Journal Practical Didactics

Journal Practical Didactics

Definition of Research Journal

Scientific Objectives

Support the international scientific community in its written production Science, Technology and Innovation in the Field of Social Sciences, in Subdisciplines of psychology of the education of the sociology, conditions of the educational act from the physiology, conditions of the educational act from the sciences of the communication, pedagogical techniques and the science of the methods, the sciences of the evaluation, the didactics and the theory of the programs.

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The works must be unpublished and refer to topics of psychology of the education of the sociology, conditions of the educational act from the physiology, conditions of the educational act from the sciences of the communication, pedagogical techniques and the science of the methods, the sciences of the evaluation, the didactics and the theory of the programsand other topics related to Social Sciences.

Presentation of Content

In the first article we present, *Parental homework support and technostress in the family context* by OCHOA-ALCÁNTAR, José Manuel, VILLARREAL-LÓPEZ, Mayra Sugey and RIVERA-IRIBARREN, Maricel, with adscription in the Instituto Tecnológico de Sonora, as the following article we present, *Learning Climate in University Students of the Northern Academic Unit of the State of Nayarit* by CHÁVEZ-SÁNCHEZ, Gabriela, CHAVEZ-SÁNCHEZ Haydeé Del Carmen, PARRA-GARCÍA Rosa Ruth and HERNÁNDEZ-GARCÍA, Juvencio, with adscription in the Universidad Autónoma de Nayarit, as the following article we present, *Student perspectives inspiring change: The vital role of surveys* by DIAZ-RINCON, Hilda, NAVARRETE-PRIETO, José Antonio, FLORES-MERCADO, Jesús Cayetano and MORA-CORDOVA, Adolfo, with adscription in the Tecnológico Nacional de México / Instituto Tecnológico de Tlalnepantla, as the last article we present, *Exploring neurolinguistic programming in University students: Interpretations and reflections as an effective teaching resource in the classroom* by CARRILLO-BELTRÁN, Julio César Cuauhtémoc, MEJÍA-SALAZAR, Gilberto, LLANOS RAMÍREZ, María del Carmen and RAMÍREZ JIMÉNEZ, Armando, with adscription in the Universidad Autónoma de Nayarit.

Content

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Parental homework support and technostress in the family context

Apoyo parental en las tareas escolares y tecnoestrés en el contexto familiar

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Abstract

Participation of parents in their elementary school children's homework is essential for several reasons: it fosters a positive attitude towards learning, helps to establish routines of study and responsibility, allows to know the progress and difficulties of children and also strengthens the relationship between parents and children. The objective of this research was to describe the participation of parents in their children's homework, as well as their level of technostress, through a quantitative, non-experimental, cross-sectional and descriptive study with 107 fathers and mothers from the administrative area of a Mexican public higher education institution. As results, a mean of 3.51 points (always) was obtained in the variable support for their children's autonomy; 2.54 points (almost always) in cognitive stimulation; and 2.72 points in technostress. In conclusion, parental involvement in the studies of elementary school children is crucial for their academic success and integral development; the level of stress related to the use of educational technology in homework may vary according to the individual and the circumstances.

Parental involvement, Homework, Techno-stress

Resumen

La participación de los padres y madres de familia en las tareas escolares de sus hijos de educación primaria es esencial por varias razones: fomenta una actitud positiva hacia el aprendizaje, ayuda a establecer rutinas de estudio y responsabilidad, permite conocer el progreso y las dificultades de los niños y también fortalece la relación entre padres e hijos. Esta investigación tuvo como objetivo describir la participación de padres de familia en las tareas escolares de sus hijos, además de su nivel de tecnoestrés, a través de un estudio cuantitativo, no experimental, transveral y descriptivo con 107 papás y mamás del área administrativa de una institución de educación superior pública mexicana. Como resultados, se obtuvo una media de 3.51 puntos (siempre) en la variable apoyo a la autonomía de sus hijos; 2.54 puntos (casi siempre) en estimulación cognitiva; y 2.72 puntos en tecnoestrés. En conclusión, la participación parental en los estudios de las y los hijos de primaria es crucial para su éxito académico y desarrollo integral; el nivel de estrés relacionado con el uso de la tecnología educativa en las tareas puede variar según la persona y las circunstancias.

Participación parental, Tareas escolares, Tecnoestrés

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1. Introduction

In recent decades, the importance of parents' active involvement in their children's education has been recognised as a determining factor in their academic success and personal development. Parents play a crucial role in supporting and motivating children in their learning process, and their involvement in schoolwork has become a fundamental aspect of family dynamics. However, this involvement is not without its challenges, especially in the digital age in which we find ourselves. In this context, it is crucial to investigate how parents engage in their children's homework and how the use of technology impacts their experience.

The present study focuses on examining parents' involvement in their children's schoolwork and the impact of the technostress they experience when providing academic support in the digital age. The rapid advancement of technology has transformed the educational landscape, introducing new digital tools and platforms that aim to improve the teaching-learning process. However, this transition to digital education is not without its challenges, and parents face particular challenges when trying to help their children with tasks involving technology. It is therefore essential to understand how technostress influences parental involvement in homework and what strategies can be implemented to overcome these obstacles and foster effective collaboration. Furthermore, despite technological advances, there is a digital divide that affects different socio-economic groups and can influence parents' ability to adequately support their children in educational settings. Access to electronic devices, internet connectivity and digital resources can vary significantly from household to household, posing additional challenges in terms of equal educational opportunities. It is therefore necessary to explore parental involvement and what measures can be implemented to ensure equitable access to digital tools.

2. Problem statement

Carro et al. (2014), have identified low parental expectations together with low parental educational attainment, large number of siblings and family disruption, as family-dominant factors that impact on educational exclusion, particularly on school dropout.

Mayorquin et al. (2019), agree that parental involvement in their children's school activities results in gains in academic achievement; over time parental involvement has become a national priority and schools have been encouraged to make changes in their policies.

Tirado-Hurtado (2020) mentions that worries are a main reason for stress in parents in times of pandemic (up to 70%) along with manifestations of impatience (47%), fear (45%) and irritability (45%), resulting in parents feeling more stress since the beginning of the COVID-19 pandemic.

For this reason, this research aims to find out parents' level of technostress and their involvement in their children's academic activities in order to answer the question: what is the parents' involvement in their children's studies and their level of technostress?

3. Objectives

To characterise the different forms of support parents give to their children in their school work.

To identify the level of stress related to parents' use of educational technology.

4. Type of study

The present research is framed as a quantitative methodological study, which implies that it is based on the analysis of numerical data and the use of statistical techniques to obtain conclusions and generalisations. This study follows a non-experimental design, which means that no variables are manipulated and no control groups are established. Furthermore, this study adopts a cross-sectional approach, also known as trans-sectional, which implies that data are collected at a single point in time, without follow-up over time. Finally, the scope of this research is descriptive, which implies that its main objective is to describe and characterise particular phenomena or situations, without seeking causal explanations or establishing causal relationships (Hernández-Sampieri & Mendoza-Torres, 2018).

5. Participants

The population consisted of workers in the administrative area of a Mexican public university who had their children studying in primary school.

Sample

Non-probabilistic convenience and snowball sampling was used; the sample size (n=96) was calculated based on a confidence level of 95%, a margin of error of 10% and using Wimmer's (2018) sample size calculator. The participants at the close of the survey were 107 fathers and mothers.

6. Instruments

A search for scales previously used for each of the variables covered by this research was carried out and each of them is described below.

Support for autonomy

The scale "Support for autonomy" developed by Gonida and Cortina (2014), adapted by Valdés, Grijalva and Parra (2020) was used. It measures parental involvement in terms of providing facilitating cues, encouraging children to pay attention in case of making mistakes or facing difficulties, asking them to reflect on the task and its solution, as well as promoting self-regulation practices (Gonida & Cortina, 2014). The survey consists of a total of seven items, for example: "when my child makes a mistake in his/her homework, I encourage him/her to review and correct it" (α = 0.70). A five-point Likert-type response format ranging from "0 = never" to "4 = always" was used.

Cognitive stimulation

The "Cognitive stimulation" scale developed by Gonida and Cortina (2014), adapted by Valdés, Grijalva and Parra (2020), was used. It measures parental involvement in actions that seek to empower their children. These actions include guiding children to look for additional homework-related information in other books or on the Internet, providing additional information related to schoolwork.

And assigning additional exercises similar to schoolwork to practice (Gonida & Cortina, 2014). It consists of a total of eight items, e.g., "I advise my child to review his/her school material (notes, books, guides, etc.) to solve homework assignments correctly" (α = 0.79). A five-point Likert-type response format ranging from "0 = never" to "4 = always" was used.

Technostress

The "Technostress" scale of Tarafdar et al. (2007), adapted from Ochoa (2023), was used. It measures the level of stress experienced by parents due to the use of information and communication technologies to support their children's schoolwork (Brod, 1984; Weil & Rosen, 1997). The survey consists of a total of five items, for example: "I often find it too complex to understand and use technology" (α = 0.64). A five-point Likert-type response format ranging from "0 = Strongly Disagree" to "4 = Strongly Agree" was used.

7. Results

Characterisation of forms of homework support Descriptive statistics (mean and standard deviation), as well as skewness (-2 to +2) and kurtosis (-7 to +7) indices were used to determine normality (Byrne, 2010; Hair et al., 2010).

Autonomy support

Seven items were used to measure parental involvement in terms of providing facilitating cues, encouraging children to pay attention in case of making mistakes or facing difficulties, inviting them to reflect on the task and its solutions, as well as promoting self-regulatory practices. The average obtained on this scale was 3.51 points, which in the scale used means "always".

As can be seen in table #1, the item with the highest mean was item 2 (I explain a school task to my child when it is difficult for him/her) which obtained a mean of 3.80 points (always); on the other hand, item 5 (when my child solves a task wrongly, I ask him/her to describe how he/she solved it to make it easier for him/her to understand his/her mistake) was the item with the lowest mean of the scale with a mean of 3.08 points (almost always).

A normal-like distribution is observed for all variables except for item 7.

	Ítem	M	DE	Mín	Máx	Asimetría	Curtosis
1	When my child makes a mistake on homework, I encourage him/her to check and correct it.	3.67	.53	2	4	-1.30	.73
2	I explain a homework assignment to my child when he/she finds it difficult.	3.80	.49	2	4	-2.43	5.24
3	When my child does not know how to solve a homework assignment, I prompt him/her to identify the known elements and build on them to find the solution.	3.49	.65	1	4	-1.10	1.05
4	When my child does not understand how to solve a task, I solve an example first in order to make it easier for him/her to understand.	3.30	.76	1	4	-.70	-.51
5	When my child solves a task wrongly, I ask him/her to describe how he/she solved the task in order to make it easier for him/her to understand his/her mistake.	3.08	.95	0	4	-.82	.04
6	I guide my child on how to do tasks that are difficult for him/her.	3.57	.67	2	4	-1.28	.37
7	When my child cannot solve a task, I encourage him/her to read the instructions carefully.	3.66	.72	0	4	-2.69	8.20

Table 1 Mean, standard deviation, minimum, maximum, skewness and kurtosis for the autonomy support scale

Cognitive stimulation

Eight items were used to measure parental involvement in actions aimed at empowering their children. These actions include guiding children to look for additional homework-related information in other books or on the Internet, providing additional information related to school work, and assigning additional exercises similar to school work for practice. The average score obtained on this scale was 2.54 points, which on the scale used means "almost always".

As can be seen in table #2, the item with the highest mean was item 8 (I advise my child to review his/her school material, notes, books, guides, among others, to solve homework correctly) which obtained a mean of 3.37 points (almost always); on the other hand, item 12 (I assign my child additional homework to that assigned by the teacher) was the item with the lowest mean of the scale with a mean of 1.61 points (sometimes). A normal-like distribution is observed for all variables.

	Ítem	M	DE	Mín	Máx	Asimetría	Curtosis
8	I advise my child to check his/her school material (notes, books, guides, etc.) in order to solve homework assignments correctly.	3.37	.91	0	4	-1.48	1.70
9	I use the computer with my child to complete homework assignments.	2.41	1.10	0	4	-.29	-.46
10	I guide my child in searching for information on the Internet to get help for his/her homework.	2.76	1.09	0	4	-.57	-.29
11	I provide my child with additional homework-like exercises for practice.	2.31	1.12	0	4	-.20	-.42
12	I assign my child additional homework to that given by the teacher.	1.61	1.11	0	4	.55	-.07
13	I show my child books to improve understanding of the homework.	1.99	1.10	0	4	.06	-.22
14	I discuss homework issues with my child in order to improve his/her learning.	2.93	.79	1	4	-.33	-.35
15	I suggest to my child to look for information (books, Internet, etc.) in order to get help for his/her homework.	2.94	1.06	0	4	-.97	.71

Table 2 Mean, standard deviation, minimum, maximum, skewness and kurtosis of the cognitive stimulation scale

Identifying the level of stress related to the use of educational technology

Four items were used to measure the level of stress experienced by parents due to the use of information and communication technologies to support their children's homework. The average obtained on this scale was 2.72 points, which on the scale used means "agree".

As can be seen in table #3, the item with the highest mean was item 16 (I know enough about technology to help my children with their homework) which obtained a mean of 3.31 points (agree); on the other hand, item 19 (I think other parents know more about the use of technology than I do) was the item with the lowest mean of the scale with a mean of 1.61 points (neither agree nor disagree). A distribution similar to the normal distribution is observed for all variables.

	Ítem	M	DE	Mín	Máx	Asimetría	Curtosis
16	I know enough about technology to help my children with their homework.	3.31	.70	1	4	-.85	.71
17	I don't need a lot of time to understand how to use some of the technology my children need for their homework.	2.97	.93	0	4	-.94	.56
18	It is easy for me to find time to improve my technology skills to help my children.	2.67	1.06	0	4	-.43	-.67
19	I think other mums and dads know more about using technology than I do.	1.83	1.06	0	4	.12	-.27
20	I often find it too complex to understand and use technology.	2.83	1.03	0	4	-.85	.21

Table 3 Mean, standard deviation, minimum, maximum, skewness and kurtosis of the technostress scale

The summary of the means, standard deviation, minimum and maximum values, skewness and kurtosis of the 3 variables studied in this research can be seen in Table 4.

	Variable	M	DE	Mín	Máx	Asimetría	Curtosis
1	Support for autonomy	3.51	.42	2.00	4.00	-.81	.51
2	Cognitive stimulation	2.54	.66	.50	4.00	-.31	.95
3	Technostress	2.72	.62	1.20	4.00	.05	-.31

Table 4 Mean, standard deviation, minimum, maximum, skewness and kurtosis of the scales of variables

8. Conclusions

Parental involvement in their children's studies, in some parents are very involved in their children's education, while others may have more limited involvement. Parental involvement in the studies of primary school children is crucial for their academic success and comprehensive development, i.e. it is essential to support and guide children during their early years of education. Education is defined as "a permanent process, which covers the different stages of people's lives and aims to achieve their spiritual, ethical, moral, affective, intellectual, artistic and physical development, through the transmission and cultivation of values, knowledge and skills" (Ministry of Education, 2009).

In the findings of this research, it was determined that providing children with facilitating clues and giving them stimuli helps them to pay attention when they make mistakes and face difficulties, and it was also taken into account how they reflect on the solutions to the tasks, as well as solving them in a particular way; another of the findings found in the research is that when children make mistakes in a task, their parents almost always ask them to explain the task to them.

On the other hand, the level of stress related to the use of educational technology in homework can vary according to the individual and the specific circumstances. Some people may experience a high level of stress due to various factors, such as lack of experience with technology, pressure to adapt quickly to new tools, or concern about lack of equitable access to technology; in the present research findings, parents commented that they do understand technology, so stress may be lower than those who have no knowledge of technologies.

Parental involvement can influence different aspects of technology use support; some parents can help their children navigate and use educational technology.

If parents are familiar with the tools and applications used in their children's education, they can provide technical support and help them overcome potential obstacles. This can reduce students' level of technostress by knowing that they have someone who can help them with technology.

Parents, students and individual teachers have different views on the need to set homework (Valle et al., 2016). Doing this type of extracurricular homework every day helps to create habits of work, self-improvement and personal effort, teaches students to be responsible and develop discipline, connects parents to their children's education, reinforces and contextualises learning in the classroom, stimulates children's reasoning and memory and fosters autonomy and makes it possible for the student to learn to work on their own and therefore develop the ability to plan and search for information on their own. In addition, many parents do not have the education to provide adequate supervision.

Each child is unique and may have different needs and learning styles. Tailoring participation to the individual needs of children is important to provide them with the necessary support in their academic journey, the present study highlighted that giving them homework support creates positive effects on their academic performance.

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Annex 1

Instrument

ITSON moms/dads' involvement in their children's homework, technostress and technological infrastructure at home

1. Who is answering this survey?
I am the mom
I am the father

2. Year your son/daughter is in
First
Second
Third
Fourth grade
Fifth grade
Sixth grade

3. Age of your son/daughter

4. Sex of your son/daughter
Female
Male

5. Does my son/daughter have a study or work area to do his/her homework at home?
Yes
No

6. My son/daughter has an assigned schedule for homework assignments
Yes
No

7. Mother's highest level of education
Primary
High school
High school
Bachelor's degree
Master's degree
Doctorate

8. Father's highest level of education
Elementary school
High school
High school
Bachelor's degree
Master's degree
Doctorate

9. How do you consider your level of use of technology to support your children's homework?
None
Low
Medium
High

Instructions. Select the option that represents the frequency with which you performed the following activities related to your son/daughter's homework during your last bimester. There are no good or bad answers, you are only asked to be honest.

Support for autonomy (7 items). It involves making sure that children identify mistakes and difficulties and explore with them strategies for solving homework tasks.

Gonida & Cortina (2014). Adapted from Valdés, Grijalva & Parra (2020). In Valdés-Cuervo, Á., Grijalva-Quiñonez, C., Parra-Pérez, L. (2020). Motivational beliefs of mothers and students' purpose of learning in homework. Their relationship with autonomy support and control. Journal of Psychodidactics, 25, 100-108.
https://doi.org/10.1016/j.psicod.2020.05.002

[0] Never
[1] Almost never
[2] Sometimes
[3] Almost always
[4] Always

1. When my child makes a mistake on his/her homework, I encourage him/her to check and correct it.

2. I explain a homework assignment to my child when he/she finds it difficult.

3. When my child does not know how to solve a homework assignment, I tell him/her to identify the known elements and build on them to find the solution.

4. When my child does not understand how to solve a task, I solve an example first in order to make it easier for him/her to understand.

5. When my child wrongly solves a task, I ask him/her to describe how he/she solved it in order to make it easier for him/her to understand his/her mistake.

6. I guide my child on how to perform tasks that are difficult for him/her.

7. When my child cannot solve a homework assignment, I encourage him/her to read the instructions carefully.

Cognitive stimulation (8 items). It involves guiding children in the search for additional information and homework-like exercises in order to improve homework-related skills.

Gonida & Cortina (2014). Adapted from Valdés, Grijalva & Parra (2020). In Valdés-Cuervo, Á., Grijalva-Quiñonez, C., Parra-Pérez, L. (2020). Motivational beliefs of mothers and students' purpose of learning in homework. Their relationship with autonomy support and control. Journal of Psychodidactics, 25, 100-108.
https://doi.org/10.1016/j.psicod.2020.05.002.

[0] Never
[1] Almost never
[2] Sometimes
[3] Almost always
[4] Always

1. I advise my child to review his/her school materials (notes, books, guides, among others) to solve assignments correctly.

2. I use the computer with my child to complete homework assignments.

3. I guide my child in searching for information on the Internet to get help for his/her homework.

4. I provide my child with additional homework-like exercises to practice.

5. I assign my child additional homework to that assigned by the teacher.

6. I show my child books to enhance understanding of the homework.

7. I discuss homework-related issues with my child in order to enhance his/her learning.

8. I suggest my child to look for information (books, Internet, etc.) in order to get help for his/her homework.

Technostress (5 items).

Tarafdar, M., Tu, Q., Ragu-Nathan, B., & Ragu-Nathan, T. (2007) The Impact of Technostress on Role Stress and Productivity. Journal of Management Information Systems, 24(1), 301-328. http://dx.doi.org/10.2753/MIS0742-1222240109

[0] Strongly disagree
[1] Disagree
[2] Neither Agree nor Disagree
[3] Agree
[4] Strongly agree

1. I know enough about technology to help my children with their schoolwork.

2. I do not need a lot of time to understand the use of any technology my children need for their homework.

3. It is easy for me to find time to improve my technology skills to help my children.

4. I think other moms and dads know more about using technology than I do.

5. I often find it too complex to understand and use technology.

Learning Climate in University Students of the Northern Academic Unit of the State of Nayarit

Clima de Aprendizaje en Estudiantes Universitarios de la Unidad Académica del Norte del Estado de Nayarit

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Abstract

This article contemplates an investigation related to the learning climate of the students of the Bachelor's Degree in Accounting at the UANEN. For its development, a validated learning climate survey was used that contains 15 items that measure the autonomy that the teacher grants to the students. 50 surveys were administered randomly between the morning and semi-school shifts. The general results show that the students of the Northern Academic Unit of the State of Nayarit perceive that they are given autonomy during their teaching-learning process. After data analysis and concentration of information, the results were graphed and actions that benefit the Academic Unit and therefore further improve the learning climate are generally recommended

Learning Climate, Teachers, University Student

Resumen

Este artículo contempla una investigación relacionada con el clima de aprendizaje de los estudiantes de la Licenciatura en Contaduría de la UANEN. Para su desarrollo se utilizó una encuesta validada de clima de aprendizaje que contiene 15 Items que mide la autonomía que el profesor otorga a los estudiantes. Se aplicaron 50 encuestas aleatoriamente entre el turno matutino y semiescolarizado. Los resultados generales demuestran que los estudiantes de la Unidad Académica del Norte del Estado de Nayarit perciben que si se les brinda autonomía durante su proceso de enseñanza-aprendizaje. Posterior al análisis de datos y concentración de información se graficaron los resultados y se recomienda de manera general acciones que beneficien a la Unidad Académica y por ende mejoren aún más el clima de aprendizaje.

Clima de Aprendizaje, Docentes, Estudiantes Universitarios

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† Researcher contributing as first author.

Introduction

For most university students, a good working environment in the classroom or an adequate learning climate depends to a large extent on the teachers, the atmosphere they create in class is derived from the activities and dynamics they implement during their lectures. González *et al* (2019) refers that currently the quality of university teaching is evaluated as the teaching-learning process focuses on the professional training demanded by society, this position requires changes focused on the student being able to build their own knowledge, values and skills required and demanded by the work environment.

All this is possible if the teacher accompanies the student, creating pleasant moments, a healthy atmosphere in class and, above all, awakens the students' interest in learning and acquiring new knowledge. In this sense, in order to evaluate the quality of university classes, it is important to analyse existing research and different studies on the learning climate, as they offer very important data and information on how students perceive this process.

On the other hand, Matos (2009) affirms that motivation is one of the basic pillars in psychology and it is said that students need to feel motivated so that an adequate and active participation in the teaching-learning process takes place, allowing them to continue learning throughout their lives. However, what is motivating for one pupil or student may not be motivating for another, as it often depends largely on the context in which the event, environment or personal characteristics of each individual take place.

Stover *et al* (2017) states that motivation is focused on the feeling, direction, consistency and purpose of behaviour, encompassing what is intended and the results of these actions; therefore it is located within the biological, cognitive and social sense of the individual. Self-Determination Theory (SDT) approaches the subject in a particular and important way because it is constantly being revised and updated. In order to be successful, any educational system requires motivated students, and for this to be achieved, motivated teachers are the fundamental pillar for the creation of an adequate environment.

The TAD considers in a central way the influence that the quality of the social environment in which a person develops has on the motivation, performance and personal well-being of the people who belong to that environment. This theory also differentiates between different types of behavioural regulation by referring to autonomous versus controlled behaviour. Intrinsic motivation is said to exemplify autonomous behaviour and extrinsic motivation is said to be more controlled (less autonomous).

Ruidiaz *et al* (2019) address the issue by stating that the educational environment (EA) is a factor to be taken into account in Education at all levels and professional profiles. Its importance has been recognised by the degree of influence on student success and satisfaction. Academic achievement has been recognised in a positive way on the perception they have of their learning environment.

Within this context Espinoza (2022) states that within the educational environment it is necessary that a good learning climate prevails within the classroom, defining this as strategies or procedures carried out by students and teachers inside and outside the classroom. The learning climate contemplates classroom characteristics and situations that affect the teaching-learning process and as a consequence affects the academic performance of students, which encompasses not only physical conditions but also the emotions of students and their needs such as self-esteem, personal growth, coexistence, identity.

Within the reviews of research related to the topic it was deduced and found that the academic performance of students is related to the learning climate that occurs in the classroom and is directly related to the motivation of students. It is clear that the learning environment is very important for the teaching-learning process to take place, which is why it is said that any educational institution or organisation that wants to be excellent must identify the learning climate experienced by the students who study there.

Taking into account how important motivation is for the behaviour of students and therefore one of the triggers of the learning climate that occurs in the classroom, it was decided to conduct an investigation to identify how the learning climate is with students of the Bachelor's Degree in Accounting and Administration within the Academic Unit of the North of the State of Nayarit in order to identify areas of opportunity and take actions for the benefit of the same.

Objectives

General Objective

To identify the learning climate of university students at the Academic Unit of the North of the State of Nayarit.

Specific Objectives

−   To analyse the results of the learning climate test.

−   To propose general recommendations for the improvement of the learning climate in the Academic Unit of the North of the State of Nayarit.

Methodology

In order to carry out this research work, a random sample of 50 students of the Bachelor's Degree in Accounting from the morning and semi-school shifts was taken. Their average age ranges between 19 and 25 years old. For this research, the Learning Climate Questionnaire (LCQ) was used, taken and adapted from the study by Antonio Granero Gallegos, carried out in 2014, which consisted of the Spanish validation of the instrument.

According to Granero *et al* (2014) the instrument consists of 15 items that measure teacher autonomy support based on the dimension of autonomy support. In the instructions, students are asked to choose the degree of agreement with the items, using a likert scale ranging from strongly disagree with the lowest score to strongly agree with the highest. The aim of the present research was explained to the participants and there was a very good response from each of them.

Description of the study

The Learning Climate Questionnaire includes 15 items related to the autonomy that the teacher offers to each of the students. The items are to be answered on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). This instrument assesses the students' perception of the autonomy that the teacher promotes in his or her students. Thus, a high score indicates or refers to greater support for student autonomy on the part of the teacher. This instrument considers four dimensions: communication, interest, respect and interpersonal relationships. It is important to mention that the overall total results measure the autonomy that the teacher grants to the students in their opinion.

In this sense, Matos (2009) affirms that this instrument has obtained good results in university students and has obtained good psychometric properties. The factorial validity was investigated by William Deci in 1996 who reported that the 15 items of the instrument form a single scale and an eigenvalue is obtained. This research work contains a quantitative and exploratory study. It is important to mention that the survey used is anonymous in order not to compromise or intimidate the students and that the answers are objective.

Results and discussions

As a first point, the highest and lowest scores are interpreted to give an idea of the overall results.

Graph 1 Overall Results
Source: Own Elaboration

It can be seen from graph 1 that the highest points are concentrated in items 2 and 3, which refer to the pupils' ability to choose and feeling understood by their teachers.

In relation to item 4, which refers to the confidence that students perceive their teachers have in their abilities, the results were favourable, with 43 % at the second highest level.

On the other hand, the lowest value was concentrated in item 11 concerning the student's perception of the teacher's emotions.

In this sense, item 5, which concentrates on the teacher's acceptance of the student's perception of the student, the results showed that the percentage of students who responded totally in agreement was 41 %.

The graphs relating to each item are presented below for better interpretation:

1. I feel that my teacher gives me options and possibilities to make choices.
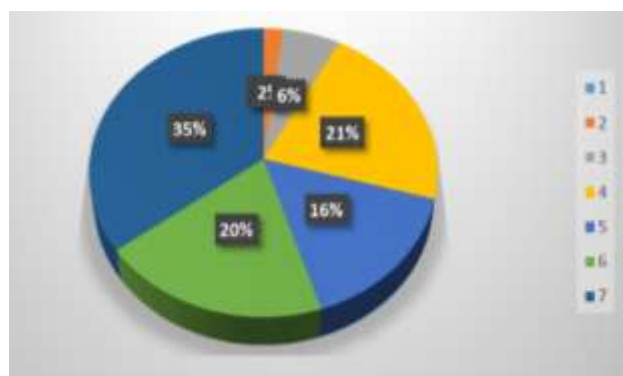
Graph 2 Possibility to chooser
Source: Own Elaboration

In the first question related to the options and possibility of making choices, 35 % of the students answered strongly agree, which is considered the maximum response value, and only 2 % answered strongly disagree. The remaining values were distributed across the other items, with 21 % concentrating on the neutral value.

2. I feel that my teacher understands me
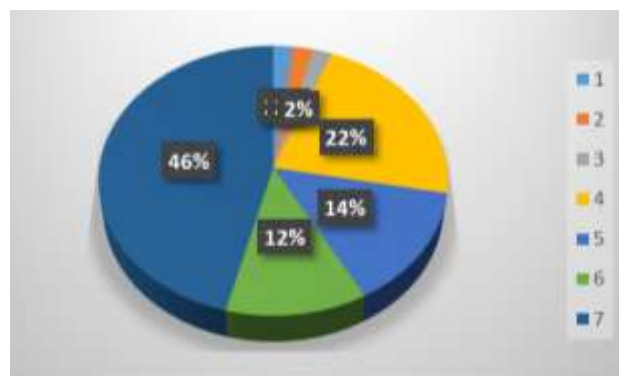
Gráfico 3 Teacher's understanding
Source: Own Elaboration

The second item related to understanding showed very favourable results, with 46 % of the students agreeing strongly that they feel understood by the teacher.

3. During the lesson, I have the possibility to open up (be honest) with this teacher.
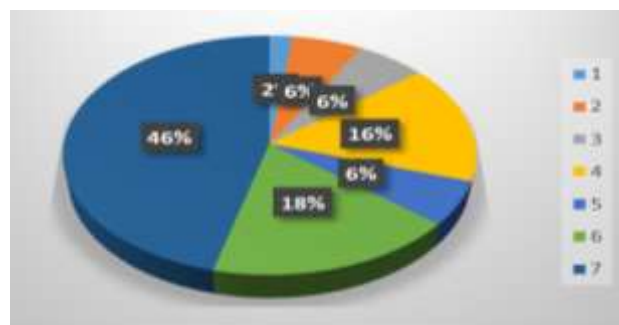
Graph 4 Perception of openness
Source: Own Elaboration

According to Item No. 3, 46 % of respondents strongly agreed and only 2 % strongly disagreed.

4. My teacher has confidence in my ability and that I will do well in this class.

Graph 5 Confidence
Source: Own Elaboration

The results for Item No. 4 are: 43 % were at the penultimate highest level, i.e. number 6, followed by 25 % strongly agreeing, which is the highest score, and again only 2 % disagreed.

5.   I feel that my teacher accepts me

Graph 6 Acceptance
Source: Own Elaboration
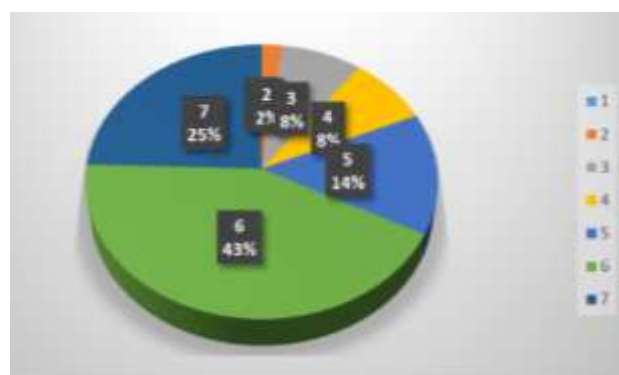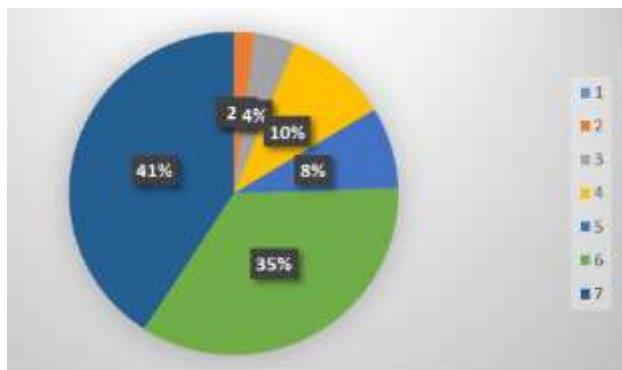
The results for Item No. 5 showed that 41 % of the students feel accepted by the teachers, 35 % at level 6, and again 2 % totally disagreed.

6.   My teachers make sure that I have really understood the course objectives and what I need to do.

Graph 7 Course objectives
Source: Own Elaboration

35 % of the students responded that they strongly agree with the perception that teachers ensure their learning, 31 % of the students were inclined to agree with the second value and only 2 % were inclined to respond strongly disagree.

7.   My teacher encourages me to ask questions.

Graph 8 Questioning
Source: Own Elaboration

The maximum score for this response in terms of the teacher encouraging the student to ask questions was 31 % corresponding to the value strongly agree and the lowest with 2 % respectively values 2 and 3 which are below the neutral level.

8.   I feel a lot of trust with my teachers
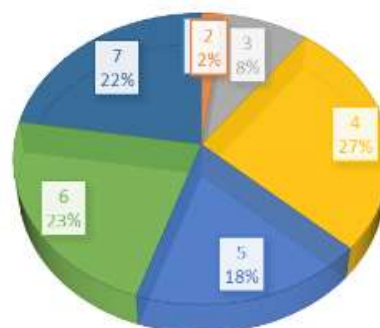
Graph 9 Confidence with teachers
Source: Own Elaboration

In relation to the trust students feel with teachers, 23 % answered the second value at 6 points, 22 % the maximum score related to strongly agree and only 2 % said they strongly disagreed.

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9.   My teacher answers all my questions carefully.
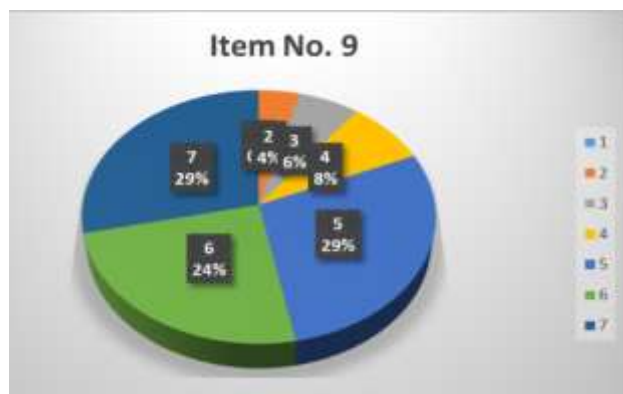
Graph 10 Teacher's answers
Source: Own Elaboration

The maximum value for the item related to the students' perception that the teacher answers all their questions was reflected with the same percentage in the score 7 and 5 referring to strongly agree, and the next to the neutral value, the option with 6 points obtained 24 % and the response option with 2 points obtained the lowest percentage with 4 %.

10.   My teacher listens to how I would like to do things.

Graph 11 Students feel that they are listened to
Source: Own Elaboration

The results of this item regarding the students feeling listened to showed that 31 % agreed completely, followed by 27 % which is above the neutral value and the minimum value was obtained by 4 % with results above the minimum value.
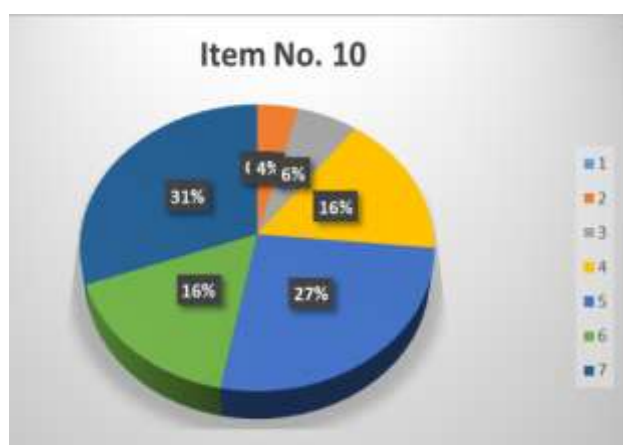
11.   My teacher handles people's emotions very well.
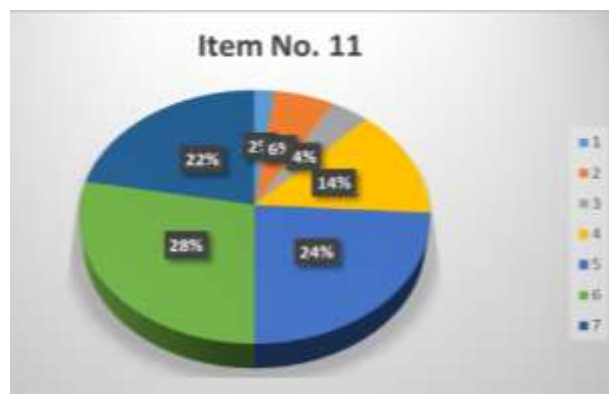
Graph 12 Handling of emotions
Source: Own Elaboration

Item No. 11 related to the teacher's handling of emotions obtained 28 % in level 6, 24 % in the highest level related to strongly agree, 22 % in the value above neutral, and the rest distributed in the other values.

12.   I feel that my teacher cares about me as a person.
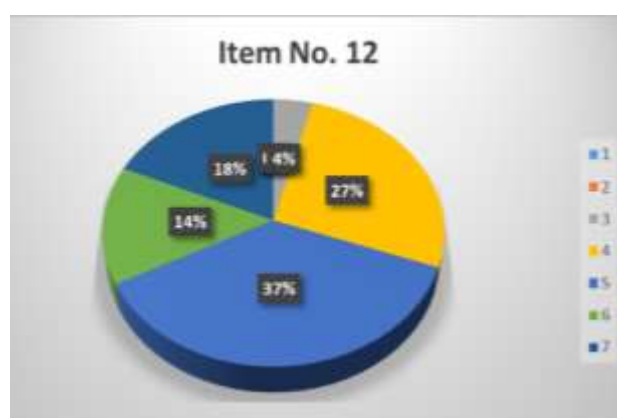
Graph 13 Teacher acceptance
Source: Own Elaboration

The highest scores for this item were 37 % in total agreement, although it is noteworthy that 27 % expressed a neutral opinion, although the majority responded favourably to the fact that they felt that they were important for teachers.

13.   I don't feel good about the way my teacher talks to me.
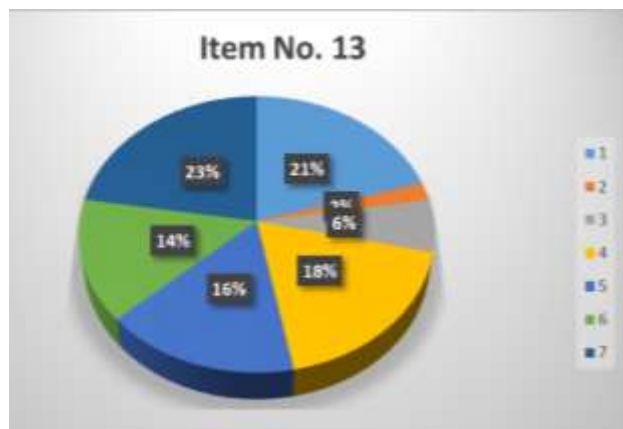
Graph 14 Empathy with the teacher
Source: Own Elaboration

This question is presented in the form of negation and was perhaps misunderstood by some students as the results show the highest value in the score 7 with 23 % meaning strongly agree, however the second value resulted with 21 % in the lowest value which is 1 with strongly disagree, the rest was distributed similarly in the rest of the values.

14.   My teachers try to understand how I see things before suggesting new ways of doing them.

Graph 15 Teacher understanding
Source: Own Elaboration

Item No. 14 obtained 29 % in the upper value of neutral, 23 % in neutral, 22 % in strongly agree and the rest of the other scores.

15.   I feel able to share my emotions with my teacher.
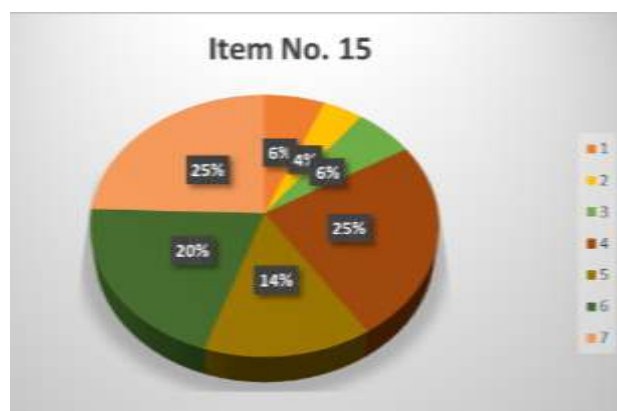

Graph 16 Emotions
Source: Own Elaboration

The highest results for this item concerning students' confidence in expressing their emotions to the teacher are in strongly agree with 25 % and 25 % also in the neutral value, 20 % in value 3 referring to two points above strongly disagree and the rest distributed in the other values.

Conclusions

The data analysis and processing of this research yielded favourable results that denote a good learning climate.

The instrument that was used basically measures the perception that students have in relation to the autonomy that teachers give to their students, resulting in the majority with the highest points in the option totally agree.

Similarly, the dimensions of communication, interest, respect and interpersonal relations showed favourable results. This indicates that the learning climate in the Academic Unit of the North of Nayarit State is good, achieving empathy with students, teachers and other members of the university community.

Dominguez *et al* (2020) refers that a learning climate must be interactive, as it benefits student learning. In this regard, Tomas *et al* (2016) state that a motivating learning climate should be promoted within the classroom, as this is related to the goals and objectives that students have.

Taking into account the current results within the Academic Unit of the North of the State of Nayarit, the researcher recommends that future studies be carried out on other degree programmes in order to compare the two types of learning climate.

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Student perspectives inspiring change: The vital role of surveys

Perspectivas estudiantiles que inspiran cambios: El rol vital de las encuestas

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Abstract

The absence of simple feedback mechanisms that consider the interest of students hinders the updating of curricula. This impediment is exemplified in the Software Security Technologies course, taught in the last semester of the Information and Communication Technologies Engineering programme. For this study, the descriptive cross-sectional method was adopted, which is characterised by data being collected at a single point in time and at a single point in time. The method was applied in 2022-1, using a convenience sample of 34 students who participated voluntarily. The results obtained support the curricular updating strategy for continuous improvement, in alignment with the institutional development programme of the Tecnológico Nacional de México (TecNM) and to meet CACEI requirements. New course topics were introduced based on the results obtained, including the implementation of Artificial Intelligence as a coaching tool for collaboration and exploration in the development of the final case study.

Update, Syllabus, Survey

Resumen

La ausencia de mecanismos sencillos de retroalimentación que tengan en cuenta el interés de los estudiantes obstaculiza la actualización de los programas de estudio. Este impedimento se ejemplifica en el curso de Tecnologías de Seguridad del Software, impartido en el último semestre del programa de Ingeniería en Tecnologías de la Información y la Comunicación. Para este estudio, se adoptó el método descriptivo transversal, que se caracteriza porque los datos se recolectan en un solo momento y en un solo tiempo. El método se aplicó en 2022-1, utilizando una muestra de conveniencia de 34 estudiantes que participaron voluntariamente. Los resultados obtenidos apoyan la estrategia de actualización curricular para la mejora continua, en alineación con el programa de desarrollo institucional del Tecnológico Nacional de México (TecNM) y para cumplir con los requisitos del CACEI. Se introdujeron nuevos temas del curso con base en los resultados obtenidos, incluyendo la implementación de la Inteligencia Artificial como herramienta de coaching para la colaboración y exploración en el desarrollo del caso de estudio final

Actualización, Programa de estudio, Encuesta

† Researcher contributing as first author.

Introduction

Taking into consideration what is established in the work programme 2022 published on 21 January of the same year and which was based on the Institutional Development Programme 2019-2024 published on the website of the Tecnológico Nacional de México (TecNM) and which shows the priority projects based on the strategic axes of the same and to which the research refers is specifically axis 1 whose name is "Educational quality, coverage and comprehensive training", which establishes the general objective of strengthening the quality of the educational offer, considering two lines of action: the first is to improve the quality, relevance and evaluation of the undergraduate and postgraduate academic programmes towards a level of international competition, and the second is to improve the level of qualification of the academic staff.

As such, line of action 1 indicates that the TecNM's educational model is to be updated and the second one is the self-evaluation of the educational programmes at undergraduate level, which is why it considers the application of surveys to strengthen and consider the students' perspective, specifically for the subject of Software Security Technologies.

Considering what Rodríguez Lagunas, J., Leyva Piña, M., & Hernández Vázquez, J. (2020)) mention that the university reforms of the last two decades in Mexico have as their main objective to promote the modernisation and quality of education. To this end, measures have been incorporated to promote modern higher education institutions (HEIs) capable of meeting the new demands of society (ANUIES, 2000) 2018).

Vaillant, 2016 as cited in Huanca Ramírez (2023) considers that it is a mission of each teacher for the improvement of the performance of a suitable institution to make decisions appropriate to the reality of the group to reform and establish organisational activities or pedagogical planning that should be directed to the achievement of optimal educational competences in favour of the acquisition of learning.

Quezada Cáceres, S. & Salinas Tapia, C. (2021) summarise that effective feedback is incipient in the freedom of teaching in Mexican universities where any process of change is gradual, since the perception of the student and the teacher about co-responsibility in learning must be transformed, by emphasising the benefits such as having the possibility of knowing different ways in which the same problem is contextualised, understood and solved, which can be achieved through qualitative, quantitative and timely feedback (Elizondo, J. & Gallardo, K. (2018). Together, Harks, Rakoczy, Hattie, Besser et al., 2014) cited in Quezada Cáceres, S. & Salinas Tapia, C. (2021) mention that, although there is a concern for implementing the practice of feedback, it must be systematised and adopted as linked to the entire teaching-learning process.

Therefore, sustainable feedback is recursive in nature when it is delivered through cycles, providing an opportunity to correct erroneous knowledge that leads to improvement, with the support of clear criteria that allow for calibrated self-assessment. In this way, metacognitive processes are generated, involving feedforward feedback to improve the current task and meet future learning needs.

The teacher must consider the student in the feedback as an ally to jointly build strategies to improve levels of understanding, explicit and tacit (Boud, D. & Molloy E. (2012); effective feedback should allow students to actively participate in the process of understanding intended objectives to self-assess their own work and develop strategies (Hattie & Timperley, 2007) that allow them to improve.

Furthermore, Maldonado *et al* (2023) externalise that it is crucial to consider all stakeholders, including teachers, students, parents and the wider community, where collaboration and open communication are key to addressing challenges and maximising the benefits of such changes and that constant reflection and evaluation of outcomes are essential to making informed decisions in the field of educational administration.

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Development

The methodology used was that of (Hernández Sampieri R., Fernández Collado, C. Méndez Valencia, S., Mendoza Torres, C. P. (2014), who point out that descriptive studies "seek to specify the important properties of people, groups, communities or any other phenomenon that is subjected to analysis", a descriptive study is conducted since information was obtained about the phenomenon under study, describing the situation and identifying its different elements, analysing and interpreting them using a survey, limiting the sample to the students of the subject.

The central problem is the lack of implementation of mechanisms that during and at the end of the subjects allow enriching the study programmes, since instruments are applied, but these only evaluate the teacher, and do not consider elements that allow improving the study programmes, and even this survey has not been updated according to the new needs that are arising day by day in the society in which students and graduates develop. The updating of study plans and programmes should be considered in a constant and periodical way that is in line with the new changes that are taking place in the way of teaching and achieving learning for the students, as well as considering the current technological innovations, the way of life of the students, the environment in which they develop and the way in which organisations are evolving.

In the particular case of the Instituto Tecnológico de Tlalnepantla (ITTLA) and specifically in the career of Engineering in Information Technology and Communications, the speciality of Software Engineering is taught and where one of its subjects is Software Security Technologies and is where the survey was applied to know the opinion of students regarding the subject, it should be noted that an analysis of the curriculum of the career and specialties was also carried out in different aspects such as: The results of this analysis are set out in another document, one of the results of which was considered for this article, which indicates that the generic study programmes have not been updated in accordance with the new needs of organisations and technological advances, and the one corresponding to the specialities is revised every 3 years.

In this regard it is important to mention that the study plans and programmes were generated and implemented in the institute from 2008 and to date they have only been updated since 2013 so it can be seen that they have a 10 year lag where there have been changes such as new forms of work, the pandemic, new information and communication technologies, computer equipment, new requirements of legal and governmental entities.

That is why it is important to consider all those involved and participants in order to improve the professional training of the ICT engineer, as well as the elements and the environment where they develop in order to include the new needs that contribute to their professional profile, including soft skills, the use of information and communication technologies, computer equipment and software management that will allow them to fully develop in their organisational environment.

The application of the survey was carried out at the end of the semester after the delivery of the final evaluation in a way that allowed the student to evaluate and express their opinions with the freedom and security that it would not influence their final evaluation.

For the survey, the Google form was used so that the student could answer at the time and place he/she found himself/herself and was limited to only one answer, the questions were elaborated in a general way as a test essay and contained the following questions:

1. What is your general opinion of the course?

2. How do you consider the overall content of the course?

3. How do you consider the theoretical content of the course?

Very good ( ) Good ( ) Fair ( ) Poor ( ) No comment ( )

4. How do you consider the practical work done during the course?

Very good ( ) Good ( ) Good ( ) Fair ( ) Poor ( ) No comment ( )

5. Did the course contribute to your professional training?   Yes ( ) No ( ) No ( )

6. Do you consider the updating of the content of the course important for your professional training?   Yes ( ) No ( ) No ( )

In which units and topics. Indicate topics to be included.

7. Give your opinion of the course This question was considered optional so that the student could express whatever he/she wished in it and even if he/she wished to include his/her name and control number he/she could do so, since the survey was carried out anonymously but only for the members of the subject.

The sample of students for this first test case were those enrolled in the subject being these for the period 2022-1 a total of 34 where a convenience sampling approach was used due to the size of the sample and the availability of participants (Johnson, 2015; Smith & Brown, 2018), with a non-probability sample of 39 students of the corresponding period. It is important to indicate that along with the survey, observation was also applied to analyse the behaviour of the students, since the time of the pandemic had passed and the application of the survey was carried out when the students returned to the classroom, which is interesting to see the results in a later analysis.

Results

Based on the application of the survey, the following results were obtained:

For the first question "How do you consider the theoretical content of the subject" the following results were obtained which are shown in graph 1.

How do you consider the theoretical content of the course?
34 answer
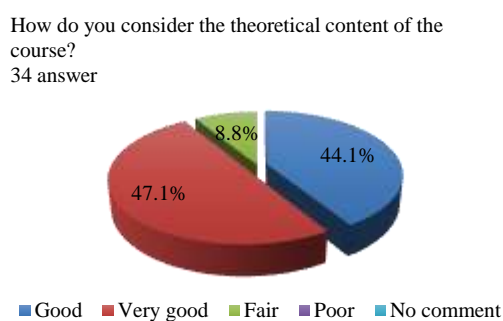
Graph 1 Question 3
Source: Own Elaboration

For this question a diversity of opinions can be observed, but with the highest percentage being very good (47.1%) followed by good with 44.1%, so that the opinion of the theoretical part of the course is considered good and very good by the students with a total of 91.2%, which indicates that for them the content of this speciality subject is very good and good, confirming that the development of the speciality is still valid for them due to its 3-year duration.

With regard to the internships, the following result was obtained, as shown in graph 2.

How do you consider the practical work done during the course?
34 answer
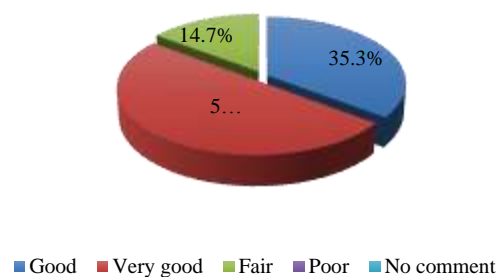
Graph 2 Question 4
Source: Own Elaboration

In this question, the student is asked how he/she considers the practices carried out during the course, and as can be seen in figure 2, the results of the practices indicate very good with 50% and good with 35.3% at this point it is important to highlight that there were no negative answers and no comments, so that in this aspect it was reflected to integrate more practices for all units of the course, in addition to the student shows interest in doing more practical exercises thus strengthening their skills as a future professional.

Did the course contribute to your professional training?
Yes ( ) No ( )
34 Answers

Graph 3 Question 5
Source: Own Elaboration

In the question shown in graph 3, it can be seen that there were 100% affirmative responses, which confirms that the speciality subject has the basis for improving the professional profile and that its content is contributing to the degree programme. Continuing with the results obtained, graph 4 shows that students show interest in the updating of their professional training syllabuses, and as can be seen, the answers show that 82.4% consider this activity to be important.
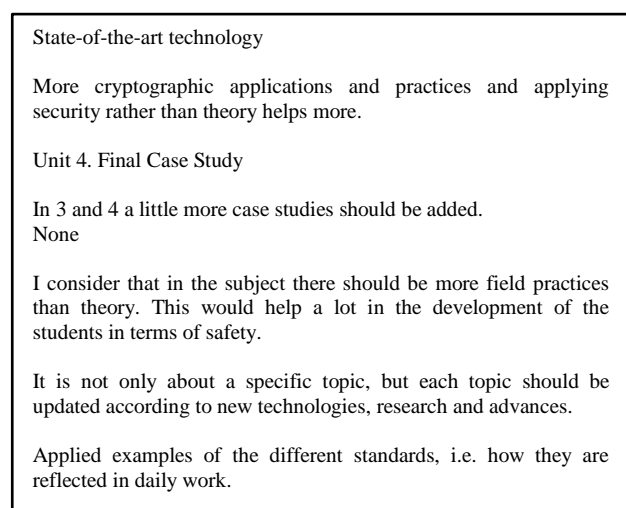
Do you consider the updating of the content of the course important for your professional training?
Yes ( ) No ( )
34 Answers

1…
82.4%

■ Yes
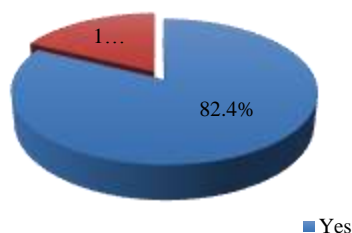
Graph 4 Question 6
Source: Own Elaboration

In this question a section was included for the student to express in a better way what he/she wants to see improved in his/her subject programme, where some of the answers to this question are grouped in the following figure 1.
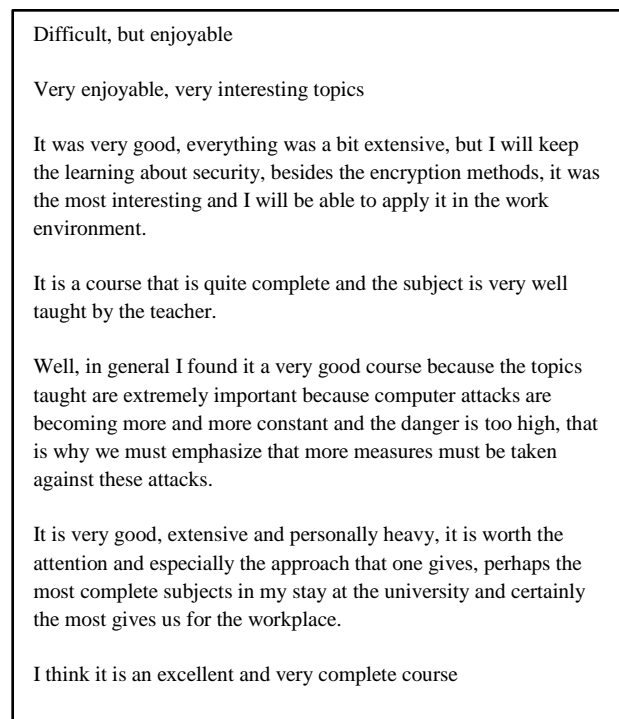
State-of-the-art technology

More cryptographic applications and practices and applying security rather than theory helps more.

Unit 4. Final Case Study

In 3 and 4 a little more case studies should be added.
None

I consider that in the subject there should be more field practices than theory. This would help a lot in the development of the students in terms of safety.

It is not only about a specific topic, but each topic should be updated according to new technologies, research and advances.

Applied examples of the different standards, i.e. how they are reflected in daily work.

Figure 1 Supplement to Question 6
Source: Own Elaboration

The content of the answers is already being considered in the teaching of the subject and was updated in the syllabus, together with the inclusion of new practices up to the use of artificial intelligence, for which the survey will be applied again and the results obtained will be compared.

Finally, the last question regarding the opinion of the course is shown in figure 2.

Difficult, but enjoyable

Very enjoyable, very interesting topics

It was very good, everything was a bit extensive, but I will keep the learning about security, besides the encryption methods, it was the most interesting and I will be able to apply it in the work environment.

It is a course that is quite complete and the subject is very well taught by the teacher.

Well, in general I found it a very good course because the topics taught are extremely important because computer attacks are becoming more and more constant and the danger is too high, that is why we must emphasize that more measures must be taken against these attacks.

It is very good, extensive and personally heavy, it is worth the attention and especially the approach that one gives, perhaps the most complete subjects in my stay at the university and certainly the most gives us for the workplace.

I think it is an excellent and very complete course

Figure 2 Question 7
Source: Own Elaboration

With regard to the question about the opinion of the course, it is still considered that it is taught by the teacher of which the students also refer to the fact that the laboratory where the subject is taught has been improved in order to allow the new practices proposed for the subject to be carried out.

Conclusions

By carrying out complementary surveys that refer to the syllabus and not only to the teacher as a strategy for continuous improvement, it was possible to integrate and improve the programme by considering the opinions of the students in order to include new subjects, new practices and thus meet the objectives set out in the Institutional Development Programme 2019-2024 published on the website of the Tecnológico Nacional de México (TecNM) and comply with the requirements of the CACEI accreditation. The application of strategies such as the one carried out allowed us to consider the opinions of the students and to act collaboratively, considering that they are immersed in a globalised world with great technological advances, so that the updating of the programmes will allow them to improve their skills and be more competitive in their professional performance.

The results obtained were integrated into the final report that is delivered with the final evaluations that were integrated into the official transcript of grades, this report was shown to the Academy of Systems and Computing in order that other teachers adopt the survey for the continuous improvement of the study programmes of the career and update if necessary these along with the professional profile and competencies of these.

Allowing the student to freely express their opinions allows for the improvement of the student's curriculum considering that it was an important strategy to request it after their final evaluation so that the student expresses their training needs more clearly and that it should be considered continuously and not only in certain periods.

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Exploring neurolinguistic programming in University students: Interpretations and reflections as an effective teaching resource in the classroom

Exploración de la programación neurolingüística en alumnos Universitarios: Interpretaciones y reflexiones como recurso didáctico eficaz en el aula

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Abstract

The main objective of this research is to know the perception of students of the Universidad Autónoma de Nayarit about the Exploration of Neurolinguistic Programming in University Students: Interpretations and Reflections as an Effective Didactic Resource in the Classroom. The perception of university students of the Bachelor's Degrees in Administration, Accounting, Marketing and International Business who are currently studying in the first, third and fifth semesters at the Academic Unit of Accounting and Administration. The study arises because of its importance to achieve significant learning. The purpose of the article is to make a qualitative statement, making a comparison with different researches. Due to its scope and approach, the research is descriptive with a mixed approach. For the collection of data, a Google Forms survey was designed to know the students' perception of the use of neurolinguistic programming in the classroom. As main results, it is concluded that university students perceive NLP as a valuable tool to improve their learning, their communication and interpersonal skills, their stress management and their preparation for the working world.

Resumen

El objetivo principal de la presente investigación es conocer la percepción de alumnos de la Universidad Autónoma de Nayarit acerca la Exploración de la Programación Neurolingüística en Alumnos Universitarios: Interpretaciones y Reflexiones como Recurso didáctico Eficaz en el Aula. La percepción de los alumnos universitarios de las Licenciaturas en Administración, Contaduría Mercadotecnia y Negocios Internacionales que actualmente están cursando en el primero, tercero y quinto semestres en la Unidad Académica de Contaduría y Administración. El estudio surge por la importancia que tiene para lograr un aprendizaje significativo. La finalidad del artículo es enunciar de forma cualitativa haciendo una comparativa con distintas investigaciones. Por su alcance y forma de abordaje, la investigación es de carácter descriptivo con un enfoque mixto. Para el acopio de los datos se diseñó un instrumento que es la encuesta de Google Forms, para conocer la percepción de los alumnos sobre el uso de la programación neurolingüística dentro del espacio áulico. Como resultados principales, se concluye que el estudiante universitario percibe la PNL como una herramienta valiosa para mejorar su aprendizaje, sus habilidades de comunicación y relación interpersonal, su manejo del estrés y su preparación para el mundo laboral.

Classroom, Didactic resource, Higher education, Neurolinguistic programming

Aula, Educación superior, Programación neurolingüística, Recurso didáctico

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Introduction

The perception of university students is very important as some of them already know about this topic. Neuro Linguistic Programming (NLP) is a discipline that has gained relevance in various fields, including education. The topic "The Impact of Neuro Linguistic Programming in Higher Education: Perspectives and Reflections on its Use as an Effective Teaching Resource in the Classroom" is of great importance for several reasons.

Firstly, NLP offers a set of techniques and strategies that can be used to enhance teaching and learning. These techniques can help students learn more efficiently, improve their concentration and increase their motivation. In addition, NLP can help teachers to communicate more effectively with their students, to better understand their needs and to adapt their teaching to the different learning styles of students.

Secondly, despite its potential, NLP has not been widely adopted in higher education. This may be due to lack of knowledge about NLP and its benefits, resistance to change or lack of NLP training for teachers. Therefore, more research on this topic is needed to better understand the barriers and opportunities for the implementation of NLP in higher education.

Thirdly, higher education faces several challenges, such as the need to improve the quality of teaching, to increase student retention and success, and to prepare students for an ever-changing world of work. NLP can be a valuable tool to address a number of challenges, such as the need to improve the quality of teaching, to increase retention and to prepare them for a changing world of work.

For example, it can help students develop critical thinking, problem-solving and communication skills, which are essential for success in the 21st century.

Furthermore, NLP can contribute to inclusion and equity in higher education. By taking into account the different learning styles of students, NLP can help ensure that all students have equal opportunities to learn and succeed. This is especially relevant in a context of increasing diversity in higher education.

Finally, NLP can have a positive impact on students' well-being. By helping students to manage their stress, increase their self-esteem and improve their interpersonal relationships, NLP can contribute to their mental and emotional health, which is an increasingly important aspect of higher education.

Neuro Linguistic Programming (NLP) is a discipline that focuses on the study of human communication and behaviour. In the context of higher education, NLP has become increasingly important because of its potential to enhance learning and teaching in the classroom. In this paper, the impact of NLP in higher education will be explored, as well as perspectives and reflections on its use as an effective teaching resource in the classroom.

NLP is based on the idea that communication and human behaviour are interconnected and that it is possible to improve the quality of communication and behaviour through specific techniques. In the context of higher education, NLP has been used to improve the quality of teaching and learning in the classroom. NLP techniques can help teachers to communicate more effectively with students, to better understand their needs and to adapt their teaching strategies.

In addition, NLP can help learners improve their learning by identifying and tapping into their preferred learning style. Students can learn to use NLP techniques to improve their memory and retain information more effectively. They can also learn to communicate more effectively with their classmates and teachers, which can improve their overall learning experience.

Research and studies have revealed that university students value interactive and dynamic classes to ensure better learning. NLP can provide an effective way to create an interactive and dynamic learning environment in the classroom. Teachers can use NLP techniques to engage students in the learning process and encourage active participation in the classroom.

In addition, NLP can be useful to improve students' communication and interpersonal skills. This can be especially relevant in the context of group work and presentations, which are common in higher education. NLP can help students to communicate more effectively and to work more productively in teams.

NLP can also be useful in managing stress and anxiety, which are common among university students. Through NLP techniques, students can learn to better manage their emotions and maintain a positive attitude towards challenges. This can improve their ability to cope with stressful situations and increase their overall emotional well-being.

From the teachers' perspective, NLP can be a valuable tool to improve their ability to communicate effectively with students and to tailor their teaching to the individual needs of each student. Teachers can learn to use NLP techniques to improve their ability to listen to and understand students, which can improve the quality of teaching and learning in the classroom.

In addition, NLP can be useful in improving teachers' ability to motivate students and encourage their active participation in the classroom. Teachers can learn to use NLP techniques to create a positive and motivating learning environment, which can enhance the learning experience of students and increase their engagement in the learning process.

In this way, Neuro Linguistic Programming has a significant impact on higher education and can be an effective teaching resource in the classroom. NLP techniques can improve the quality of teaching and learning by improving communication between teachers and students, tailoring teaching to the individual needs of each student, improving students' ability to retain information and improving their overall emotional well-being. Consequently, Neuro Linguistic Programming is a topic of growing importance in higher education and can be an effective teaching resource in the classroom. Teachers and students can benefit from NLP techniques to improve the quality of teaching and learning, improve communication and interpersonal relationships, and improve overall emotional well-being.

It is important for teachers and students to learn about NLP techniques and consider their use in the classroom to enhance the learning and teaching experience in higher education.

According to Origins of Neurolinguistic Programming (n.d.). NLP was born from the joint work of John Grinder (linguist) and Richard Bandler (mathematician and Gestalt therapist) and a group of students, among them Robert Dilts, Judith DeLozier, Leslie Cameron and David Gordon; its purpose was the identification of explicit models of human excellence.

They developed this model as a result of the investigation of the operative patterns of three of the greatest therapists of that time: Virginia Satir, recognised as the best family therapist of our times, Fritz Perls, creator of the Gestalt therapy that makes possible the total development of the human being, and Dr. Milton H. Erickson, the greatest exponent of contemporary Hypnosis. These wizards of modern therapy had behaviours in common that made them stand out very prominently compared to the rest of their generation.

Grinder and Bandler managed to standardise these common patterns and offered them as their own model of learning.

NLP can be recognised as a model of emotional intelligence, where the human mind is programmed through language, both verbal and its paralinguistic elements, and non-verbal: body posture and facial gestures. Years of study by its founders John Grinder, a professor of linguistics, and Richard Bandler (1975), a student of computer science and mathematics at the University of California, demonstrated that the human mind works like a machine, reacting through linguistic stimuli that generate changes in behaviour. Neuro-linguistic programming has several ways of being defined as it is the study of the brain and how it relates theory to practice according to Bavister & Vickers (2011) "A process that analyses excellence in human behaviour in such a way that the results created by that behaviour can be duplicated by almost everyone" (p.12). For this reason, we can say that NLP is a communication-based model that provides insight into the process people use to perceive information and thus develop skills.

Basic processes such as reading, practising a sport or imagining are human behaviours that, after being programmed into the brain, go through a mental process that generates results to achieve the goals we have set ourselves. NLP provides conscious and flexible options to improve the perception of information. Neuro-linguistic programming emerged from the research of John Grinder and Richard Bandler in 1970, who were interested in knowing why the treatments of therapists Virginia Satir, Milton Erickson and Fritz Perls were better than those of other colleagues.

They concluded that the achievement of these therapists followed the same pattern and that they used the same specific communicative processes. Bandler and Grinder (2000), indicate that NLP is the name they gave to their approach to human learning, indicating how it basically helps the individual to develop ways of teaching people to use their own resources. NLP is the study of subjective human experience, how the individual organises what he or she perceives, how he or she reviews or filters the outside world through his or her senses. It explores how the person conveys his or her representation of the world through language.

According to the authors, in NLP, life experiences are captured by the five senses and processed as information by the nervous system, which helps to internally represent these experiences in order to give meaning and structure to each of them. This is done at the linguistic level, through words, sounds, senses, sensations or smells. Cudiccio, C (2003) adds that NLP can be defined as a set of study techniques on communication, subjective experience structure that aims to achieve a greater understanding of human relationships at any level manifested, whether personal, professional or social.

According to the aforementioned author, in terms of its etymological meaning, the term Programming is linked to the personal capacity to produce and apply behavioural programmes, the term Neuro refers to sensory perceptions which determine, as is well known, a specific inner state, both in the strict sense, i.e. neurological, and in the figurative sense, which refers to the subjective emotional state.

The term Linguistic refers to the verbal-non-verbal behaviour through which communication takes place.

Methodological strategies or materials and methods

The present research work about the perception of students of the Autonomous University of Nayarit on the Exploration of Neurolinguistic Programming in University Students: Interpretations and Reflections as an Effective Didactic Resource in the Classroom of the academic programmes of Bachelor's Degree in Administration, Bachelor's Degree in Accounting, Bachelor's Degree in Marketing and Bachelor's Degree in International Business that are currently studying the first, third and fifth semester in the Academic Unit of Accounting and Administration has been developed mainly with a qualitative approach, both narrative and descriptive, generating a new perspective from a subjective point of view, analysing by means of logical reasoning a series of comparisons of different authors that lead to a discernment of the most relevant and important concepts and definitions of the topic in question.

At the same time, the research is of an exploratory type, since during the development of the study a systematic review of the literature of various scientific articles on this topic was carried out using the following scientific databases: Direct Science, Emerald, Scopus, Scielo, Redalyc, Google Académic. Likewise, for this article, search criteria were applied based on search engines or descriptors, achieving the best results with high impact articles.

In this research, variables that allow us to identify the disposition and perspective of students regarding this topic are analysed.

A population of just under 1600 students was considered and a survey was used as a data collection instrument, randomly applied to a sample of 114 students who voluntarily answered.
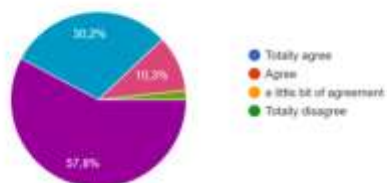
The survey was carried out on the Google Forms platform on a Likert scale and comprised 4 items that were related to the Exploration of Neurolinguistic Programming in University Students.

Results and discussion

Analysis and interpretation of the surveys to determine the perception of the students of the above mentioned degrees. It should be noted that the results of the surveys of 114 students were analysed.

The detailed information is shown below:

Figure 1 ¿Do you think that Neurolinguistic Programming can be an effective teaching resource in higher education?
Source: Own Elaboration

With respect to figure 1, the highest percentages that students expressed the highest preference were that they agreed and completely agreed that it can be an effective didactic resource in higher education, which in total amounted to 93% of respondents. A percentage of 7% expressed little agreement, due to a lack of interest, knowledge or motivation to learn about the problems that this generates.
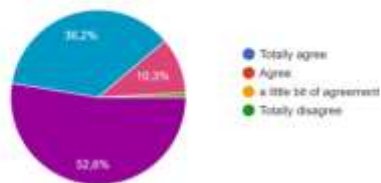
Figure 2 Do you think that Neurolinguistic Programming can improve the way teaching and learning takes place in higher education?
Source: Own Elaboration

In relation to the interpretation of Figure 2, the most outstanding percentages that students expressed the highest preference was that they agreed and completely agreed with a sum of almost 88% of respondents, fortunately students perceive the relevance of improving the way in which teaching and learning in higher education can be improved and only 12% slightly agreed, perhaps due to lack of interest.
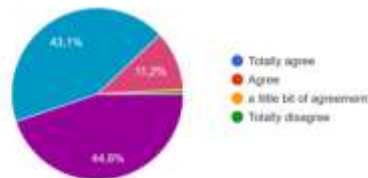
Figure 3 Do you think that the implementation of Neuro Linguistic Programming in higher education can have a positive impact on students' academic performance?
Source: Own Elaboration

With respect to the interpretation of Figure 3, it is observed that again the most outstanding percentages were added together of almost 82% which corresponds to those who agreed and completely agreed that they do believe that the implementation of NLP in higher education can have an impact on students. And only 14 % expressed somewhat agree, 5 % showed a strongly disagree which could indicate a lack of awareness or knowledge.
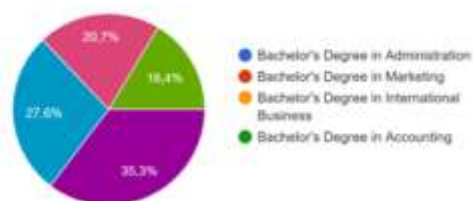

Figure 4 Do you think that higher education teachers should receive training in Neuro-linguistic Programming in order to be able to use it as a teaching resource in the classroom?
Source: Own Elaboration

When interpreting Figure 4, the most notable percentages expressed by the students were 88% agreeing that teachers should receive training in NLP so that it can be used to benefit their learning in the classroom. A percentage of 12% of the students surveyed expressed little agreement, due to a lack of knowledge of the subject itself.

Figure 5 In which degree are you studying?
Source: Own Elaboration

CARRILLO-BELTRÁN, Julio César Cuauhtémoc, MEJÍA-SALAZAR, Gilberto, LLANOS RAMÍREZ, María del Carmen and RAMÍREZ JIMÉNEZ, Armando. Exploring neurolinguistic programming in University students: Interpretations and reflections as an effective teaching resource in the classroom. Journal Practical Didactics. 2023

When interpreting Figure 5, it can be seen that out of 114 students who were surveyed, 40 students were from the Bachelor's Degree in Administration, 32 students were from the Bachelor's Degree in Accounting, 24 students were from the Bachelor's Degree in Marketing and 18 students were from the Bachelor's Degree in International Business.

Conclusions

In conclusion, the perception of university students about Neurolinguistic Programming (NLP) is a topic of growing importance in higher education and its impact on the education of university students, specifically in the academic programmes of Bachelor in Administration, Bachelor in Marketing and Bachelor in International Business that are currently studying the first, third and fifth semester in the Academic Unit of Accounting and Administration of the Autonomous University of Nayarit.

The results of the research indicate that students recognise the importance of NLP in higher education and its potential as an effective teaching resource in the classroom. Students believe that NLP can improve the quality of teaching and learning by improving communication between teachers and students, adapting teaching to the individual needs of each student, improving their ability to retain information and improving their overall emotional well-being.

In addition, learners recognise that NLP can be useful in improving their ability to communicate effectively and work in teams, which can be particularly relevant in the context of group work and presentations. They can also improve their ability to manage stress and anxiety, which can improve their ability to cope with stressful situations and increase their overall emotional well-being.

However, students also point out that NLP is not widely known in higher education and that more dissemination and training is required for its effective use in the classroom. Students suggest that courses and workshops on NLP should be offered for teachers and students, and that more resources on NLP should be included in academic programmes.

In this sense, the Autonomous University of Nayarit has a responsibility to promote the inclusion of NLP in academic programmes and to encourage its effective use in the classroom. The university should offer courses and workshops on NLP for teachers and students, and should include more resources on NLP in academic programmes. In addition, the university should encourage research on NLP and its impact on higher education to improve the quality of teaching and learning.

Thus, university students' perception of the impact of NLP in higher education is very positive and suggests that NLP can be an effective teaching resource in the classroom. However, further dissemination and training is required for its effective use in higher education.

It is important to note that NLP is not a magic solution to all problems in higher education, but it can be a valuable resource for improving communication, tailoring teaching to the needs, information retention and emotional well-being of students.

It can be concluded that the inclusion of NLP in higher education can be an important step to improve the quality of teaching and learning. Universities should offer courses and workshops on NLP for teachers and students, and should include more resources on NLP in academic programmes. In addition, research on NLP and its impact on higher education can provide valuable information to improve the quality of teaching and learning.

Proposal

The present proposal aims to promote academic excellence and the improvement of students' academic performance in addition to the updating of teachers who are the key to the integral and academic development of the Autonomous University of Nayarit.

As mentioned in this research study, Neuro Linguistic Programming (NLP) is a powerful tool that can be used to improve the effectiveness of classroom teaching. The following are five main actions to implement NLP in higher education in order to improve the quality of teaching and learning.

CARRILLO-BELTRÁN, Julio César Cuauhtémoc, MEJÍA-SALAZAR, Gilberto, LLANOS RAMÍREZ, María del Carmen and RAMÍREZ JIMÉNEZ, Armando. Exploring neurolinguistic programming in University students: Interpretations and reflections as an effective teaching resource in the classroom. Journal Practical Didactics. 2023

1. Teacher training in NLP: The first action is to provide teachers with solid training in NLP. This would include the teaching of basic NLP techniques as well as how to apply these techniques in the classroom. The training should also include the opportunity to practice these techniques and receive feedback on their effectiveness.

2. Integrating NLP into the Curriculum: The second action is to integrate NLP into the university curriculum. This could involve the inclusion of NLP in course curricula, as well as the use of NLP in the teaching of all subjects.

3. Creating a Positive Learning Environment: The third action is to use NLP to create a positive learning environment. This could involve using NLP techniques to improve communication between teachers and students, and to help students overcome barriers to learning.

4. Ongoing Evaluation of the Effectiveness of NLP: The fourth action is to establish an ongoing evaluation system to measure the effectiveness of NLP in improving teaching and learning. This could involve collecting data on student performance as well as conducting surveys to collect feedback from students and teachers.

5. Adaptation and Constant Improvement: The fifth action is to use the evaluation results to adapt and constantly improve the way NLP is used in the university. This could involve making adjustments to teacher training, integrating NLP into the curriculum, and the way NLP is used to create a positive learning environment.

In conclusion, the implementation of these five actions could have an impact on the teaching-learning process of university students in the short to medium term.

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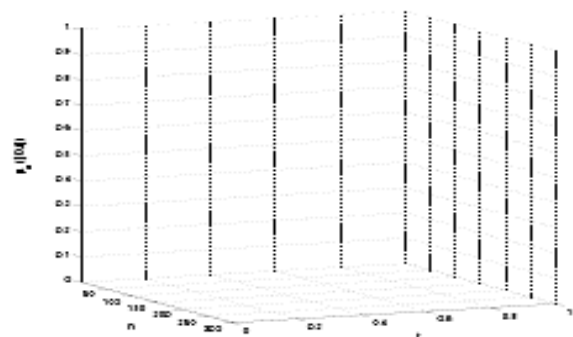
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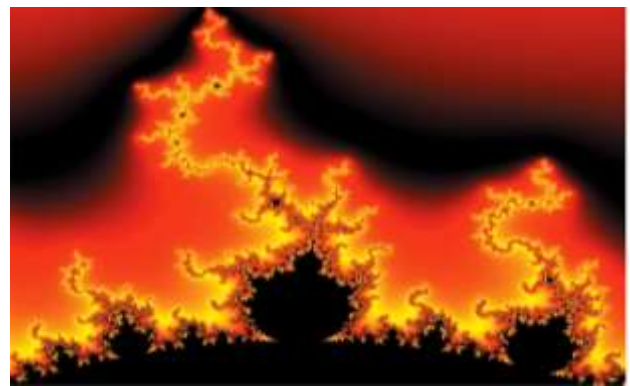
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