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Presentation

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In Pro-Research, Teaching and Training of human resources committed to Science. The content of the articles and reviews that appear in each issue are those of the authors and does not necessarily the opinion of the editor in chief.

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Knowledge about the Nursing Process

DIMAS-PALACIOS, Cirila†*, VALENZUELA-GANDARILLA, Josefina, MARÍN-LAREDO, Ma. Martha and GARCÍA-REZA, Cleotilde

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Abstract

Objective: Identify the knowledge that the nurses froma a hospital in Morelia, Michoacan have of the nursing process. Methodology: Not experimental, descriptive, correlational cross – sectional study. Through sampling for convenience, they were interviewed 176 nurses of the Women´s Hospital of March to April of 2013. A questionnaire with 29 questions in Likert sacale was used. The dependability of the instrument obtained the coefficient alpha of Cronbach 0.831. Sociodemographic, labor and knowledge variables were explored in the Nursing Process. Contribution: With base to the results obtained in this study, the purpose is that the the authority of the hospital drifts and execute intervention strategies for the education and the nurses continuous upgrade in the methodology of the discipline and to improve the quality of attention. (150-200 words)

Nursing. Nursing Process. Nursing Care. Attention of quality

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Introduction

The Nursing Process (NP) is a dynamic and systematic way of providing nursing care to real or potential problems centered on the human responses of the individual, family and community, promotes and allows to provide a scientific and humanistic care, focused on objectives or effective results And efficient, to provide quality and holistic care, in addition to promoting disciplinary development. It consists of five stages that are valuation, diagnosis, planning, execution and evaluation which are closely related, therefore one affects or benefits others.

At present, this methodology contributes to nursing, both in our country and in other parts of the world, striving to consolidate as a scientific discipline and to avoid what until the decade of the 1970s persisted; Nurses were valued for their skills and technical skills (Andréu, 1990, quoted in Francisco del Rey, 2008), which could be directly observed in their practice, mainly aimed at contributing to the diagnosis and treatment of the disease.

According to Alfaro - LeFevre, 2003, the application of the Nursing Process, in many countries is a requirement for the practice of the professional nurse; in Mexico, is becoming increasingly relevant in the training of nurses and their application during practice; however, there is still a way to go in this field, which is unknown to many nurses even today. Similarly, Mena and Romero (2001) attributed the lack of knowledge in the Nursing staff, on this methodology as a difficulty in the application of the EP. This is reflected in the decrease in the quality of nursing care to the individual, family and community, becoming the great challenge for current nursing.

Also, the application of NP is limited, Mainly because the nursing staff frames their work in complying with the medical indications with little independent action and does not occupy in the health team the place that corresponds to it and consequently care is not focused on the human response. On the other hand, Medina in 1999, indicates that the abyss existing between the theory and the practice of nursing is explained with several arguments; The alleged lack of

Knowledge and understanding that nurses have of theories and methods that should govern their practice, or failure to assume the responsibilities entailed by an autonomous practice derived from the application

Of the scientific method of problem solving (NP).

Despite the fact that in some health institutions, the implementation of the Nursing Process has been implemented, the few studies carried out explain that the evaluation stage is not carried out methodically and without any support from a guide as a frame of reference, model or theory of nursing. Nursing.

In order to prepare the nursing diagnoses, the rules established by the North American Nursing Diagnosis Association (NANDA) are not used or complied with, and the same diagnoses are recorded in nursing sheets during The different shifts and days, being that one of the characteristics of the diagnosis is that it must be changing and must be prioritized depending on the health status of the person.

Nursing diagnoses that are performed are not those approved by the North American Nursing Diagnosis Association (NANDA) and do not comply with the rules established by the same association, they elaborate them in their own words.

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Nursing records show the same diagnoses during different shifts and for several days, which must be changing and prioritized according to the needs of the person. For the care plan, no goals / outcomes are set according to the established nursing diagnosis due to the lack of knowledge about the use and management of the Nursing Outcomes Classification (NOC), or the Nursing Interventions Classification (NIC), but care is given based on medical diagnosis, medical indications and can be said routinely.

This is evidence of the disengagement and lack of continuity of the EP stages, and consequently the care is not provided in a systematized, individualized, scientific and humanistic way. The lack of implementation of the EP in a systematic way means that the diagnosis and treatment of human responses is not guaranteed, and this way it does not prove to be a relevant strategy for the disciplinary and professional development, as its aims establish.

It is important that nurses link knowledge, critical thinking, technical and interpersonal skills and attitudes, components that integrate the nursing methodology (PE). However there are factors for its application, both personal and institutional, one of the main is the knowledge about NP.

Therefore, the following research questions are posed: What knowledge do the nurses of the Morelia Women's Hospital in Michoacan have about the Nursing Process?

What is the relationship between knowledge about PE and seniority of nursing staff?

Is there an association between the knowledge that nurses have about the Nursing Process and having received a course on this methodology?

The main objective of this study is to evaluate the knowledge of nurses at the Morelia Women's Hospital in Michoacán on the Nursing Process. Also determine if this knowledge is associated with seniority and having received course on this method.

The hypotheses raised for this investigation are; the nurses at the Morelia Women's Hospital in Michoacán have knowledge about the Nursing Process, there is an association between knowledge about PE and seniority of nursing staff, there is also an association between the knowledge about PE and having received courses on this methodology.

This research is considered relevant and innovative because based on the results obtained an important contribution of concrete research lines is generated. The results obtained will be useful for the authorities of the health institution, with the purpose of planning and executing intervention strategies for the education and continuous updating of the nurses in the methodology of the discipline and with that to provide nursing care Scientific and systematized in the prevention and timely diagnosis of the disease, treatment of human responses, rehabilitation and avoid complications in the health status of people, as long as the institution benefits in reducing costs and days of stay Hospital, due to the reentry and presence of complications in the women, besides reinforcing the professional development of nursing.

This article is made up of the following sections: Description of the methodology used to carry out the study, later presented the section of the results obtained, gratitude, the conclusions are presented and finally references.

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Methodology to apply

It is a non-experimental, descriptive, correlational, prospective and cross-sectional study. Through non-probabilistic sampling for convenience, 176 nurses were surveyed who provide direct care at the Women's Hospital of Morelia, Michoacán from March to April 2013. The questionnaire known as Knowledge and Application of the Diagnostic Nursing Process in Hospital and Community Practice (CAPDEP), prepared by López España J. and Moreno Monsivais MG and reviewed by the Mexican Group for the Process of Nursing 4 and 5 of November 1999, previous pilot test of the same, in which 8 sociodemographic and labor variables were explored, 21 items correspond to the variable knowledge about Nursing Process, the latter, raised in Likert scale, with the following options Of responses; Totally agree, partially agree, do not know, partially disagree and strongly disagree. The reliability of the instrument based on the Cronbach alpha coefficient is 0.831.

Data analysis was performed using the statistical package for the social sciences (IBM SPSS Statistics Version 20) using descriptive and inferential statistics specifically the Chi square test and the Pearson correlation coefficient.

The ethical basis of this study is based on the Research Regulations of the General Health Law on Research and with the authorization of the Research and Ethics Commissions of the participating institution.

Results and discussion

Based on the research, the following results were found; the total number of participants was 176 nurses working at the Women's Hospital of Morelia, Michoacán.

Dimension I: Sociodemographic variables

The majority of the nurses work in the night shift representing 31.8%, 53.4% have less than 5 years of experience, that is to say, it is a girl with less than 5 years of experience, in whom the authority Can influence significantly, due to the characteristics, attitudes and opening abilities that they could have for the continuous updating on NP management.

Regarding the degree of studies, it was found that 57.4% of nurses have undergraduate degrees. Results explain that 77.8% of the researches have received courses on the Nursing Process, while 22.2% indicated that they did not. Reaffirming what was mentioned by Arroyo and Mompart in 1998, quoted by Francisco del Rey in 2008. Who explains that it is necessary to train nurses on the discipline's own methodology for a professional exercise that ensures a scientific practice.

It was also found that 52.3% of nursing staff received courses on NP 2-3 years ago.

Dimension II: Variable knowledge about nursing process

Regarding nurses' knowledge of NP, 74.4% were "totally in agreement" that PE is a method to carry out independent nursing actions. These results coincide with that found by Ledesma, Oros, Ortiz, Ibarra and González (2010), where 78.6% of the nursing staff makes the same affirmation. The 79.5% of those investigated fully agreed that unification of a language would facilitate the communication between colleagues.

Regarding whether nursing should only carry out delegated medical activities, 63.6% said they totally disagree. According to the findings, nursing knows that it must perform independent interventions.

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This differs from the findings of Rojas and Pastor (2010) who explain that planning is based on medical diagnosis, established routines and protocols, ratifying the lack of autonomous criteria to assess, diagnose, plan, perform and justify interventions Nursing care. These findings coincide with that found by Ledesma, Oros, Ortiz, González and Ibarra (2010), where 93.8% report the same.

It was found that 72.2% of the nursing staff were "totally disagree", that only medical personnel can make diagnoses. The 53.4% report that it is "totally disagree" that nursing diagnoses are only the physical symptoms that the client has, which explains that the nurses know that the diagnoses refer to different human responses (physical, psychological, spiritual, Social and cultural) that can be presented by women.

Regarding whether the planning is time consuming and not feasible, 41.5% of the nursing staff were "totally disagree" and 24.4% partially disagree, and 50.6% also know that the resources of women and their Family, he answered "totally agree", the above agrees with Kozier, Erb & Snyder (2013), that although planning is the responsibility of the nursing staff, the support of the user, family and support people is Essential for the plan to be effective, and encouraged to actively participate as far as possible.

On the other hand, 69.9% of the nurses evidenced that the established objectives should respond primarily to the needs of women. 69.3% stated that they fully agree that they may be short-term or long-term.

50.6% percent of the nurses said they were "totally in disagreement" that nursing interventions are only in collaboration with other health professionals.

These results differ with the data found by Rojas and Pastor (2010) who explain that nursing bases the interventions in the medical diagnosis and not independently. 71.6% of nurses know that independent interventions are activities that do not require recipes or indication of another professional.

70.5% of nurses recognize the importance of documenting nursing interventions and adding them to the file to give legality to the discipline's work. Regarding whether nurses know that the use of nursing diagnoses supports the systematization of nursing practice, 78.4% (138) answered "totally agree". While 68.8% of the staff surveyed know that the use and management of the nursing diagnosis is necessary. Regarding whether the nursing diagnosis helps to identify the human responses of women to real and risky health problems, 67.6% fully agreed, these data agree with García, Gómez, Toxqui, Gollner, Solano, and Medina (2014) who refer that nursing can perform interventions directed at human responses that are legally allowed to attend without an indication from the doctor.

Regarding to whether the nursing diagnosis facilitates the professionalization of the nursing discipline, 60.8% stated that they fully agree.

Corresponding to whether the nursing diagnosis facilitates delimitation of nursing practice, it was found that 51.7% of the nurses fully agree. While 46% indicate that it is a clinical judgment issued by the nursing staff and is the conclusion of the assessment. Finally, 65.3% of the nurses report that the taxonomy of the nursing diagnosis was elaborated by NANDA.

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On the other hand, Table 1 shows that most nurses have received courses on Nursing Process, but also reflect a greater knowledge about the discipline's own methodology, through the measurement criterion; totally agree.

Have you received course on NP	Knowledge about Nursing Process			Total
	Agree	Partially agree	I don't know	
Yes	16	90	31	137
No	3	34	2	39
Total	19	124	33	176

Table 1 Contingency table ,has received course on the Nursing Process * Knowledge of the EP

In Table 2, according to the Chi-square test, it is observed that the Nursing Process courses were significantly associated with the nurses' knowledge about this methodology (p <0.004).

	Value	gl	Sig. asymptotic (bilateral)
Pearson Chi Square	15,565[a]	4	,004
Reason for likelihood	13,194	4	,010
Linear by linear association	4,031	1	,045
Valid cases number	176		

Table 2 Chi Square Test Result

Dimension III: Correlations

It is important to mention that a positive correlation was found with a value of r = .234 ** and P = 0.01 based on Pearson's Correlation Coefficient, between seniority

Of less than five years that the majority of the nurses work in the hospital with the knowledge they have about whether the nursing diagnosis facilitates the professionalization of the discipline, it may be because the staff is young and recently graduated. These results support what was pointed out by Rojas (2009), who explains that the purpose of promoting the disciplinary development in nursing is the development of strategies and the methodology of the profession.

Likewise, a positive correlation was found with a value of r = .260 ** and P = 0.01 based on the Pearson Correlation Coefficient, between the time elapsed (2-3 years) of the course of NP with The NP knowledge about whether it is a method for carrying out independent nursing actions, ie, continuous updating entails that nurses have adequate NP knowledge.

There is a positive correlation with a value of r = .181 * and P = 0.05 based on Pearson's Correlation Coefficient, between the degree of the degree that most nurses have and the identification of actual or potential problems in women. That is, to a higher degree of studies, greater knowledge to identify health problems (Rodriguez, 2006).

According to the results obtained, there is a positive correlation with a value of r = .200 ** and P = 0.01 based on Pearson's Correlation Coefficient, between the knowledge about whether the NP is a method to perform independent nursing actions and The importance of unifying the nursing language to facilitate communication between colleagues. The above is based on García, Gómez, Toxqui, Gollner, Solano and Medina (2014), who explain that the nursing diagnosis is the identification of human responses, in which nurses base their knowledge, experience, legal responsibility and are treated independently.

In this way nurses were aware that the Nursing Process consists of 5 stages, a positive correlation was found with a value of r = .336 ** and P = 0.01, with respect to whether NP is a method to carry out independent actions Of nursing. That is, to a greater knowledge of the stages of the Nursing Process, more independent actions can be performed. These findings coincide with those found by Perez, Sánchez, Franco and Ibarra (2006), as they found a positive correlation between knowledge of NP and its application in care.

In relation to the knowledge that nurses have about whether only medical personnel can make diagnoses, a positive correlation was found with a value of r = .493 ** and P = 0. With the related to if the planning takes a long time and is not feasible, that is to say, greater knowledge of which also nursing can diagnose, greater planning of nursing care. These findings coincide with that reported by Sotelo (2013), who states that the nurses studied have good knowledge and skills in the application of NP.

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Conclusions

This research allows an overview of the knowledge that nurses have in a hospital in Morelia, Michoacán, about the Nursing Process.

Nurses have knowledge about the EP and its stages, recognize it as the method to carry out independent actions, know the types of human responses, this gives them the possibility of issuing nursing diagnoses and not only the doctor is the one who diagnoses.

They point out that the diagnosis makes it possible to systematize the practice, to plan educational strategies, independent nursing interventions and not only in collaboration with other health professionals.

The planning of care based on the assessment of human needs, allows real and precise objectives to be established in the short or long term, in coordination with women and their families, since all the actors are involved in the elaboration of Holistic, efficient and effective care plans that lead to satisfactory results. Likewise, a significant association was found between having received a course on the Nursing Process and the nurses' knowledge about this methodology.

These findings will serve as a basis for implementing programs and actions in the nursing staff focused on the development of clinical and critical thinking skills in the application of the EP and favor the disciplinary development that guarantees care as the fundamental axis of the practice. They can also be used to promote studies and define concrete lines of research on knowledge, skills, abilities and critical thinking, in order to increase the body of knowledge in the discipline.

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Article **ECORFAN-Bolivia Journal**
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Acetylene sensor based on a fiber laser finely tunable with a silicon wafer

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Abstract

In this work a finely tunable erbium doped fiber laser based on a silicon wafer to detect acetylene is presented. Here, the silicon wafer acts like a Fabry-Perot interferometer which is used to select the emission line of the laser. The laser emission can be tuned when the silicon wafer temperature is changed since the maxima peaks of the interference spectrum are shifted. The temperature is finely varied and highly stabilized with a thermo electric cooler that is driven with a PID controller. The laser line emission has as minimum FWMH of 28 pm, emits around of 1530 nm and reaches a continuous tuning range of around 947 pm. The absorption lines of the acetylene molecule, measured with a photodetector and recorded with an oscilloscope, can be characterized with high precision when the fiber laser emission scans the molecule around such absorption lines. Finally it is shown that amplitude of the recorded signal depends directly on the acetylene concentration.

Fiber laser, Fabry-Perot interferometer, acetylene sensor, silicon wafer

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Introduction

Gas censorship is very important in applications of environmental monitoring, pollution, security, among others (Stewart, 1999). For example in the industry acetylene gas is used in welding and cutting equipment so it is necessary to monitor it to avoid accidents. Fiber optic sensors based on the absorption of light allow the remote detection of gases with additional advantages such as: immunity to electromagnetic interference, relatively fast response, non-contaminated and very accurate. Some applications of this type of optical sensors require optical fiber lasers whose emission lines can be continuously tunable and have a single frequency of operation (Weldon et al., 1995).

Therefore it is necessary to finely tune the laser emission with small tuning steps over the entire spectral region. Today there are several proposals for fiber lasers for the gas sensing but they have the limitation of not being continuously tuned (Ball & Morey, 1992; Whitenett et al., 2004). However, some laser-based lasers with continuous tuning have been reported (Paschotta et al., 1997; Shen et al., 2011) [5, 6]. For example, the laser proposed by (Paschotta et al., 1997) was tuned continuously around 0.72 nm by uniformly narrowing the elements of the optical cavity, two Bragg gratings at the ends of an erbium-doped fiber. Another example is the single frequency tunable laser proposed by [6], which relied on the heating of a fiber segment to tune the laser around 5 GHz.

In particular in the spectral region around 1530 nm the molecule of the acetylene has lines of absorption, reason why the optical lasers doped with Erbium are optimal for its sensate. In this work a simple acetylene gas sensor based on a fiber laser doped with continuous tuning erbium is presented.

Said laser has a silicon wafer which sets the laser emission wavelength. The emission line is finely tuned by varying the temperature of the wafer with a thermoelectric cooler (TEC) handled with a PID controller. It is shown that the laser has a minimum width at half height (FWHM) of 28 pm, emits around 1530 nm and reaches a tuning range of approximately 947 pm with a resolution of 84.6 pm / ° C, sufficient characteristics to scan or two lines of acetylene absorption. Finally the experimental results of characterizing an acetylene absorption line are presented, in which it is observed that as the power that reaches the detector varies as the wavelength of the laser is tuned. This way when the laser emits in the wavelength where the line of absorption is more intense is detected the smaller amount of power. The power will be lower as the acetylene concentration is higher.

Experimental arrangement of the acetylene sensor

Figure 1 shows the experimental arrangement that was implemented to sensitize acetylene. In which the arrangement of the erbium doped fiber laser based on a silicon wafer can be observed. In this arrangement is placed a circulator that serves to obtain the reflection of the silicon wafer which is positioned on the TEC. The reflected light is divided into two equal parts with the 50/50 coupler. One of the beams is passed through a variable optical attenuator (VOA) and then enters a wave division multiplexer (WDM) which serves to close the ring and generate the laser emission generated by erbium-doped fiber, EDF. The laser emission is monitored by the other output of the 50/50 coupler, considered as the output of the laser.

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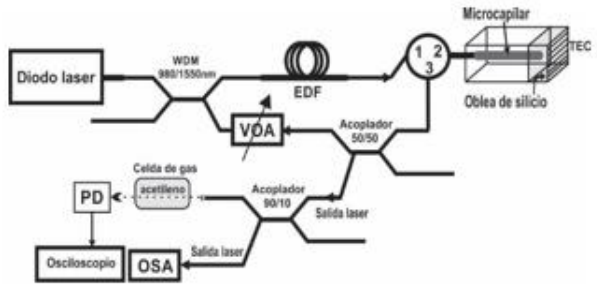


Figure 1 Experimental arrangement of the acetylene sensor

The laser output is spliced to a 90/10 coupler, of which the 10% output is connected to the Optical Spectrum Analyzer (OSA) in order to monitor the wavelength of the lasso, while the 90% output is Leads to the gas cell (see Figure 2). Finally, the beam passing through the cell affects a photodetector (PD) which is responsible for converting the optical signal to an electrical signal. In our case this electrical signal is coupled to an oscilloscope to monitor the sensor response.

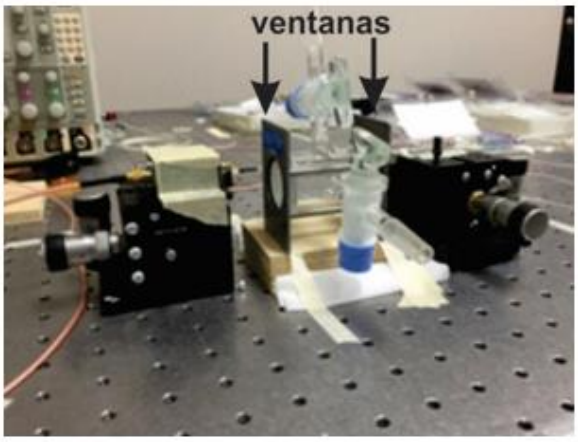
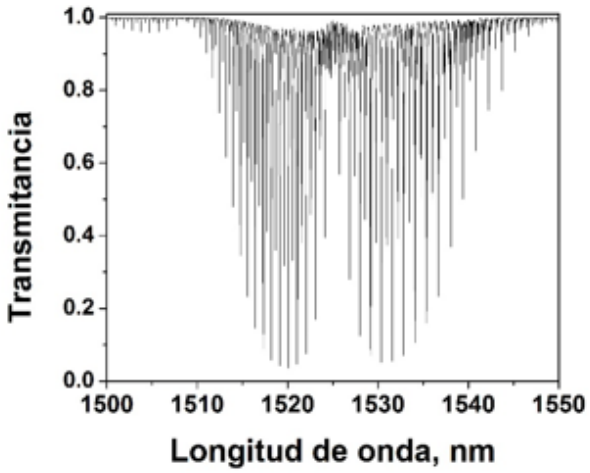


Figure 2 Celda de gas

Tunable laser

The wavelength of the laser emission is determined by the silicon wafer, which acts as a Fabry-Perot interferometer (FPI).

In this way the FPI generates a spectral interference pattern which affects the luminescence spectrum of the erbium, ranging from 1520 nm to 1570 nm. The interference pattern can be shifted spectrally allowing the laser to be tuned. It is also important to note that in order to generate a laser emission around 1530 nm, it is necessary to reduce the gain in the region of 1550 nm, in our case it was done with VOA. The achieved FWMH of the laser emission around 1530 nm was 28 pm. This value was measured with the OSA with a resolution of 20 pm.

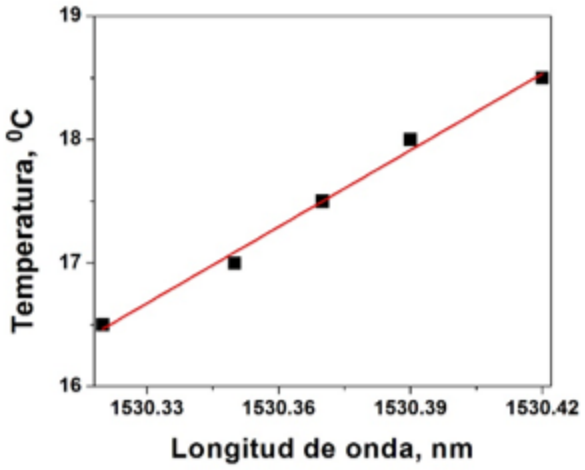


Graphic 1 Spectrum of vibrational absorption of acetylene in the region of 1530 nm.

The acetylene absorption lines are in the spectral region of 1530 nm, as shown in Figure 1. In order to scan one of the absorption lines of the molecule, it is necessary to shift the emission of the laser in the region where a line occurs Of C2H2 absorption, which was done using a TEC.

In turn, a PID controller was implemented to stabilize the temperature of the TEC and the silicon wafer. With this, it is possible to spectrally shift the maximum peaks of the interference pattern of the FPI and thus the emission line of the laser.

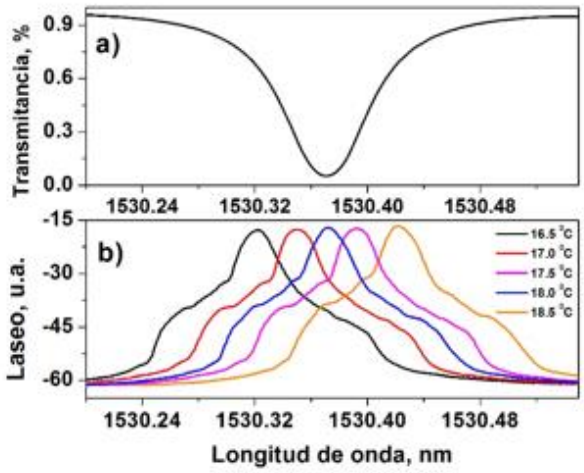
So the continuous tuning was achieved with fine changes in the temperature of the silicon wafer in a range of around 947 pm (see Chart 2) and a resolution of 84.6 pm / ° C, sufficient to scan an absorption line. Figure 2 shows that the variation of the wavelength as a function of temperature, which has a linear behavior.



Graphic 2 Laser wavelength as a function of the temperature applied to the silicon wafe

Censing of acetylene

In order to sense acetylene by absorbing the laser light, it is necessary to pass the laser output beam through the gas cell. In order to obtain a good signal from the beam after it had been attenuated, it was necessary to collimate it to avoid high divergence in order to concentrate the greatest amount of energy in the photodetector and finally to monitor it on the oscilloscope (Figure 1). Subsequently, the temperature of the silicon wafer was changed to position the laser emission line in the region of 1530 nm, at a wavelength very close to one of the acetylene absorption lines, as shown in the Chart 3. After being in the starting position, the laser emission line began to tune in fine steps to characterize said absorption line, this was done by increasing the temperature of the silicon wafer.



Graphic 3 a) Acetylene absorption line and b) laser emission tuned to different temperatures.

To characterize the response of the sensor to the presence of acetylene, the cell was first completely filled with acetylene gas. Then on the arm that was connected to the OSA was verified that the emission wavelength. Afterwards, a scan of the laser line was performed in the spectral region where one of the acetylene absorption lines is located as shown in Graph 3. In doing so, the light intensity detected by the photodetector was decaying according to the line of Emission was approaching the maximum absorption of the ro-vibrational line (Graph 4a). In this case the minimum and maximum voltage detected by the photodetector is when the laser line is located at the point of greatest and lowest absorption, which occurs at 1530.37 nm and 1530.15 nm respectively, as shown in Figure 3a. Subsequently, the concentration of the gas inside was reduced and the sweep was repeated and the signal of Figure 4b was obtained.

When comparing the results derived from these two concentrations it can be observed that the depth of the measured signal depends on the concentration of acetylene. So the concentration value is directly proportional to the amplitude of the measured signal.

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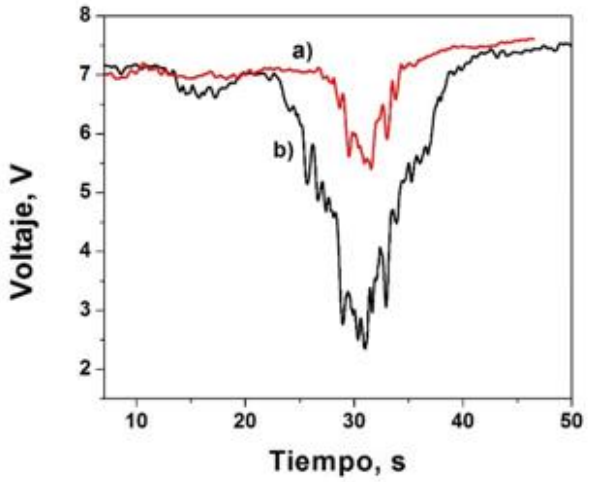

Graphic 4 Figure of the absorption line measured with the photodetector at different concentrations.

Conclusions

It was possible to implement an acetylene sensor, which is based on a tunable laser. In addition it was verified that the ability of the laser to move with very precise and reduced steps is high, making it a suitable laser for the sensing of the acetylene gas.

It was also demonstrated that the lack of mechanical components considerably increases the laser precision in the selection of the laser region. Finally it is necessary to continue exploring the capabilities of this laser, in order to look for reduction in size, which is highly probable.

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Article **ECORFAN-Bolivia Journal**
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Academic Performance in Nursing Graduate Students

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Abstract

Objectives. Analyze academic performance on nursing students in their bachelor´s degree. Describe the factors that affect academic performance. Methodology: quantitative approach, descriptive, transversal; no probabilistic sample of 55 students. AMEDMAR validated instrument was used with 59 items, reliability of .858. Descriptive statistics were applied with frequency and percentages by using the statistics package SPSS. The norms and universal ethical principles were accomplished. Contribution. Identify the factors that affect academic performance in students, it will be an opportunity from the professor and the institutional authorities because it will support the fulfillment from the National Development Plan 2013-2018, to the objective of guarantee quality health services for Mexicans, to form professional excellence human resources. Thus contributing to increase educative quality and favor nurses to grant a quality and secure attention. Furthermore the academic performance builds an indicator level from the knowledge reached by the student, and is composed with a factor to value the educative quality, this studio will help to identify and addressed in a timely the factor that affect performance, favoring the studiesin the bachelor's degree plan.

Academic performance, intrinsic motivation, extrinsic motivation

Citation: LIZALDE-HERNÁDEZ, Azucena, MARÍN-LAREDO, Ma. Martha, VALENZUELA-GANDARILLA, Josefina and ÁLVAREZ-HUANTE, Claudia Guadalupe, DIMAS-PALACIOS, Cirila. Academic Performance in Nursing Graduate Students. ECORFAN Journal-Bolivia 2016, 3-4: 15-22

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Introduction

The academic performance of students is affected by multiple factors that need to be identified and corrected, the nursing profession needs to increase the quality of education to ensure that graduates guarantee quality and safety in care for people in the professional practice. In addition academic performance is an indicator of the level of learning achieved by the student and is a factor in assessing educational quality. (Torres, 2011, p.53) It points out that among the school factors that affect academic performance, is the administration of the educational institution, its policies, and strategies; the training, commitment, workload of teachers. It also emphasizes that the objective of the teacher is to train and promote the development of the students in charge and not only fail them.

It is necessary to identify the factors that affect the academic performance of nursing students because from the educational point of view it can be said that the academic performance is a result of the learning produced by the educational activity of the teacher and as a result in the student. The term academic achievement covers different factors that students must face. Therefore, starting from the definition of Pizarro in 1985 (as cited in (Tonconi, 2009)), academic performance is a measure of the respondent or indicative capacities that express in an estimative way, what a person has learned as a consequence Of a process of instruction or training. It also defines performance from the perspective of the student as the respondent's ability to respond to educational stimuli, which can be interpreted according to pre-established educational objectives or purposes. While (Carrasco 1985) academic performance can be understood in relation to a social group that sets a range of minimum approval levels and maximum disapproval levels in a given range of knowledge and / or skills.

Academic performance according to Montero and Villalobos, 2004 (as quoted in Garbanzo Vargas, 2014, p. 124) is a set of multicausal factors that impact on the academic outcome; They intervene in the sociodemographic, psychosocial, pedagogical, institutional and socio-economic aspects; among them; Motivation, anxiety, self-esteem, perception of academic climate, enthusiasm, teaching staff, sense of purpose. In addition, academic achievement is an indicator of educational quality and efficiency. Demonstrations of failure such as poor academic performance, repetition and dropout, express deficiencies in a university education system. The causes of student failure should be sought beyond the student himself.

This is not the sole responsibility for its failure, it is also the educational institution and many other factors. Gender, marital status, type of residence, age, type of secondary school, parental educational level, labor status at admission, socioeconomic status and the working condition of the mother are elements that affect the performance of a student in college. However the influence is not homogeneous. Low-performing students are most affected by factors such as gender, age, parental education, and work status. (Barrionuevo & Brizuela, 2013). Likewise, good learning and consequently a good academic performance, depends on the dedication that the student lends to homework during the time that is in his home. Academic performance is also related to learning processes (Rosales, Gómez, & Gómez, 2010).

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Methodology to apply

A quantitative, descriptive and cross - sectional study was carried out during the month of June 2015; the sample was non-probabilistic of 55 students who voluntarily agreed to participate, were informed about the confidentiality of the data and that there would be no repercussions on their qualifications. The MEDMAR validated instrument (Medina & Martell, 2008, pp. 24-25) consists of 59 items on a Likert scale that fully agree, agree, disagree and totally disagree, measure academic performance through contextual dimensions where Include the family indicator that seeks to know the family context in which the student is developed and is measured with the items of 49-51, as well as the school context that allow to determine the conditions of the educational institution in which they study and are measured With items 1-9 and 52-59. The second dimension is determined by means of the personality / human profile indicator, which seeks to know the personality traits of the student and is measured by means of items 30-48, finally the school profile that seeks to determine aspects of behavior about life and is measured by items 10-29. A reliability of .858 was obtained. Descriptive statistics were applied with frequencies and percentages using the statistical package SPSS, it was complied with the norms and universal ethical principles.

Results

Sociodemographic variables, according to the age of the students in the nursing career, 31% (17) are 21, 27% (15) 20 years; 62% (34) are female and 38% (21) male; 64% do not work and 36% (20) if they work; 80% (44) do not have some type of scholarship and 20% (11) if they have a scholarship; 29% (16) have an average rating of 7.6-8.0 and 25% (14) have an average of 8.6-9.0.

According to contextual variables in family indicators, 65% (36) strongly disagree that their parents have always agreed on the career they have chosen and 27% (15) disagree; 51% (28) strongly disagree that their families often come together to live together and 41% (23) disagree. Also for the school indicators that allowed to determine the conditions of the educational institution, it was found that 76% (42) disagree that their teachers have a solid and comprehensive education and 15% (8) totally disagree; 71% (39) disagree that most of their teachers show excellent mastery of subject matter and 16% (9) strongly disagree, 64% (35) disagree that when a teacher imparts Classes are noted to enjoy their work and only 20% (11) agree; 64% (35) disagree that most teachers have high expectations about student achievement and only 20% (11) agree; 56% (31) disagree that the way in which they evaluate them faithfully reflects their use and 33% (18) agrees; 60% (33) disagree that in general, the number of students per class seems adequate and 20% (11) agrees.

The student's own variables were measured through the personality / human profile indicator where he sought to know the personality traits of the student, finding that 45% (25) agree that they are considered impulsive and 24% disagree; 42% (23) disagree that they are generally in good physical condition and 35% 19) agree; 60% (33) agree that they generally feel fatigued and 18% (10) are totally in disbelief; 36% (20) responded that they disagree that it is rare that they become ill and 27% (15) strongly disagree; 47% (26) responded strongly disagree that they need to be clean at all times and 42% (23) disagree; 44% (24) disagree that they know how to remain calm in stressful situations and 40% (22) strongly disagree.

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49% (27) strongly disagree on having a clear vision of what they will be doing at the end of the race and 42% (23) disagree; 45% (25) strongly disagree on having a clear vision of what they will be doing in ten years and 40% (22) disagree.

The school profile sought to determine the behavioral aspects of the student's life, 44% (24) responded totally to being forced to study a university degree and 40% (22) agreed; 56% (31) disagree that he considers that he spends time for tasks (tasks, study) of his career and 23% (13) strongly disagree; 51% (28) disagree that it is usually organized to perform efficiently with all jobs and 31% (17) fully agree; 44% (24) strongly disagree that they like to use learning tools (concept maps, diagrams, etc.) to study more easily and 38% (21) disagree; 46% (25) disagree that they generally study one day before the exams and 27% (15) agree; 46% (25) agree that he usually takes copies of the notes from his peers in order to study and 31% fully agree; 42% (23) agrees that after a certain period of time the class is more difficult to lose concentration and 35% (19) disagree; 46% (25) disagree that it is easy for them to understand the topics presented in the classes and 31% (17) agree; 42% (23) fully agree that he has thought about the possibility of changing careers and 35% (19) agrees.

Annex

Tables and charts

Acknowledgements

Thanks to the participating students.

It was not funded.

Conclusions

The average grade of the students is regular, improving it will help to guarantee the educational quality and consecutively a professional exercise of quality in the graduates, for which it is necessary to integrate the young people with greater problem to the tutoring programs; Parents disagree in the career they have chosen to study, which means a serious problem because the family is very important in accompanying and supporting studies.

The students identify that their professors do not have a solid and integral formation, in addition to the teachers do not demonstrate an excellent mastery of the subject, this perhaps is due to the hiring of teachers recently graduated of the race and they do not have professional experience and some lack Of pedagogical training, a situation that can be improved by implementing compulsory induction courses for new teachers and training in pedagogy, teaching strategies, competency assessment, among others. Students generally feel fatigued and do not consider it important to be clean at all times, these factors are urgent to solve since cleanliness is an indispensable requirement in the health profession, feeling fatigued can increase the risk of making mistakes in the Practices performed by young people with hospitalized people, so they should be integrated into the tutoring program in the faculty. In addition students do not have a clear vision of what they will be doing at the end of the race, this is perhaps related to studying a career that they chose without vocation, a situation that should be solved at entry and not rejected students from other careers And where the nursing career was not her first choice to study.

It is considered important that in addition to the tutoring program, support should be sought from the psychology department of the university, as well as the unions; The factors that affect students' academic performance are multifactorial, and some young people who come from communities with conflicts with organized crime, the purchase and sale of drugs, traffic between people and other security problems affect the emotional state and academic performance.

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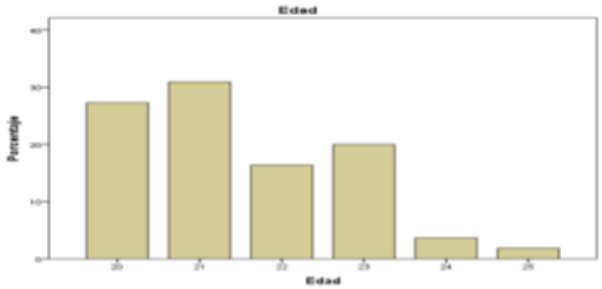
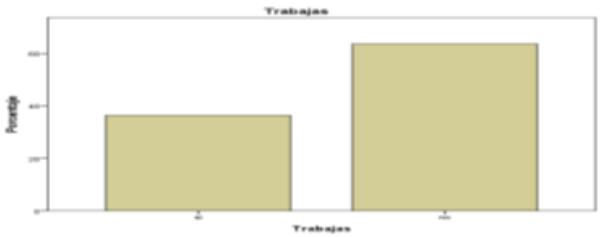
Appendix 1 Graphic

Sociodemographic variables

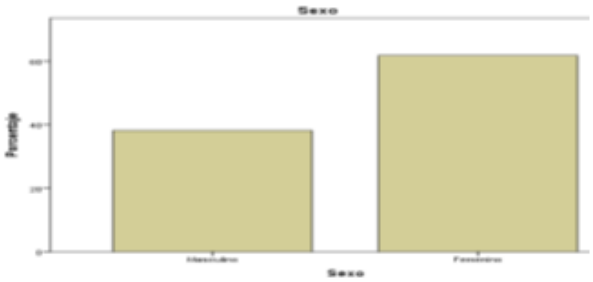


Graphic 1 Age of nursing students in Michoacán

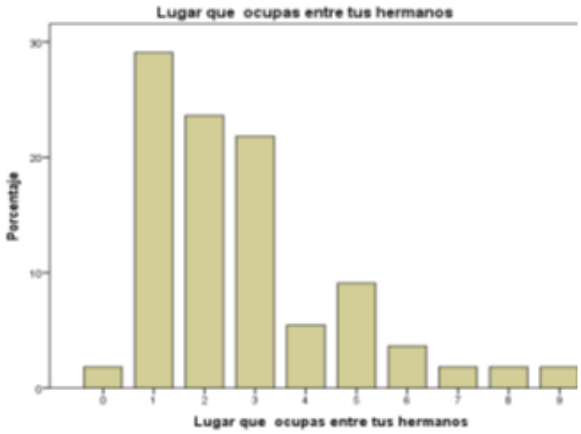
Graphic 2 Number of siblings in the family of nursing students in Michoacán



Graphic 3 Students of the nursing career in Michoacán who work



Graphic 4 Gender of students of the nursing career in Michoacán



Graphic 5 Place occupied by students of the nursing career in Michoacán among their brothers

Graphic 6 Students of the nursing career in Michoacán with scholarship

Graphic 7 Number of couples of nursing students in Michoacán

Graphic 8 Average number of nursing students in Michoacán

Family context

Graphic 8 Parents who have agreed on the career choice of nursing students in Michoacán

School Context

Graphic 9 Perception of students on the training of teachers in the nursing career in Michoacán

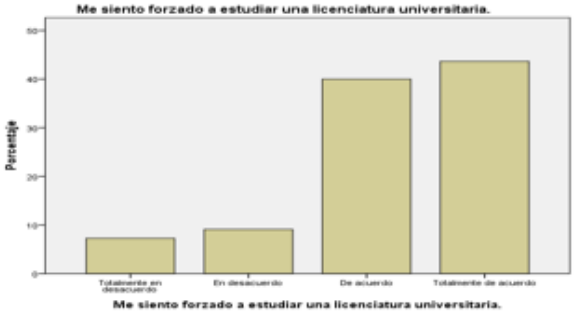
Graphic 10 Perception of students about the mastery of the subject of the teachers in the career of nursing in Michoacán

Indicator personality/human profile

Graphic 11 Nursing students in Michoacán who feel fatigued

Graphic 12 Students of the nursing career in Michoacán who do not consider important to be clean

Student's profile



Graphic 13 Students of the nursing career in Michoacán who feel forced to study a university degree

Graphic 14 Students of the nursing career in Michoacán who have thought to change their career

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Characterization of job stress and its effects on the perception of quality in customer service: Case private hospital

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Abstract

In recent years stress has been defined as the disease of the century because of the impact it has had on the health of society and organizations such as social organizations are not exempt from this problem, which extends to all areas of work in the In this sense, the present work aims to identify and analyze the causes that trigger the labor stress and the perception in the quality of the services in the user of hospital services, thus suggesting to the unit of analysis Implement strategic health programs that collaborate with their collaborators in all their areas and avoid psychological exhaustion and psychosomatic alterations. The methodology to be used will be a method with mixed approach and descriptive-correlational scope. It is expected to obtain information that defines the aspects that give rise to stress in the work and its predominance in the unit of analysis of the company determined for the investigation in process. In turn, to know the quality indicators in the service, considering that these types of companies are reviewed by the health sector whose parameters of evaluation are different from those of the joint ventures.

Job stress, Quality of Service and Perception

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Introduction

In the labor field, stress has been heard and related to absenteeism, incapacities, and job losses. In this relationship, it is detected that work stress has become a serious concern for organizations, resulting in negative performance, the physical and mental health of workers; several studies have shown that the consequences of work strain are derived, mainly from work overload, role ambiguity, organizational climate and insecurity, this is often underestimated in organizations which leads to losses in their economy.

In this sense, according to Orlandini (1999, page 13), situations of individual or collective stress cause countries and large companies losses due to defects in the quality and quantity of products and services, in addition to amplifying expenditures on health services due to premature aging, illness, drug abuse, divorce and labor disputes.

It is for this reason that chronic stress affects individuals, because the traumas of the psyche are manifested in a corporal manner these can be diseases such as hypertension, diabetes mellitus and asthma, among other alterations.

From such sense that this research work has as purpose to identify the causes that detonate work stress in private hospitals and to know its effects in the perception of quality in the service to the client.

The importance of this research work is that the constant change and breakdown of paradigms, require more and better skills of people in any work area, mainly in the quality of hospital services.

Consequently, to demonstrate why stress is the trigger for the lack of quality of service in private hospitals.

It will also allow the company to be studied, to know and define the types of stress and its stressors, as well as their impact on the perceptions in the client, in this way, it will be possible to generate from the top management and its departments, strategies to try to eradicate this phenomenon without affecting the hospital service and in turn carry out a treatment in terms of an analysis of the organizational culture and its failures.

On the other hand, the general hypothesis of this research is the following: quality in customer service in private hospitals is affected by work stress and therefore the competitiveness of the company.

In the course of this article it is expected to demonstrate in an explanatory way the sections such as the conceptualization of the variables to investigate in section number I, background of the object of study in section II, objectives of study and methodological coherence III, IV methodology to develop , V scope and study limitations and finally VI expected results.

Conceptualization of work stress and quality of service

The Dictionary of the Spanish Language (2016) points out that stress means the tension caused by overwhelming situations that lead to psychosomatic reactions or sometimes serious psychological disorders. Lucassen, Pruessner, Sousa, Almeida and Van (2014) consider in their neuropathological study that stress can be endogenous and / or exogenous and is when it is threatened until the survival of an individual.

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Stress is a problem of great relevance and social repercussion that affects an important professional group in our day and more and more frequent studies that demonstrate the importance and magnitude of the problem, from the point of view of Molina, Manzanilla, Caltagirone, Vera and Torres (2006) consider stress as a disharmonic state that alters organic homeostasis and is associated with a large number of signs and symptoms.

In this sense, distressful situations affect people, but these situations in the labor level can lead to abstention and wear and tear in the organization as well as the momentary loss of health of employees, workers and / or employees. Stress also responds to the behavior of individuals, Cramptom, Hodge, Mishra and Price, 1995).

It is important to emphasize then the merely work stress, Li and Shani (1991) (as quoted in Mercado and Salgado 2008) see it as the interaction between the organizational characteristics that become threatening to the human being as well as the way in which they impact in general satisfaction at work. In this same sense, William and Cooper (1998) point out that stress at work is a complex and multivariate process, and when measured it becomes confused with psychological health, anxiety and job dissatisfaction.

Characterization of stress and work stress

According to Martínez (2004, pp. 7-22) stress is characterized in a physical and psychological way, such that the body's responses, among others, are hygienic habits, dietary habits, sleep deprivation, lack and decay of strength characterized by apathy, physical fatigue or lack of initiative, as well as vascular diseases, of course, as a response to that overwhelming stress in people's lives.

From Hendrix's point of view, Ovalle and Troxler (1985) (as quoted in Mercado and Salgado, 2008) hypothesize a general model of work stress characterization, in which the following variables are taken into account:
Intra-organizational: clarity of goals, intergroup conflict, organizational control and individual autonomy.

Individuals: locus of control, tolerance to change and assertiveness

Extra-organizational: family relationships

It is important to note that Martínez (2004, pp. 39-41) agrees with part of the Hendrix, Ovalle and Troxler (1985) hypothesis, in this sense it points to individual causes, causes of "working life" and causes of family life as a source or characterization of work stress.

In summary it is important to know the causes of stress and the causes of stress in the workplace, the consequences are usually negative for the individual, because being overwhelmed by purely individual, organizational and family circumstances becomes a cascade of psychological and physiological symptoms which can impair your functions in any area of your life.

Consequently, these stressors or stressors mentioned above allow the individual to respond to the stressful situation that the environment shows him either by a terrifying experience, a negative memory or an unsatisfactory situation, such as an exposure to a group, an examination, hold a strong discussion, can generate as already mentioned, a negative tension.

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Conceptualization of quality and service

Quality has been defined in several ways as value (Abbott, 1955, Feigenbaum, 1951), compliance with specifications (Gilmore, 1974; Levitt, 1972), compliance with required requirements (Crosby, 1979) For the use of the product (Juran, 1974, 1988), the search for not lost by the customer (Taguchi, cited in Ross 1989), and the knowledge and / or surpassing expectations of customers (Grõroroos, 1983; Parasuraman, Zeithaml and Berry, 1985). (P.419), these authors were cited in Mora (2011).

As for the service, this is the production of a satisfactory shopping experience (Ginebra y Arana, 1999, p. 19).

Investigative background of the object of study

To begin, a historical outline is drawn up on the object of study in which the tasks of health are carried out as its administration, later on it begins with the investigative antecedents.

As Loyo-Varela and Díaz-Chazaro point out, (2009) hospitals are born at the beginning of our era and were created by religious institutions that subsisted in charity not only to care for the sick, but also to receive elderly and orphaned children, as long as, had the corresponding religious affiliation.

Apparently the first hospital that alternated the teaching of medicine with care for the sick was established in the city of Gandishapur in the sixth century. The Byzantine Nosocomio and the Islamic Maristan, considering the Hospital of the Pantocrator Monastery in the year 1136 as the first medical center.

Already for the eighteenth century the hospital as we know it today acquires a philanthropic character and already belonging to the secular society, that is to say, they did not belong to the ecclesiastical and / or religious estate as it was in its beginnings.

Figure 1 Hospitals built in Mexico by the conquistadors. Source: Hospitales en México Loyo- Varela y Díaz-Chazaro (2009)

Hospitals evolution in México

In the twentieth century hospitals in the country showed traces of previous centuries, in Mexico between 1910 and 1920, hospitals operated poorly as Fajardo (2010) points out, at this time the president of the republic Porfirio Diaz had already supplemented public hospitals And those of charity, among others, with other type of public hospitals denominated in that time of pavilion.

More than a century ago, in England and Germany, on the occasion of the Industrial Revolution, financial companies offered insurance to employers to protect them from risk at work, a situation that was generated in Mexico before the advent of social security, so this type of insurance evolved into life insurance, although in other countries the insurance companies started selling insurance protection for major diseases.

Also beginning with the contracting of medical care, sanatoria and private hospitals, evolving to such a degree that currently they are main source of financing in developed countries and Mexico has been seriously involved in it (Loyo -Vela and Diaz-Chazaro, 2009).

Faced with this proliferation of private insurance as such, hospital services in Mexico were increasingly abandoned by the authorities, and therefore a few times in our time, the lack of interest of the authorities have left hospital services in limbo as are known today, its decadent infrastructure, its administration, its warmth in the service, its unions, its human capital and its infinity of problems associated with an entropy and / or attrition, has displaced people with greater financial capacity to private hospitals, leaving those who do not have an economic solvency.

For these reasons, the National Association of Private Hospitals (2016) indicates that these institutions improve the quality of hospital services and health care, which seeks to generate the best practices to be more competitive towards their patients and clients. Private networks as a whole are categorized as a respite towards their potential customers and / or users and a threat to public services.

In a study by the National Institute of Statistics and Geography (INEGI) called Statistic of particular Health Establishments in Mexico that was carried out in 2014, it was detected that in Sinaloa (geographical limit of the investigation) there are 75 private hospitals registered of which 61 are active which demonstrates the competition in this sector towards the public sector.

Thus, the evolution of public hospitals in Mexico shows that the percentage of coverage in relation to private-sector hospitals is much higher, taking into account that the first category comes from a benefit between the employer and the governmental authorities, however, the possible inconsistencies of this public health sector are debated in the best quality of service and customer perception that makes use of these, then, why people approach private hospitals to be cared for and prevented in their health? The answer suggests that the more beneficiaries in the public sector exist, the lower the quality of service and the longer it takes to be served.

Hospitals evolution in Sinaloa

Actually the evolution of hospitals in Sinaloa goes hand in hand with the evolution of hospitals throughout the country, but before 1851 there were no hospitals throughout the state of Sinaloa, the first to be built were in Mazatlán, in this port two hospitals were built, one military and another civil, Valdez (2007, p.29).

A few years later, the first civil hospital was built in Mazatlán in 1874, in the same tenor in Culiacan, the first hospital of the charity, Carmen Hospital, was built. Sinaloa capital and a little more than 220,000 in all of Sinaloa, these lived without intubated water, without electricity or drainage, by which time it was necessary to create more hospitals to serve the growing population of the capital of Sinaloa and surrounding villages, Valdez (2007, pp. 33-35).

By then, in 1932, the civil hospital of Culiacan was built, where more than 320 thousand people are now being served from the municipalities Culiacan, Navolato, Cósala, Cruz de Elota, San Ignacio, in addition to the states of Durango and Chihuahua.

Civil Hospital of Culiacan 2016). In this sense, the creation of private hospitals, health clinics, sanatoria and private medical units would not be understood without the antecedent of the Civil Hospital of Culiacan.

Public and private administration

The public health sector, seeks to maintain the purposes for which it was created decades ago, however, institutions must be sustainable and viable, although it is true, it is valued by users that in this particular system has the better equipment that is valued by these users, the sustainability of its fast, prompt and timely service is questioned, which allows to create a very precise gap between only the service and the quality with the private hospitals, that for being a showcase for customers or people, are often created without the necessary investment in equipment as if it is the public sector, in this sense an advantage of this sector is the free of its services through employer-employer quotas, Roldan (2014).

On the other hand, health administration in the private sector, since it is of a societal character that establishes social capital for the search of an economic profitability, often determines a retail or segmented market where a specific market niche is sought, whose administration can be carried out by members of these sectors as professionals in the health area.

Management per se has to be carried out by specialists in it, then management has to achieve very clear objectives, it is the process of designing and maintaining an environment in which, working in groups, individuals efficiently meet specific objectives, Koontz and Weihrich (1998, p.6).

These specific objectives in the public and private health sector must be more than methodical, even when the disciplinary area requires it to carry international protocols, but within these specific objectives the quality of the service should not be lost because the perception of this will cause the user and / or client to move away from that hospital. In this sense, if we go to the service and the coverage capacity between public and private hospitals, we can point out and contextualize on the problematic of the research topic.

Study objectives and methodological coherence

In the present research the general objective has been to identify the causes that detonate work stress in private hospitals and to know its effects on the perception of quality in the customer service.

Consequently, the specific objectives that contribute to the investigation of the variables to be investigated, such as work stress and quality of service.

Dimension 1	Dimension 2
Work Stress	Service quality
Determine the causes of work-related stress in private hospitals	Identify the criteria and/or dimensions that determine the perception of users about the services provided

Table 1 Specific objectives by dimension. Own elaboration (2016)

For this purpose, a sub variable construction or indicators are presented which allow us to answer the general question: how is the work stress characterized in private hospitals and what are their effects on the perception of quality in customer service?

Figure 2 Construct of the labor stress variable. Own elaboration (2016)

In this way the questionnaire of the International Labor Organization (ILO) and the World Health Organization (WHO) will be taken into account, however, in the recent investigation in process, it is planned to make a scrutiny on the items necessary to provide a response to this research.

Figure 3 Construct of the quality variable in service. Own elaboration (2016)

In this sense, for this research, who writes these lines argues that to offer or provide a correct answer to the specific questions, the ideal instrument is to use the SERVQUAL model of quality of service that was elaborated by Zeithaml, Parasuraman and Berry, whose purpose is to improve the quality of service offered by an organization.

Therefore, the correlation of the variables of the mixed research can offer the expected results, which is to verify positively the general hypothesis.

Specific research questions

Dimension 1	Dimension 2
Work stress What are the causes of work stress in private hospitals?	What are the indicators that customers identify to obtain quality in the service?

Table 2 Specific questions. Own elaboration (2016)

Methodology

Firstly, the idea of research is investigated, which points out (Hernández et al., 2014, p. 25) that inspiration, opportunity, the need to solve a problem, its conceptualization (to detect the problem or phenomenon) and the need for cover holes of knowledge.

Research is therefore defined as a set of systematic, critical and empirical processes that are applied to the study of a phenomenon or problem, Hernández et al. (2014, p.4).

For Jensen (2000) (as quoted in Lara 2013, p. 103) "Research is the realization of a job of searching, following the scientific method, to acquire scientific knowledge and describe, explain and predict the phenomena that occur in that small part of the universe that you want to study and to know".

Based on the approaches that are those who study the realities of the problems or phenomena, we have that in the quantitative approach the realities are objective.

In the qualitative approach the realities are subjective and in the mixed approach the realities are intersubjective, (Hernández Et al., 2014, p 23).

The scientific method refers to the set of procedures that use the necessary tools to examine and solve a problem, Bunge (1979) (as quoted in Lara, 2013, p 114).

Research in process is based on the strategy of the case study as they have their own design and are defined as studies that use quantitative, qualitative or mixed research processes deeply analyze a holistic unit to respond to the approach of the problem (Hernández et al. 2014, page 164)

For purposes of coinciding with the methodological coherence that implies the correspondence between components of an investigation. In this sense, it is established that, among these elements, there must be harmony and compatibility with the planning of the study to be performed.

Based on the idea of research and in particular on methodological coherence, the decision was made to use a method with a mixed approach and a descriptive-correlational scope, to identify the causes of stress and affect the perception of the users of the service; It is expected to use tools such as the survey and semi-structured interviews.

And for the quantification of the results it is foreseen the use of the analysis design of surveys in social and market research (DYANE version 4.0) of the professor emeritus of the University of Alcalá Miguel Santesmases Mestre.

As stated (Hernández et al., 2014, page 199), a measuring instrument or tool is a resource that the researcher uses to record information or data on the variables that have.

For this, the instruments must have elements that allow reliability and validity, in this sense for the survey will define a questionnaire which will allow to measure the variables of the dimensions of analysis.

Therefore, the qualitative approach uses the collection and analysis of the data to refine the questions or reveal new questions (Hernández et al., 2014, page 7).

The mixed methods represent a set of systematic, empirical and critical research processes and involve the collection and analysis of quantitative and qualitative data Hernández-Sampieri and Mendoza 2008 (as cited in Hernández, 2014, page 534).

Johnson et al. (2006) (as quoted in Hernández et al., 2014, page 534) in a broad sense visualize mixed research as a continuum where qualitative and quantitative approaches are mixed, focusing more on one of them.

Scope and limitations of study

It is anticipated the presence of different limitations during the course of intervention, first, the lack of a study by the company on customer's perception of quality in its services.

Another limitation of the study may be the access to information and the population available to carry it out, as well as the bias in the answers about the methodological instrument to carry out the research activity.

No less important, it may be the redefinition of the instrument for the field work, as well as the determination of the sample, by the same rotation of the personnel that can be given in the course of the intervention, but for this we have information about the unit of analysis by determining the nursing department as such.

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Area	Employees
Nursing Head	1
Head of morning shift	1
Head of afternoon shift	1
Head of night shift I	1
Head of night shift II	1
General Nurses	24
Chief operating room	1
Circulating nurses	13
Emergency Nurses	9

Table 3 Nursing department workforce (unit of analysis). Own elaboration (2016)

Expected results

It is expected that the present investigation will test the hypothesis using the methodological tool used and the interpretation of the data that demonstrate the intervention, as well as to find elements in the theory to define and / or characterize the stress and its effects on service quality, Also give answers to both central and specific questions and finally suggest to the unit of analysis, if it were the case, strategic plans of intervention to alleviate the so-called disease of the century that hits the economy of organizations as well as health and workers income.

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System electronic clinical history applying disruptive technology and methodology agile

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Abstract

Developing three elements: Research objectives, research questions and justification of the same. Objectives and questions should align with each other and go in the same direction to establish what the research is intended to do. The questions tell us what answers the research should find and justification tells us why the research should be done. The criteria for measuring the value of an investigation are: Convenience, social relevance, practical implications, theoretical value and utility. The project culminates with the implementation stage, in this article it is presented until the design stage, which covers aspects such as the definition of the architecture, description of the functions, definition of the data and the descriptions of the interfaces that allows to do An easy navigation between each of the system modules. It should be emphasized that the information concerning the patient will be exclusively used by the hospital prior authorization of the patient, so that the data security mechanism is established, each user (previously registered by the Hospital to whom he provides his services) will consist of a name User and password to access it, which will help improve security as well as the use of electronic signature and data encryption.

Technology, Disruptive, Agile, Web, History, Electronic, Encryption

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Introduction

Generally, health-care institutions in any of their areas have strict control over their daily activities, using conventional methods for the management of large amounts of physical information. This involves complicated and routine work. With the use of information and communication technologies, solutions can be developed that will automatically process the processes demanded by the execution of said work, thus making it possible to improve the service provided to the user

In recent years health care organizations have converted their patients' medical records from large physical files into digital documents the what Reduce he weather from search, the accuracy Y the upgrade; without embargo, All Information is available so that the Use a single user.

At present, companies of all types are implementing software in charge from the Management of information by storing it in the Cloud (Cloud Computing) thus achieving a better performance and security in each of the processes carried out within the Same.

Having data in the cloud involves many advantages because the user can access them from any device with Internet access, either a computer, a tablet or a Smartphone. Thanks to the Cloud you can start editing a document from a phone mobile Y end up from set it up since A PC nail hours after, Keeping the data In the online account personal.

Likewise, the Users They have now the Confidence of having the data safe, without occupying a physical space, and without fear that the physical medium (hard disk, DVD / CD or USB memory) could deteriorate or be lost.

This paper presents the experience of developing an information system using disruptive technology (using Cloud Computing) and agile Scrum modeling. The goal of the system is to automate medical records from the Patients of the Hospital general Dr. Desiderio G. Rosado Carbajal of the city of Comalcalco, Tabasco.

The development and implementation of the Electronic Health History System (SHCE) will be an essential aid for medical and hospital personnel because it is a tool that provides timely basic information on the history clinic from the people, for That is used in any place or circumstance, for both emergency and preventive medicine or surgery what HE you they should perform to a patient.

Development

The SHCE has 3 modules that are essential to run the other and that are the foundation of the system: identify citizens, professionals who access the system and the healthcare resources ATTENTION primary Y Specialized. For To build a regional system, the classic patient master files, professionals and resources have to be Shared.

The first is the user database (BDU), whose main function is to provide each citizen from a number only from History of health of Comalcalco, to which all his health information is linked. This number is the hilvana all pages of user information in a single story. In this way, BDU is the table from Patients common from everybody Health centers and the health card is the Key that allows access to user information. It also contains the administrative details of the citizen, including if you have coverage Sanitary

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And the type of pharmaceutical benefit to which he is entitled, as well as the primary care doctor he has chosen, and can directly access the citizen from his House via Internet.

Second, the structure module, which includes functional services and units (care primary Y Specialized). East Module allows to identify each hospital service, primary care center, emergency device, ie the functional and physical organization of care, in addition to establishing the relationship between the two areas of care for the management of inter-consultations and diagnostic tests. That is, similarly to what happens with BDU in relation to citizens, all the System modules receive from it the identification of the resources of the system sanitary.

He third is he module from access Centralized Of operators, which is the gateway to it: when a professional is going to use it, this module Identifies his key from access Y you Allows the use of the functions of the different subsystems to the what this authorized. Yes BDU Identifies to the Users Y structure the means of the System, this module identifies the professionals.

Quotes

The corporate dating subsystem falls within the common part of SHCE. Responds to commitment to accessibility through patient flow control and coordination from all the Performances Required in the diagnosis and treatment of each process. It is constituted by:

Module centralized appointments that manages agendas from ATTENTION primary,Queries Diagnostic testing or external and sticas and offers worklists to the m or modulescl í nicos.

Manager requests or referrals and tests Diagnostic sticas. it based on the cat to corporate logos, are accessed from the

Modules Clinical for to register the Applications. In turn, they are accessed directly from the citation module to assign the appointment, from the own query.
RRANTY as records, which control the time between Applications Y quotes formanage RRANTY as the time m to wait ximos normatively established in Comalcalco.

The inclusion of all the agendas in the quotes Allows what since any point An appointment can be made for a consultation or diagnostic test. He user can get appointment For the family doctor through a telephone center; If your doctor tells you to visit a specialist, you can get the appointment before leaving the health center; And if the specialist you He says what should return for Review or a diagnostic test, you can assign the appointment since the Own query. From This way they increase for the user the possibilities of choosing the most convenient appointment, it facilitates the coordination of the different appointments that it needs and allows the professionals the joint monitoring of all they.

The integration of agendas to facilitate access to they do not is obstacle for what his Management is still decentralized and under the responsibility of the units that are currently performing this task. It is they who decide which stretches are available for which centers and / or Units.

This appointment module, integrated with request managers for inter-queries and diagnostic tests that work with it, works in health centers and hospitals. The system will also allow the results of the diagnostic tests to be received electronically, automatically entering the patient's health history.

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This will be integrated with the existing information systems of the laboratories of the

Hospitals and with the corporate radiological information system (RIS) (Figure 1).

Figure 1 System Components Cl í History Electr nico nico or (SHCE)

Cloud computing

The SHCE allows citizens to obtain an appointment with their family doctor through Internet Thank you to the office virtual in the Cloud, which was created so that citizens Could interact with the public health system, and allows users to change doctors, as well as view and update their data Personal information.

Health history

Is he heart of the SHCE Y Embraces a set Of modules what allow to the Medical manage The clinical information of the patient. All the information is integrated through its linkage to the SHCE and, independence from Its location, is available to Professionals who need it from any point in the Network, with access to the clinical data authorized by the patient through his card Sanitary

The information is organized hierarchically, with different configurations depending on the type of professional who uses it, and allows personalization depending on the professional and the patient. The blocks of information are as follows: the first is basic health data, such as

Health problems, history and allergies; The second is the data related to the diagnostic-therapeutic measures, such as Diagnostic tests and pharmacological treatments; Both are shared by the modules of the different care settings, each of which is differentiated in the episodic information, in the The various contacts in the Patient and constitute the third information block. These sheets collect all the information of the episode and feed the 2 previous blocks. Although they share common elements, there are different sheets for primary physicians, specialists, nurses, social workers, emergencies. In each episode the set of contacts that the patient has made for a specific problem is stored, as well as the diagnostic tests and the treatments used. In this way, all health information is linked to a specific clinical context. In addition to sharing common data, a browser allows the professional to access the information of any episode on any server on which it is stored. There are sheets common to the 2 areas of assistance for the management by processes of the diseases established by the counseling of Health.

At present, clinical modules for primary care, specialist consultations and emergencies are available. The primary care module is used by Family, pediatricians, nurses, social and administrative workers in this field, whose attendance sheet is called the consultation follow-up sheet (HSC) and is different for each type of professional.

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The external consultation module, in addition to its own HSC, includes a sheet for the initial assessment, which we call the "integral assessment sheet", which performs a cross-sectional analysis of the episode, focusing information on the problem current, Y Allows a assessment review

Of the information contained in the common elements of the story, as well as the collection of anamnesis Y exploration by Organs Y Appliances. In this way, the episode is inserted as a frame in the film which is the longitudinal history of the patient. The urgency module is common for the two areas of care.

e-Recipe

The System also makes it possible to develop The electronic prescription, a new model of prescription and dispensing of medicines, where all the prescriptions of each user made with the prescription module are recorded in a "central dispensing module", in which a "pharmaceutical credit" is created with the Complete treatment prescribed by the family physician or by the specialist involved in a particular clinical episode. Both the primary doctor and the specialist can establish treatment durations of up to one year. The patient presents at the pharmacy his health card, which the pharmacist enters in a reader so that the system authorizes the access to the prescription data; Then checks the medication to be dispensed, records the drugs delivered and can inform to the doctor from any incidence. To do this, the pharmacy uses the Web module of dispensations developed in the project, so that the chronic patients do not have to go continually to their Centers from Health To renew treatments Prescribed.

Architecture

The SHCE has a centralized environment and cloud storage that holds common data and applications:

Structural modules: user database, structure and operators.

Subsystem from quotes: quotes, Managers from Requests and Records.

Shared health history and browser history.
and-Recipe.

As for the specific data and applications of each health care area, there is an installation in each of the hospital areas, while the ones corresponding to primary care are centralized. The SHCE is completed with information processing modules that exploit the information generated by the other modules in a homogeneous way.

Results

A system was implemented to store medical records efficiently and economically through smart cards. The developed system consists of a reader-writer device, an Internet portal and visualization and updating software.

The card allows to store more data Relevant of the record clinical, to change Of a slight decrease in the safety of the same.

With already successfully he has Countered the A decrease that originated in the security of the card, for which a double security system was implemented through an encryption and the electronic signature (AES).

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The results obtained are satisfactory, and how they were able to design and construct all the prototypes necessary to put the system into operation.

Thanks to tests performed on both the software and the hardware, the card and the devices performed their functions correctly, this proves to be useful, reliable and safe tools.

Conclusions

The Documents in paper may get or Not retrieving information about an individual patient, but are of very little value when the question refers to groups of patients or the population. For example, how many patients with myocardial infarction are receiving beta-blockers and aspirin?

The electronic data file makes it possible to on indicators from quality, Reviews and clinical research and identification of patients on treatment with drugs that have been withdrawn. As can be deduced, those responsible from the taking from Decisions do not Can and should not need controlled clinical trials for each application in each situation Different

It is possible to improve the management of information about the m é doctor-patient relationship by implementing a software solution that adequately problematice the process and then automate without neglecting the environment that has the management of the relationship between these two subjects and Same software.

The choice from a model gil what HE adjustment to Software requirements, is of great importance at the time of project execution, because depending on the circumstances in which the project is found, the choice made will be transcendent at the moment of Address it.

The Tools Used They turned out Suitable for two factors, the first is the practicality in the execution and secondly because of the knowledge about them, reducing execution times in the tasks performed.

The complex in the elaboration of a software project is not to comply with the functional requirements of the software, but to try to prevent largely mistakes made by users that may affect the operation or optimal system.

During the tests Performed, HE Could Observe that it greatly improves the efficiency and effectiveness in the performance of the daily tasks with the tool Elaborate

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Virtual environment in the reproduction of an enterprise system as a playful learning tool for business management. Case study bachelor's degree in international bilingual business of the faculty of economy UAEMEX

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Abstract

This research presents an analysis of the use of virtual environments in the reproduction of an enterprise system as playful learning tool in business management in college students of the degree in international business at the University symphysis. Generally it explained its formal structure and a brief description of the factors that motivate play and make the game a learning activity. An analysis is presented in an enterprise system to develop different business skills through the integration of administrative concepts in business management. They were detected in academics, behavior and attitudes of students against this practice to detect what extent are exploited cognitive contributions that they provide. The methodology to carry out the investigation as formulating research questions considerations, the formulation of the hypothesis, identifying the variables of study, research design, the instrument for data collection was carried out, the prosesing and analisis of the information. It details how a virtual learning environment works through a business simulator Risky Business.

Virtual environment, playful learning, strategy, learning skills, students

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Introduction

Education is going through a paradigm shift, oriented towards an active model, leaving behind the conception of teaching and learning as transmission and observation, opening the door to new strategies for more meaningful learning.

It is considered that teaching should be planned in such a way as to enable the learner to manipulate the objects of their environment, transforming them, finding meaning, analyzing them, introducing variations in their various aspects, being able to make logical conclusions and develop new schemes and Mental structures. (Piaget, 2001).

The development of the individual has to do with the interaction that this has with the environment that surrounds it; argues that: "knowledge does not come neither from the subject nor from the object, but from the interaction between them". (Piaget, 2001).

In this sense, learning goes far beyond the traditional studies of a classroom, it implies that education must have among its objectives the construction of competences, understood as the set of socio-affective behaviors and cognitive, psychological, sensory and motor skills that enable a performance, function, activity or task to be performed properly. (Argudín, 2006).

Deepening specifically what is a virtual environment as a playful learning tool in the direction of business, can be defined as a representative model of the operations of a real world, according to (Gilbert, 2006) and have been used as tools in the area of learning, because they allow to make decisions of financial type, production, marketing and negotiation.

In a fictitious environment so that the reality can be represented for the participants, where they can develop the capacity of decision making and team work.

With the use of virtual environments as a playful learning tool you can develop various competences such as: teamwork, decision making, strategic thinking, organization and integration of activities, oral communication time management, analytical and information processing skills, Technical capacity and construction of spatial notions among others, which are those benefits that have been achieved that are recognized with the practice of virtual environments. But that is only a part of a much larger contribution in cognitive matters: virtual environments as a playful learning tool teach them to think differently, teach them to lose the fear of being wrong, to experiment, to seek alternatives to solve problems, to describe procedures to achieve objectives, share experiences, and other strategies to improve the learning process.

In consideration of the above, the problem that is detected in students of the bachelor's degree in international bilingual business at the UAEM Faculty of Economics, is that there is no learning developed with dynamic constructions does not make it possible for the student to be interrelated with The medium in which it develops; For this reason it is necessary to use business simulators as a learning strategy, understanding the simulation as a representative model of real world operations (Gilbert, 2006); So it is considered an educational resource to promote the learning of previously obtained knowledge.

When exploring in virtual environments, students are taking advantage of time, acquiring learning strategies and knowledge differently than they traditionally do in school.

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It is even possible that what they learn by playing (playful) apply it unconsciously in the school at a general level or even in a particular subject, so it is possible for some skills to be sharpened or better, to develop better if they are latent.

Through the use of virtual environments as a playful learning tool in business management, students work on the design, implementation, and control of operational strategies that help to have an approach to the reality of the diverse and varied scenarios that are produced in the business world; where decisions do not occur sequentially but simultaneously and reciprocally, as they do today.

This is considered as experiential learning since the student puts into practice the theoretical knowledge through the development of strategies and decision making in a simulated environment. With this tool, students are allowed to face managerial situations that they must learn to solve, so that when in real life, similar questions can be presented to them, they may have some reference elements for decision making (González, 2001).

The purpose is to recreate situations that students can face in a business environment, to know their operation, economic variables, to propose different strategies and to find solutions to particular situations, through the integration of administrative concepts to university students faculty; Since they allow to establish a virtual environment in the process of direction of a company or of a specific area of the same; As well as to relate the theoretical aspects of the direction of a company as the practical aspects that occur in real situations.

Referentes teóricos conceptuales

A Virtual Learning Environment (EVA) is an educational space hosted on the web, made up of a set of computer tools or software system that enable didactic interaction (Salinas 2011).

The virtual environments of learning have always been carried out at any time and place of life since by nature, man tends to simulate real situations before proceeding to act or make a decision in real life. This has always been seen in different areas such as sports, army, civil protection, aviation, space missions, etc. Such virtual learning environments as game are used as a dynamic training tool.

The current context, characterized by the intensive use of Information and Communication Technologies, places higher education institutions in the need to develop digital literacy for students in three basic dimensions: knowledge and use of applications Computing; The acquisition of cognitive skills for information management; And the development of a critical and reflective attitude to produce, organize and disseminate information. For these reasons, it is necessary to know the functionalities and didactic potential of the virtual environments, as a previous step for their significant integration is necessary the inclusion of a ludic learning method, characterized by the set of strategies designed to create a harmony environment in Students who are immersed in a learning process. This method is intended for students to acquire knowledge using the game (Burbules, 2001).

However, in the business education area virtual learning environments have not been used so widely.

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The performance in a company is not a simple task since bad decision making or mismanagement of resources can imply significant economic losses for the company and therefore the possible disappearance of this one. Just as soldiers, pilots and astronauts prepare themselves in a practical way by using simulators for situations that will be found in the real world, so business professionals should also be trained through the use of business simulators. (González, 2001).

Waldegg (2002), talks about the irreversible presence of new information and communication technologies in daily life, mentioning that it is necessary to clarify the different roles and uses that can have in education to review and evaluate the main trends in their school application.

Many researches have illustrated the application of virtual environments as an educational and training tool, both inside and outside the classroom, trying to take advantage of the playful perception that young people have about it. All of these researches have tried to establish and propose characteristics that virtual environments must show in order to be considered educational.

(Etxeberria, 1999), mentions some educational benefits that virtual environments can provide in the educational field of play, among which are concentrated:

- Stimulate students' sense of alertness and improve their thinking skills.
- Increase the attention span of those students who present difficulties in performing an individual task after a while.
- Increase the development of skills for the identification and assimilation of numerical concepts, word recognition, identification of objects and colors, increase of the reading rate, improvement of comprehension.
- Perceive your own mistakes and are encouraged to correct them or select other options.
- Transfer learned behaviors to real life situations.
- They are tools of support in the learning process for university students.
- Give students the ability to make decisions that can affect or benefit a company's management.
- Develop leadership and decision-making skills.
- They show the impact of management decisions on the overall performance of a company.
- It helps to stimulate group relationships among students and fosters participatory and collaborative work in the classroom.
- Introduce in students the reflection about certain values and behaviors through their content and the consequences of the actions they perform virtually.
- Helps the development of skills and abilities, such as psychomotor control, development of specialty and deductive ability, problem solving, imagination, thinking (comprehension, reflection, memorization, faculty of analysis and synthesis), etc.

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– They make it possible to dynamize the learning experience and bring it closer to the appropriate and operative world in which the student moves.

For its part, Silvern (1987) explains that all that a virtual learning environment can offer in terms of educational experiences are skills that the student possesses and puts into practice; These skills can be: Essay and error; Generation of a model; Creation of a standard; Hypothesis testing; Generalization; Estimate; Organization.

Reflecting on what the authors mention, it is considered that the great challenge is to be able to take virtual environments as an attraction to enhance learning and achieve educational goals. It should be emphasized that this enables active learning both through personal discovery and exploration in an artificial medium similar to reality as well as through the interactivity and collaboration established with others.

Methodology

Problem statement

The problem that is detected in the students of the Bachelor in International Business Bilingual in the UAEMex Economics Faculty is that there is no elaborate learning with dynamic constructions and this does not make possible that the student is interrelated with the environment in which is unfolding.

Through the virtual environment in the reproduction of an entrepreneurial system as a playful tool of learning in the direction of business, the students practice the design, implementation, and control of practical operational strategies that help to have an approach to the Reality of the diverse and varied scenarios that occur in the business world.

Where decisions do not occur sequentially but simultaneously and reciprocally, as they do today.

The implementation of information and communication technologies in the educational field, presumes new challenges regarding teaching supported in virtual environments, whose learning strategies are adapted and designed for that environment (González, 2001).

Virtual education in the leisure process of learning focuses on the autonomous and independent student and the need of the human being, to express themselves in various ways, to communicate, to feel, to live different emotions, to enjoy pleasurable experiences such as entertainment, Play, fun, recreation, which lead us to enjoy, laugh, shout, to live, being a true source generating emotions, which even leads us to cry; For which they must regulate their own learning pace by adjusting their time and space of work, study, socialization, fun and recreation, as well as selecting topics and information of their interest, with respect to their own needs (González, 2001).

By using this learning tool in college students in the business area, it allows students to be able to run fictitious companies and apply their knowledge and skills acquired throughout their academic preparation; So that in order to carry out this, it is only necessary to use educational software where they can manipulate variables related to some of the areas of an organization. The purpose is to recreate situations that students can face within an organizational environment, to know the operation of the industry, the economic variables, to propose different strategies and to find solutions to particular situations, as well as to observe the results of the decision making And also to be able to experience teamwork.

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Likewise, it allows university students to promote psycho-social development, personality conformation, evidence of values, oriented to the acquisition of knowledge, to walk to the activities, enclosing a wide range of activities where pleasure, joy , Creativity and knowledge; Allow to establish a virtual environment in the process of management of a company or a specific area of the same, putting into practice the knowledge acquired during their academic preparation on various areas and relate the theoretical aspects of the direction of a company with the practical aspects Which occur in real situations.

Virtual education in the leisure process of learning can be present in the different stages of learning processes of the human being, and allow to develop various competences such as: concentration, memorization, anticipation, capacity for observation, doubling of attention, induction (Linked to memorization and anticipation), which are not currently being developed and this would teach them to lose the fear of being wrong, to experiment, to seek alternatives to solve problems, to describe procedures to achieve objectives, to share experiences, among others Strategies to improve the learning process. By simulating, students are taking advantage of time, acquiring learning strategies and knowledge differently than they traditionally do in school.

Playful activities in the learning process can be very constructive if applied under the methodology of Experiential Learning, aware that we humans are in a continuous process of learning.

At the moment university education must allow the formation of efficient and effective professionals, who respond to the needs of the society and give solution to the problems that identify in their different areas of action.

Virtual learning environments allow students to learn in a practical way, through the discovery and construction of hypothetical situations.

A simulator has the advantage of allowing the student to develop the capacity for decision making and teamwork through its use and put it in contact with situations that can be used in a practical way. This is why it is necessary to place the student in a context that imitates some aspect of reality and to establish in that environment situations similar to those that must be faced in a way that can "experiment" without risk and thus contribute to raise its quality Education in their learning process.

Objective

To propose the use of virtual environments in the reproduction of an enterprise system as a playful tool of learning in the direction of business to develop a set of entrepreneurial skills to students of Bachelor of International Business Bilingual of the Faculty of Economics UAEMex.

The study population consisted of a total of 52 regular students of the 8th semester of the bachelor's degree in International Business Bilingual of the Faculty of Economics UAEMex, of the subject Strategic Planning.

It is considered that the main interest of this research lies in the importance of the use of virtual environments as a tool of playful learning since the form of "learn-doing" is more effective than just acquiring theoretical knowledge. At the moment university education must allow the formation of efficient and effective professionals, who respond to the needs of the society and give solution to the problems that identify in their different areas of action.

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It is clear that this methodology must be implemented in higher level schools, in order to improve the educational conditions of the graduates, as it allows:

- An environment conducive to the construction of knowledge.
- The development of cognitive abilities
- Enrich the field of pedagogy by incorporating educational technology.
- Build a new dynamic way of learning.
- Show the interdisciplinarity of the different areas of knowledge.
- Mark the possibilities for a more innovative class.

Analysis of results with the use of the Risky Business simulator as a virtual learning environment in learning. We performed an analysis of the overall operation of the simulator and the most relevant things when using it. They proceeded to explain clearly how to use the business simulator.

The simulation is structured in two stages:

- Phase test: this phase is presented as a contact between the participating teams and the simulator. Participants will experiment to the maximum with the different options that Risky Business offers.
- Competitive phase: This phase is already in serious competition and we must try to get the most advantage out of the conclusions drawn in the test phase. From the results of these periods will obtain a note that will have an important weight in the final evaluation of the subject.

The teams will be formed by members who must distribute the following functions or management positions:

- Director of the Commercial Department (sales and marketing: advertising, promotion, distribution, and product).
- Director of the Production Department (warehouses, machinery, production personnel, R & D, factory operations, etc.).
- Director of the Financial Department (financial viability, loans, investments, treasury, balances, etc.).
- General Director of the Company (regulator and coordinator of the different departments, he shall act as arbitrator and decide in case of internal conflicts of interest).

As for the general evaluation of the company, the evaluation criteria will have the following importance:

Financial 50%
Production 25%
Commercial 25%

When using the business simulator students grouped in work teams are assigned a company in a particular industry. Team members are then required to take on the role of a team of managers so that they analyze the information in their area and finally make the most appropriate decisions that correspond to the management of the area they are in charge, considering both the decisions of the other areas, as well as the general objective of the company.

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Simulated experimentation allows students to assume a certain role, by virtue of which they must solve situations by considering a series of variables, which are linked precisely to the concepts that have been part of the knowledge previously acquired in class. It should be noted that the simulation allows the deepest assimilation of knowledge through experimentation, since it requires the student to place himself in the place of the agents involved in a model to understand from within key concepts, such as causal relationships between variables or assumptions under which this model may or may not work.

A descriptive analysis of the data was performed; According to the results obtained during the research, it can be observed that the students surveyed consider that virtual learning environments is a playful tool is effective and dynamic that serves to promote learning by relating it to a real system through the experimentation of A model that represents it.

In all cases the students emphasized that the main enrichment was the management of the company, since it consisted in strengthening teamwork and applying the knowledge of the subject. Some students emphasized other contributions of the simulation, such as: allowing them to strengthen knowledge of economics, learn how to deal with other people in a different way, gave them a global view of the company and its operation, allowed them to know the impact of Their decisions in the different areas, helped them to assess the need for planning and the knowledge that they provide the subjects, etc. Regarding the criteria of distribution of roles and tasks in the group work, it is worth mentioning that it was done based on the personal interest of each member, as well as their knowledge and ability for a certain functional area of the company.

Which allowed the company's functions to be better understood, such as the financial area, where the students in charge of this department not only put the technical skills to the test, but also their ability to evaluate the information received And rank it by importance, their ability to make decisions under pressure, and their ability to work as a team. In this way, the functions of the company were more effectively understood by showing the impact of their decisions on the overall performance of the company.

In this sense, they are a learning tool that allows the development of decision-making capacity and teamwork through the integration of administrative concepts to undergraduate students in bilingual internships that study strategic planning in the Faculty, in addition to Which is a tool that favors learning by relating it to a real system through the experimentation of a model that represents it.

The virtual environment provided by the Risky Business simulator can be oriented to support the learning of conceptual, procedural and attitudinal contents, since they favor the development of creativity and strategies of thoughts, such as: discovering regularities through observation, making inferences, assembling Isolated data, simplify, make analogies, reach the required conclusion, apply the results to more complex cases or new contexts; to come up with new and different ideas, to analyze and design their own games, to develop favorable attitudes towards the formation of the student.

The simulation is considered a real experience; is seen as a partial representation of reality, which selects important features from a real situation and replicates them within an environment or place that is basically out of risk.

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This virtual environment as a playful learning tool has become an integral part of academic training and is a preferred practice as a teaching method. It provides participants with the opportunity to experience decision-making processes in a dynamic, risky and uncertain environment as opposed to using only readings as the sole means of learning. The most important thing is that this virtual environment of playful businesses learning reports an increase in the knowledge of the interrelationships and interdependencies between the functional areas of the companies.

In this sense, the student develops several types of intelligence and their channels of perception, ie, kinesthetic and visual. In addition, they put into action all the body organs, fortify and exercise the psychic functions, serve to strengthen the student's social life, language, awaken ingenuity, develop the process of observation, inference, hypothesis and learn to generate solutions, Will and perfect patience.

It is worth mentioning that virtual environments are intended to provide an open learning environment based on real environments, with a high level of interactivity since the operation depends on the decisions of the user. They provide the opportunity to anticipate the consequences of strategic decisions, which enrich the planning process. It favors the construction of self-responsible groups, allows for flexibility, dialogue and creativity, emphasizing personal initiative, self-organization of groups and communication models. The objective was to generate a virtual competition between future professionals, as well as to know and develop future talents capable of facing the current challenges that are expected in a business environment and competitive activity.

The pedagogical projects focused on virtual environments allow learning through living, facilitate the understanding and integration of complex systems and favors the change of mental schemas necessary for learning and organizational evolution. All the students surveyed consider the simulator to be an interesting learning tool for their training. Information and communication technologies have broadened the spectrum of these concepts by providing them with exponential capabilities that allow different participants to mediate knowledge from any of the channels of perception and regardless of their experience and intelligence more developed.

The virtual environment in the reproduction of an entrepreneurial system as a playful tool of learning in the direction of business combines an important mixture in the planning of the learning in the students as it forces them to face the challenges that this presents through the information that Know the simulated environment. This implies that students unconsciously read frequently without reflecting directly on reading activities, this influences as a main element to address a number of aspects relevant to the creation and use of the simulator.

The simulation induces to indicate that it has an enormous educational importance, since it is an activity that can be oriented by the student and become an effective instrument for the learning. Among the many possibilities to be realized in the classroom, the game can be used as motivator for the development of a later work; Develop logical thinking, creativity, to strengthen concepts; Memorize rules; Reinforce the teaching-learning process, among others.

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Conclusions y Recommendations

Virtual learning environments lead students to practice using theoretical knowledge in their application through teamwork and making decisions in a simulated environment. With this tool, students are allowed to face real situations that an organization faces and that they must learn to solve, so that, when in the real situation, similar questions can be presented to them, they can have some reference elements to make decisions. This, favors the construction of groups responsible for themselves, allows to develop the dialogue and the ability to analyze and select the most appropriate decision for the company, thus increasing the level of commitment and interest from students; allowing them to gain experience through market analysis, formulating strategies and managing their implementation.

Their use can be oriented as support to conceptual, procedural and attitudinal learning, since they favor the development of creativity and strategies of thoughts, such as: observation, analysis and decision making; as well as forcing the student to demonstrate what he has learned during his academic training.

Likewise, they favor the construction of groups responsible for themselves, allows the development of dialogue and the ability to analyze and select the most appropriate decision for the company that leads, thus increasing the level of commitment and interest of students; allowing them to gain experience through market analysis, formulating strategies and managing their implementation.

Virtual environments, also allow students to generate interactive experiences and develop an integral learning of all their subjects; achieving a better understanding of the behavior of the labor market and enabling its development with the implementation of appropriate strategies to achieve the objectives of the simulated company. In addition to reinforcing learning with different media such as: images, diagrams and thought strategies that manage to better capture their attention in the topics of the course.

The virtual environment in the reproduction of an enterprise system as a playful tool of learning in the business direction, allowed to retain much more information and to develop better the learning of the students of the degree in "Bilingual International Business" from the Faculty of Economy UAEMex. In this way, the effect of using business simulators as a support tool in the learning process of the faculty students is justified.

It was found, that the general objective is reached by the majority of the students, nevertheless exists a significant percentage that does not manage to be completely involved in the simulation. This is because if the business simulator is not properly employed and if it is not practiced following a method of work by students, learning and skill development is not achieved in its entirety.

In this sense, it is necessary to use virtual environments as a complement and support for the course of strategic management, so that, what is theoretically learned is supported by practice through the simulator as a playful learning tool in business management. Thus, from a concrete experience in a company direction will allow to understand concepts and make generalizations for other circumstances.

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On the other hand, part of the simulation success lies in choosing a suitable simulator that covers much of the course content, hence it is necessary to review the characteristics of the simulator and how they relate to the concepts to be presented.

Finally, it is recommended that you use this business simulator or some other in different subjects to be useful for business students in other Universities.

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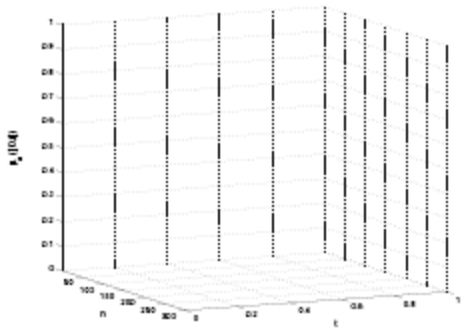

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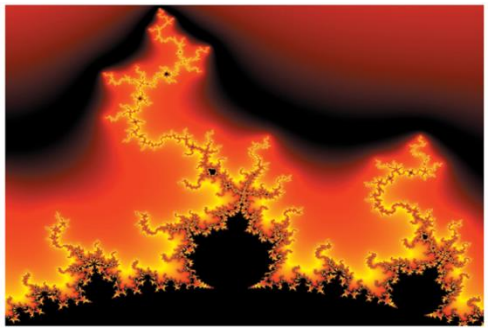

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