthening the dimensions of intellectual, emotional, social, and personal capabilities (Fernandes & Flores, 2013).

In this context, tutoring is understood as a job supervised by an experienced teacher, who serves as a guide for students to achieve socialization skills and acquiring knowledge in diverse academic activities offered by the university, basing advice on professional support (Lechuga, 2014).

Recognizing and exploring the new university terrain is an important activity for newly enrolled students. Tutoring helps fears and doubts disappear more quickly, so students can begin enjoying one of life's most important experiences.

Another of the fundamental purposes of tutoring, according to De la Cruz Flores et al., (2011), is to enable students to obtain open and transferable capabilities to face a lot of complex and uncertain situations, as proposed by the current society. Moreover, it emphasizes on the fact that tutors are professionals willing to share their knowledge through teaching, training abilities, advice, and feedback.

In addition to this, it is relevant to mention the importance of mutual-esteem relationships, formed between students and their teachers in the academic context, to achieve human development of the students. This also gives ubiquity, certainty, and mostly self-assurance (Kim & Schallert, 2011).

Tutoring is a process where both teacher and student participate. The teacher plays as a tutor and a leader, whose goal is to promote guide autonomous learning among the students, by guiding and adapting it to specific situations. The tutor expects students to obtain an integral education based on human and professional development without forgetting the ethical and human approach tutoring action must have (García Nieto et al., 2005). It is a fact that there must be certain conditions for students to develop and accept tutoring such as their emotional state and disposition towards tutoring action (Bourdeau & Grandbastien, 2010).

The tutor plays a preponderant role in the systematic process of tutoring, besides being a key element of the educational project. The tutor helps students create attitudes like the need to become better, research and analyze their own aptitudes, optimize their learning, and be conscious of the role they play.

The mentor helps stimulate thought processes and allows young people visualize alternatives to improve their capacity for decision making, as well as to reflect upon ways to solve a problem (Fresan & Romo, 2011). A mentor listens, orients, reflects experience and identifies areas of opportunity so he can help his students know themselves and exploit their capabilities (Novak, Armstrong, & Browne, 2014). The relationship established during the tutoring process is a win-win situation, in consequence, the student will be able to build knowledge, improve, and strengthen attitudes that help during his maturing process, both human and intellectually, thus obtaining academic progress (Fernandes & Flores, 2013).

The tutoring process relies on four elements, the first of which is psychological and emotional support. The second element is accompaniment so the student can choose a major and establish goals in the short, middle, and long terms according to the duration of the academic program. The third is advisory on the work opportunities of the chosen major. The fourth and last element is the work the student carries out and which is guided towards adapting proper conduct models for university students (Crisp & Cruz, 2009).

It is fundamental in the tutoring process to establish responsibilities and commitments on both sides respectively to carry out their functions. Tutoring is seen as a support system where students and teachers become partners in a permanent educational process (Gorinski et al., 2010).

The trajectory of tutoring can be divided into two moments, the first being oriented towards students who have not failed any course. The tutor steps into action and supports in overcoming academic problems, advisory in the selection of following courses, professional orientation, and insertion into the field. The second moment is centered on students with low academic yield. In this case, a punctual follow through is necessary for the student (Nuñez & Rodriguez, 2011).

Nowadays, a social environment where this process is present all the time is universities, which must promote and potentiate orientation and tutoring processes since they provide the growth of adaptation competences oriented to helping students know the environment where they shall develop during their time at university. It is obviously not an easy task, and therefore basic knowledge of the operation process of the study plans and school regulations is desired.

Thusly, the student can identify specific actions that will help him make decisions regarding his academic activity, as well as to detect possible opportunities for professional development and recognize the professional field (Manzano et al., 2012).

The role of the tutor is determined from the educational and orientation model the university bases on; from the model approach, mentor activities are defined. Strong emphasis is required on the role academic professors have to perform as counselors, equally focusing their efforts on the integral and academic development of their students.

The desired goal for academicals is to develop a profile where they are knowledgeable of the teachinglearning process, as well as the development of the professional career, being capable of planning determined educational interventions to achieve the desired individual development objectives. Teaching and orientation must be understood as two indispensable elements in the professor's performance (Sebastian & Sanchez, 2012).

Efficient tutoring can be, occasionally, hindered by the amount of time teachers can spend on doing so, the commitment to tutoring, and the distribution of workloads in front of a group which can sometimes be excessive (Nasser-Abu Alhija, 2014).

Therefore, tutoring is understood in the present paper as a systematic process of accompaniment that serves as a guide for the newly enrolled student to achieve early adaptation to university life. It also supplies information on the functioning of the study program, institutional structure and regulations; it integrates solution alternatives to academic problems along with helping the students develop social, professional, and emotional competences. The final result is a satisfied and fulfilled student.

#### 3.0 METHODOLOGY

The present work is a cross-sectional, descriptive, and explanatory study where we seek to achieve knowledge on the possible factors that are better evaluated in the everyday exercise of tutoring, analyzed from the perception of the student.

A questionnaire was made, integrated by 29 items structured considering the research by Fresan & Romo (2011). These authors give an instrument to evaluate tutorial function, and we considered the questions related to tutor capacities. Some of the characteristics of tutor roles (De la Cruz et al., 2011) were also considered.

Moreover, intrinsic motivation was retaken as an element that helps improve tutoring (Fernandes & Flores, 2013), as well as emotions and their handling (Karcher, 2008), and interpersonal relationships (Reichenberg et al., 2014) (See Table 1).

Variable	Conceptualization
Disposition to attend to	It is the teacher's attitude towards the student where he shows that he has
students	the time to listen.
Climate of trust	Climate created by the teacher so the students can express their problems.
Respect	It is the consideration of someone who considers other people's autonomy.
Interest in their problems	Alert and available attitude by the teacher to identify problems related with
	academic performance.
Capacity to listen	The attention and openness of the senses to listen to problems.
Disposition to maintain	The teacher's disposition to give valuable communication with the student at
permanent communication	any moment, at least in the timeframes set for tutoring.
Academic doubts	Adequate knowledge to solve questions on academic affairs.
Study techniques	Knowledge of study techniques that can be taught to tutored students.
Diagnosis of possible	Full knowledge of questionnaires that help students identify areas of
academic difficulties	opportunity that will help in their academic performance.
Independent study	The capability of stimulating students to study on their own.
Professional formation	The academic degrees obtained by the teacher.
Pedagogic methods	The tools that the teacher uses for student learning, individually or in group.
Tutor locating	Easy location of the tutor, especially in case of an emergency.
Institutional regulations	Knowledge of the school's regulations to know the options that exist in case
	of risk of failing or dropping-out.
Course selection	Adequate advise so the student can chose the courses to take without exceeding load.
Channeling	Knowledge of channeling areas for the student in case there are situations
	that endanger his emotional or academic state.
Improvement of academic	The perception that tutoring allows students to improve their academic
performance	performance.
Integration into the university	Faster adaptation to the university.
Diagnosis of study habits	Detecting weaknesses and strengths in the study habits.
Convocation information	The tutor knows all the convocations that are available for the student and
	informs upon them in a timely fashion.
Remedial courses	Timely channeling in case of being about to fail courses.
Life and professional project	Adequate accompaniment so the student can build a life and professional
	project.
Satisfaction with the assigned	The student's perception regarding satisfaction from the tutor that was
tutor	assigned.
Satisfaction with the tutoring	Feeling of general satisfaction with the tutoring program implemented by the
program	university.
Commitment with the tutor	The student recognizes that he show commitment with the tutor, and
	therefore recognizes his obligations as a student.
Honesty towards the tutor	The student shows honesty towards the teacher.

Table 1: Variable conceptualization

Intrinsic motivation	The feeling that generates the signals that stimulate a young man to feel confident with his future.
Handling of emotions	Tutor support so the student can recognize his own emotions, and thus control them.
Self-confidence and respect	Tutor support that allows the student to generate self-confidence as a result
	of the teacher valuing his capabilities and abilities.

The instrument was based on the Likert scale, and to validate the questionnaire's reliability, a pilot test was run with 60 students, obtaining a Cronbach alpha of 0.959, which indicates internal consistency in each item.

Data collection consisted of applying a total of 312 questionnaires to a total population of 430 students. The sample size was set by applying a formula where the (p) probability for the study case is known to be 95%, and which corresponds to the percentage of students with an assigned tutor, with a confidence level of 95%, so n=73. However, the students received the questionnaire in a good manner, and more students participated in the study. The data were analyzed using SPSS version 20. The instruments were answered by the participants in November, 2013.

Dimension reduction tests were applied, the main components were extracted, and varimax rotation giving a Kaiser Meyer Olkin measure of sampling adequacy of 0.916 > 0.005, which indicates factors can be reduced. Five main factors were found (See Table 2).

#### Table 2: Rotated component matrix (Factorial structure matrix)

Items of the Instrument		Components (factors)					
	1	2	3	4	5		
5. Shows capacity to listen to students	.761*						
<ol> <li>Cordiality and climate of trust</li> </ol>	.750*						
<ol><li>Shows interest in students' problems</li></ol>	·737 <b>*</b>						
3. Is respectful	.736*						
1. Disposition to attend to students	.710*						
23. I feel satisfied with the tutor assigned to me	.564*						
7. The tutor has the capacity to solve students' academic doubts	·553*						
25. I feel committed with my tutor and therefore recognize my obligations as a student	.488*						
10. The tutor has the capability to stimulate independent study	.449*						
28. My tutor helps me know and handle my emotions		.810*					
29. My tutor helps me build self-confidence and respects and values my capabilities and abilities		•753*					
22. My tutor has helped me build a life and professional project		.688*					
27. My tutor motivates me to improve		.648*					
19. My tutor has done a diagnosis of the weaknesses and strengths of my study							
habits		·593 <b>*</b>					
20. My tutor helps me with information on scholarships available for me		·579 <b>*</b>					
21. In case of being about to fail a course, my tutor knows my situation and helps channel me to remedial or leveling courses		.500*					
18. Having a tutor has allowed me to better integrate to university			.736*				
24. I feel satisfied with the tutoring program of the UPT			.643*				
6. He shows disposition to keep permanent communication			.642*				
17. Being enrolled in the tutoring program has allowed me to improve my							
academic performance			•599*				
9. The tutor has the capacity to diagnose the difficulties and carry out the pertinent actions to solve them			•435*				
26. I am honest with my tutor				.796*			
8. The tutor has the capacity to orient students in study techniques				.768*			
11. The tutor has good professional formation				, .633*			
13. It is easy to find my assigned tutor					.686*		

<ol> <li>The tutor has full knowledge of pedagogical methods for individual and group attention</li> </ol>	.612*	
16. My tutor knows the channeling instances	.589*	
14. The tutor knows institutional regulations well enough to advise me on the	*	
adequate options for my school problems	·574 <b>*</b>	
15. The orientation I got from my tutor has allowed me to make an adequate	4.0*	
selection of courses and credits	.408*	
Extraction method: Analysis of main components.		
Rotation method: Kaiser Varimax Normalization.		

\* Factorial punctuation – Correlation indexes. High correlation represented among items of the instrument grouped by factors.

Additionally, Table 3 shows the rotated component matrix, which means items grouped into five factors (1= competences for tutoring, 2= Tutoring support, 3=PIT program, 4= Professional tutoring, 5= Institutionalized tutoring). Thusly, each item is correlated so that it gives off a set of characteristics akin to one of these, making the system a conjunction and grouping through causal identities. Each of the factors answers the research questions.

### 4.0 RESULTS

When applying the questionnaire, 40% of the participants were women and 60% were men. The mean age of the students was 21 with a standard deviation of 2. The evening shift participated in 65% of the questionnaires while the morning shift made up the rest. Students from the third, sixth, and ninth semester helped solve the instruments by 29%, 36%, and 35%, respectively. The students stated they had a mean Grade Point Average of 8.45 with a standard deviation of 0.54. An important datum from the research is that only 25% of the students have a scholarship from the National Program for Undergraduate Education Scholarships (PRONABES). Nevertheless, despite not having such a rigorous scholarship program, 96% of the students have an assigned tutor. Cross variable examination allowed us to identify that the students with greater tutor involvement are those from the sixth and ninth semesters. The students were asked if they had any failed courses. Another datum obtained was that only 20% of the students mentioned having one or two failed courses.

# 4.01 FACTOR 1: COMPETENCES FOR TUTORING

This factor integrates eight elements that analyze the tutors' capabilities and abilities as perceived by the students.



Source: Self elaboration from the results of the questionnaire-survey.

Variables with higher correlation to the factor were: the tutor shows capability to listen to the students (0.761), cordiality and environment of trust (0.750), interest in problems of students (0.737), respect and disposition to serve students (0.736). The best graded capabilities were the capability to treat students respectfully, 78% of the students agreed with this statement. Also, 71% mentioned that their tutor shows a disposition to attend to them.

On the other hand, 71% of the students consider that the teacher shows interest in the academic and personal problems. Finally, 70% of the students mentioned that their tutoring teacher knows how to solve academic doubts. The best graded entry, represented by 57%, is mentioning that the students are satisfied with their assigned tutor in the semester. An interesting finding is that only 62% of the participants of the study perceive their own commitment to their tutor, thus recognizing their own obligations as a student.

On the contrary, 68% of the students perceive their teachers as capable of creating an environment of trust to expose their problems. Likewise, 69% of them think that the tutor is capable of listening to any kind of problems (See Chart 1).

### 4.02 FACTOR 2: TUTOR SUPPORT

The way that allows us to determine the effects of tutoring action in students is the abilities and attitudes that are obtained throughout time. In this factor, variables with higher association found were: tutor's capability to encourage independent study (0.810), the tutor helps to know better my emotions and managed them (0.753), my tutor plants confidence and values students' abilities and skills (0.688), the tutor helps build a life plan, and the professor motivates me to succeed (0.648).



Source: Self elaboration from the results of the questionnaire-survey.

The analysis descriptive encounters 62% of the students consider that their tutor knows how to channel them in a timely fashion in case of detecting a possibility that they might fail. Another interesting datum that shows the immediate need to work with tutors is that only 58% of the students consider that their teachers inform them about scholarships, contests, and academic mobility. Likewise, 50% of the students mention that their tutor helps them know their emotions and shows them different ways to handle them.

On the other hand, the students were asked if they considered that their tutoring teacher made a diagnosis of their weaknesses and strengths regarding their study habits; only 48% said they did. This indicates that the teacher is not undertaking his responsibility as a tutor, added to this is the need of intervention by the authorities of the institution.

Likewise, 47% of the students agreed with the fact that their tutor had helped them to build a life and professional project, associated with the development of self confidence and the value the teacher gives to the capabilities and abilities the student shows. An interesting datum found is that only 45% of the students think their tutor motivates them to improve, so only 47% of them think the tutor stimulates self-confidence besides valuing their capabilities and abilities (See Chart 2).

# 4.03 FACTOR 3: THE INSTITUTIONAL TUTORING PROGRAM

This entry grouped the variables dealing with analyzing the satisfaction with the Institutional Tutoring Program, questions with higher correlation are: to have a tutor has allowed me to integrate better to the University (0.736), I feel satisfied with the Tutoring Program (0.643) and, my tutor shows disposition to keep a permanent communication (0.642). Only 50% of the students feel satisfied with the program, while 52% perceive that they have achieved to increase their academic performance. At the same time, 53% of the students feel that tutoring has helped them to integrate better into university. Moreover, only 60% of the students perceive the tutor to have the disposition to maintain permanent communication.

Finally, only 50% of the students agrees with the fact that their tutor has the knowledge to diagnose difficulties, and so carry out the necessary actions for the students to have solution alternatives. So in this entry, we can see that the work of the teachers within the tutoring program has been viable. However, it is indispensable to pay more attention and take action aimed at the continuous improvement of the program, which most likely will result in benefit of the students (Chart 3).





### 4.04 FACTOR 4: PROFESSIONALIZATION OF THE TUTORIAL ACTION

The variables found with higher correlation were: honesty to the tutor (0.796), capability to guide the student on study techniques (0.768) and, the tutor possesses an adequate vocational training (0.633). In this entry, we found that 70% of the interviewed students consider that their tutor has good professional formation. However, the study showed that only 58% of the students consider their tutor is aware of the processes to orient on the ways to apply study techniques. Honesty is an element that allows both parts

to interact; without it, problems that can be solved through tutoring are not visible because the student does not speak truthfully. Only half of the students stated being honest with their tutor (See Chart 4).

Therefore, it becomes indispensable to put greater emphasis on the professionalization of the teachers with regard to tutoring. According to activities aimed at developing the perception should be integrated into the formation of tutors through the development of the senses, and thus, facilitate the tutor with activities to be more empathic, pedagogic technocrats, and most of all, human.



Source: Self elaboration from the results of the questionnaire-survey.

# 4.05 FACTOR 5: INSTITUTIONALIZED TUTORING

In this factor was found that questions with higher association were: easy localization of the tutor (0.686) and, the tutor possesses a dominance of pedagogical methods (0.612).



Source: Self elaboration from the results of the questionnaire-survey.

In this entry, we found that 60% of the participants in the study consider their tutor to have full knowledge of pedagogic methods. Also, 62% of them recognize that their tutor knows the institutional regulations and also believe that it is easy to locate their tutoring teacher. Contrastingly, only 49% of the students agree with the fact that their tutor knows the channeling instances (See Chart 5). It is important to point out that the institution in charge of providing the formation spaces for tutors should also create the links with the organisms that students could be channeled to. It is common in the professionalization of teacher-tutors that they remain only in the elemental stage, which is knowledge, setting aside important aspects such as the protocols corresponding to the channeling of students with greater problems, which in the long term could interfere with their educational processes and trajectories.

# 5.0 CONCLUSIONS

The results of the evaluation of student perception that are show in Table 1 achieved the objective of analyzing the way in which tutoring has contributed to the integral development of students. This was done through the five factors into which the studied variables were grouped by the factorial analysis. With regard to factor 1: competences of tutoring, the students realize that their teachers treat them with respect, are interested in their problems, are disposed to see them, and answer their academic doubts. However, the competences that were graded the lowest were the capability to foster independent study and satisfaction with their assigned tutor.

Factor 2: tutor support. The students' state that their tutors do not generate internal motivation, besides, only half of them considers that they have built a life and career plan. Added to this, a little less than half of the participants believe that the teacher promotes self-confidence. Also, there is little diagnosis of study habits and knowledge of their own emotions. We agree with Tejeda and Arias (2003) in that tutoring helps students to have more self-assurance and most of all, to properly channel their emotions. This is a key element since without this self-assurance students lose interest in their professional formation. As far as the self-confidence that students must strengthen through their tutor, this is in accordance with Novak, Armstrong, and Browne (2014).

Factor 3 refers to the institutional tutoring program. We found that only half of the students is satisfied with the program. A little over half of them consider that their academic performance has improved. Also, half of them think that tutoring has contributed to their integration in university. This confirms what is mentioned by (Bernier, Larose, and Soucy, 2005) and (Fuentes et al., 2014).

Factor 4: professionalization of the tutoring action, we found that the students accept the professional formation of their tutors; although a little over half of them consider that they do not have adequate orientation on study techniques. Therefore, we recommend considering what is mentioned by Fernandes and Flores (2013) so that proper planning can be made on the role of tutors to support and monitor student learning, as well as improving their motivation.

Factor 5: institutionalized tutoring. We found that students consider that their tutors have no knowledge of the proper channeling instances. Added to this, two thirds of the students believe that their tutors are not well acquainted with pedagogic methodologies, institutional normativity, and proper orientation to select courses.

Considering all five factors, the university, tutors, and the educational environment must assume the responsibility handed to them in giving quality education to young people to achieve significant goals in accommodation, assimilation, development, and conclusion of students in university levels, as stated by Novak, Armstrong, and Browne (2014) and Fernandes and Flores (2013).

Based on the results of the factorial analysis, we recommend that universities consider a tutoring program based on the following factors: 1) tutoring competences, 2) tutoring support, 3) institutional tutoring program, 4) professionalization of the tutoring action, and 5) institutionalized tutoring. This

contributes to carry out an evaluation on the tutoring action as it is perceived by the students and helps to achieve a better integral development of the students.

The implications for higher education institutions are important. Firstly, to evaluate tutoring programs becomes a priority to know the quality of the job done by the tutors, and thus know how students feel. Secondly, tutoring programs require diverse support of full-time academic personnel and trained to exercise the tutorial function, inasmuch as the labor of canalization is indispensable for university students.

In third place, the need of working with a system of early warning supporting to know the academic situation of students in order to help them since the problem originates was detected. As fourth point, it is important for tutors to have an approach with the community surrounding the school to get more interaction with society and, if possible, seek support with organizations focused on working with youths to search resources which sometimes are not had to work with the students.

It is proposed to study in the near future the study habits to know susceptible areas of improvement, and thus to suggest the implementation of a regularization workshop. Finally, it is suggested to continue working with the youths of this university to develop activities headed to the students' integral development.

#### ACKNOWLEDGEMENTS

We would like to thank the National Polytechnic Institute and the Department of Research and Graduate Studies for their support for conducting this research. Also students of the Polytechnic University of Tecamac located in the State of Mexico, for your time to answer the questionnaire.

#### REFERENCES

- Ariza Ordóñez, G. I., & Ocampo Villegas, H. B. (2005). El acompañamiento tutorial como estrategia de la formación personal y profesional: un estudio basado en la experiencia en una institución de educación superior. *Universitas Psychologica*, 4(1), 31-42.
- Bean, N. M., Lucas, L., & Hyers, L. L. (2014). Mentoring in Higher Education Should be the Norm to Assure Success: Lessons Learned from the Faculty Mentoring Program, West Chester University, 2008–2011. Mentoring & Tutoring: Partnership in Learning, 22(1), 56-73.
- Bernier, A., Larose, S., & Soucy, N. (2005). Academic mentoring in college: The interactive role of student's and mentor's interpersonal dispositions. *Research in Higher Education*, 46(1), 29-51.
- Bourdeau, J., & Grandbastien, M. (2010). Modeling tutoring knowledge. In Advances in intelligent tutoring systems (pp. 123-143). Springer Berlin Heidelberg.
- Collings, R., Swanson, V., & Watkins, R. (2014). The impact of peer mentoring on levels of student wellbeing, integration and retention: a controlled comparative evaluation of residential students in UK higher education. *Higher Education*, 1-16.
- Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. Research in Higher Education, 50(6), 525-545.
- Dappen, L., & Isernhagen, J. C. (2006). Urban and Nonurban Schools Examination of a Statewide Student Mentoring Program. Urban Education, 41(2), 151-168.
- De la Cruz Flores, Chehaybar, E., & Abreu, L. F. (2011). Tutoría en educación superior: una revisión analítica de la literatura. Revista de la Educación Superior, 40(157), 190-209.
- Dennison, S. (2000). A win-win peer mentoring and tutoring program: A collaborative model. *Journal of Primary Prevention*, 20(3), 161-174.
- Eller, L. S., Lev, E. L., & Feurer, A. (2014). Key components of an effective mentoring relationship: A qualitative study. Nurse education today, 34(5), 815-820.
- Federal, A. P. (2013). Plan Nacional de Desarrollo 2013-2018.

- Fernandes, S., & Flores, M. A. (2013). Tutors' and Students' Views of Tutoring. In *Back to the Future* (pp. 277-295). SensePublishers.
- Fresán Orozco, M., & Romo López, A. (2011). Programas Institucionales de Tutoría una propuesta de la ANUIES. México: Asociación Nacional de Universidades e Instituciones de Educación Superior.
- Fruiht, V. M., & Wray-Lake, L. (2013). The Role of Mentor Type and Timing in Predicting Educational Attainment. *Journal of youth and adolescence*, 42(9), 1459-1472.
- Fuentes, M. V., Alvarado, A. R., Berdan, J., & DeAngelo, L. (2014). Mentorship Matters: Does Early Faculty Contact Lead to Quality Faculty Interaction?.*Research in Higher Education*, 55(3), 288-307.
- García Nieto, N., Asensio Muñoz, I., Carballo Santaolalla, R., García García, M., & Guardia González, S. (2005). La tutoría universitaria ante el proceso de armonización europea. *Revista de educación*, 337, 189-210.
- García González, A. J., & Troyano Rodríguez, Y. (2011). El Espacio Europeo de Educación Superior y la figura del profesor tutor en la Universidad. *REDU. Revista de Docencia Universitaria*, 7(2), 1-10.
- Graffigna, A. M., Hidalgo, L., Jofré, A., Berenguer, M. D. C., Moyano, A., & Esteybar, I. (2014). Tutorial Practice as a Strategy of Retention at the School of Engineering. *Procedia-Social and Behavioral Sciences*, 116, 2489-2493.
- Gorinski, R., Fraser, C., & Ayo, L. (2010). Mentoring as a key strategy in the development of a community of reflective practitioners in tertiary education. In*Teachers as Learners* (pp. 217-241). Springer Netherlands.

INEGI. (2010). Censo de población y vivienda 2010. México: Instituto Nacional de Estadística y Geografía.

- Kadiwal, L., & Rind, I. A. (2013). 'Selective cosmopolitans': tutors' and students' experience of offshore higher education in Dubai. *Compare: A Journal of Comparative and International Education*, 43(5), 689-711.
- Karcher, M. J. (2008). The study of mentoring in the learning environment (SMILE): A randomized evaluation of the effectiveness of school-based mentoring. *Prevention Science*, 9(2), 99-113.
- Kim, M., & Schallert, D. L. (2011). Building caring relationships between a teacher and students in a teacher preparation program word-by-word, moment-by-moment. *Teaching and Teacher Education*, 27(7), 1059-1067.
- Lapeña Pérez, C., Sauleda Pares, N., & Martínez Ruiz, M. Á. (2011). Los programas institucionales de acción tutorial: una experiencia desarrollada en la Universidad de Alicante.
- Lechuga, V. M. (2014). A motivation perspective on faculty mentoring: the notion of "non-intrusive" mentoring practices in science and engineering. *Higher Education*, 1-18.
- Massón de Brusa, A. (2012). La función turoial: Una revisión de la cultura institucional escolar . Buenos Aires: Homo Sapiens, 5a. ed.
- Manzano Soto, N., Martín Cuadrado, A., Sánchez García, M., Rísquez, A., & Suárez Ortega, M. (2012). El rol del mentor en un proceso de mentoría universitaria. *Educación XX1*, 15(2).
- Martina, C. A., Mutrie, A., Ward, D., & Lewis, V. (2014). A Sustainable Course in Research Mentoring. *Clinical and Translational Science.*
- Nasser-Abu Alhija, F., & Fresko, B. (2014). An Exploration of the Relationships between Mentor Recruitment, the Implementation of Mentoring, and Mentors' Attitudes. *Mentoring & Tutoring: Partnership in Learning*, 22(2), 162-180.
- Novak, J. M., Armstrong, D. E., & Browne, B. (2014). Managing and Mentoring your Educational Self. In *Leading For Educational Lives* (pp. 53-67). SensePublishers.
- Núñez, M. A., & Rodriguez, J. J. (2011). El sistema de tutorías como herramientas de auditoría para la evaluación de la calidad docente. The tutorial system: A tool to evaluate the quality of higher education. *Cultura y Educación*, 23(2), 259-271.
- Ortega-Andrade, N. A. (2011). Un modelo de tutoría universitaria para el aprendizaje de materiales instruccionales. *Educación y Educadores*, 14(1), 85-104.
- Pérez, P. (2012). Los planes de tutoría de carrera: una estrategia para la orientación al estudiante en el marco del EEES. *Educar*, 48(2), 247-266.
- Ramos, A. (2010). Manual para el desarrollo integral. México: Editorial Amate. 5a. edición. México.
- Reichenberg, R., Avissar, G., & Sagee, R. (2014). 'I owe to my tutor much of my professional development': looking at the benefits of tutoring as perceived by the tutees. *Professional Development in Education*, (ahead-of-print), 1-17.

- Sebastián Ramos, A., & Sánchez García, M. F. (2012). La función tutorial en la universidad y la demanda de atención personalizada en la orientación. *Educación XX1*, 2.
- SEP. (2013). Programa Sectorial de Educación 2013-2018. México: Pública, Secretaria de Educación.
- Tejada, J. M., & Arias, L. (2003). Estudios e investigaciones: el significado de tutoría académica en estudiantes de primer ingreso a la licenciatura. *Revista de la educación superior*, 23(3) 127.
- Vizcaya, E. L. G. (2003). Las universidades politécnicas: Un nuevo modelo en el sistema de educación superior en México. Revista de la educación superior, 32(126), 6.