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ECORFAN-Journal Colombia

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Knowledge Area

The works must be unpublished and refer to topics of Philosophy, history and human sciences and other topics related to Humanities and Behavioral Sciences.

Presentation of the Content

In the first article we present, *Integrating sustainability into teaching and research practice at a higher education institution: A holistic approach* by Hernández-Ayón, Francisco Javier, Figueroa-Verde, Brenda, Arvizu-Narváez, Ana Carolina and Navarrete-Méndez, Adrián, with adscription in the Universidad Autónoma de Nayarit, as the next article we present, *Developing 21st century skills: A proposal for a didactic sequence with a STEAM approach and active methodologies for basic education students in the Mexican Southeast*, by Trejo-Trejo, Gilberto Abelino, Domínguez-Gutú, Jesús, Gordillo-Espinoza, Emmanuel and Constantino-González, Fernando Exiquio, with adscription in the Universidad Tecnológica de la Selva, as the next article we present, *The importance of Netnography as a research methodology*, by Chávez-Morales, Ignacio, Lino-Gamiño, Juan Alfredo, Chávez-López, Pedro Jacob and Moreno-Meza, Rocío de Jesús, with adscription in the Universidad de Colima, as the next article we present, *Emotional intelligence and Locus of control in college students*, by Coronado-Sauceda, Angelyn, Bojórquez-Díaz, Cecilia Ivonne, Quintana-López, Víctor Alexander and Sotelo-Castillo, Mirsha Alicia, with adscription in the Instituto Tecnológico de Sonora and Universidad Autónoma de Baja California, as the next article we present, *Hardy personality and burnout in diving judges*, by Ponce-Carbajal, Nancy, Ramirez-Nava, Rubén, Jaenes-Sanchez, José Carlos and Sosa-Aldape, Blanca Lilia, with adscription in the Universidad Autónoma de Nuevo León, as the last article we present, *Generation of knowledge for the intervention of community integration projects and recognition of diversity, proposed in the plans and programs of the New Mexican School in Multigrade Primary Schools*, by Zea-Verdín, Aldo Asunción, Guzmán-Álvarez, Alejandra and Castellón-Lepe, Alma Jazmín, with adscription in the Universidad Autónoma de Nayarit..

Content

ECORFAN Journal-Colombia 10[18]1-11: e11018111
Article

Integrating sustainability into teaching and research practice at a higher education institution: A holistic approach

Integración de la sustentabilidad en la práctica docente y de investigación en una institución de educación superior: Un enfoque holístico

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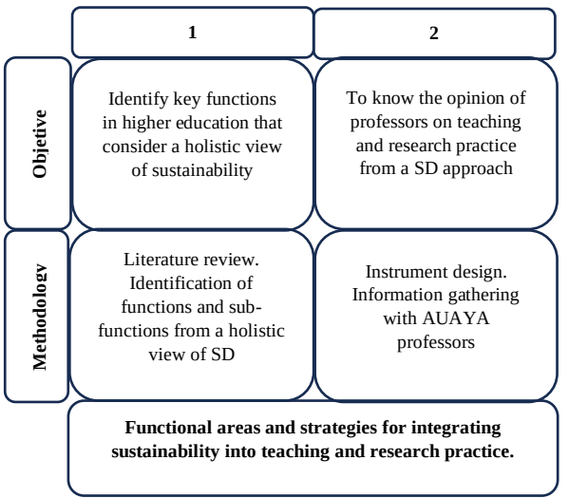
Abstract

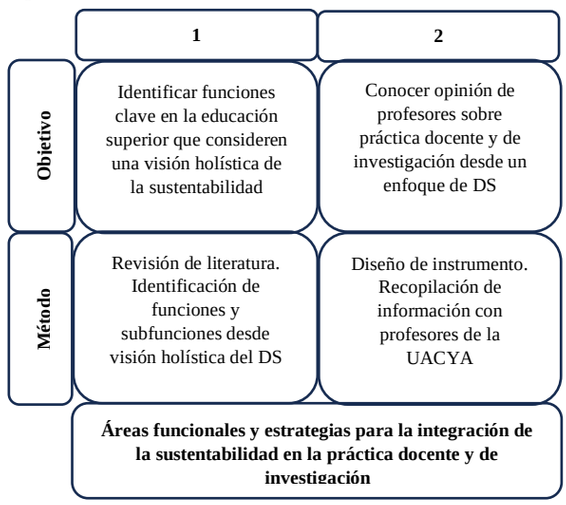
Higher education institutions play a fundamental role in training for sustainable development, recognized as key actors since 1990. Higher education institutions can contribute to the Sustainable Development Goals through teaching, research, outreach and institutional management, but face challenges for a holistic integration, requiring a systemic approach. This research sought to identify areas and strategies for the integration of sustainability in the teaching and research practice of a higher education institution. Using a field methodology and quantitative approach, first key functional areas and sub-functions were defined, assessing their coherence with sustainability. Then, the opinion of professors was gathered, who pointed out main problems in teaching, especially in curriculum development and evaluation, evidencing the need for a comprehensive approach.



Institutions, Sustainability, Holistic

Resumen

Las instituciones de educación superior juegan un papel fundamental en la formación para el desarrollo sustentable, reconocidas como actores clave desde 1990. Las instituciones de educación superior pueden contribuir a los Objetivos de Desarrollo Sostenible a través de la docencia, investigación, vinculación y gestión institucional, pero enfrentan desafíos para una integración holística, requiriendo un enfoque sistémico. Esta investigación buscó identificar áreas y estrategias para la integración de la sustentabilidad en la práctica docente y de investigación de una institución de educación superior. Usando una metodología de campo y enfoque cuantitativo, primero se definieron áreas funcionales y subfunciones clave, evaluando su coherencia con la sustentabilidad. Luego, se recopiló la opinión de profesores, quienes señalaron principales problemas en docencia, especialmente en desarrollo curricular y evaluación, evidenciando la necesidad de un abordaje integral.



Instituciones, Sustentabilidad, Holístico

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Introduction

Higher education institutions (HEIs) play a fundamental role in training professionals prepared to face the challenges of sustainable development. Since the 1990 Talloires Declaration, HEIs have been recognized as key players in promoting sustainability at the global level (Colding, 2017; Cardozo et al., 2020).

It was from the 1992 Rio Summit that a call was made to all global organizations to contribute to this goal by promoting a balance between environmental, economic and social dimensions (UNCED, 1992). More recently, the Sustainable Development Goals (SDGs) ratified by the United Nations in 2015 have reaffirmed the need to integrate sustainability comprehensively into the strategies and operations of all types of organizations, including HEIs (United Nations, 2015).

HEIs possess a wide range of essential tools and capacities to drive the transition towards sustainability within societies. These institutions are positioned as crucial actors in the pursuit of the SDGs (De Amorim et al., 2020) and play a fundamental role in this process (Sustainable Development Solutions, 2020). To promote sustainability in HEIs, it is essential to link theory with practice, articulating cultural, social and educational aspects (Cebrián et al., 2013). This implies taking advantage of the three substantive functions of HEIs: teaching, research and linkage with society.

Through teaching, HEIs can train new generations of leaders, professionals and citizens, imparting knowledge and developing skills oriented towards sustainability. On the other hand, the research they carry out allows them to generate new knowledge, technologies and innovations that contribute to address environmental, social and economic challenges.

Likewise, outreach and community outreach activities allow them to disseminate good practices and encourage citizen participation in sustainability initiatives. In this way, HEIs can make a significant contribution to the transition towards sustainable development, taking advantage of their privileged position and multiple capacities to have a positive impact on the environmental, social and economic dimensions.

Linking the theory and practice of sustainability in HEIs faces important challenges. According to an analysis of 331 HEIs in 11 Latin American countries, sustainable practices encounter administrative, financial and cultural obstacles, which highlights the importance of learning, training and efficient institutional protocols (Bezerra et al., 2023).

In the same sense, Yarritu, et al.(2024) conducted a study of 403 teachers at the University of the Basque Country and concluded from their findings that knowledge of the 2030 Agenda leads teachers to have a comprehensive description and a deep understanding of it. Consequently, there is a need for higher education institutions to provide more training to teachers to promote a holistic understanding of sustainability and facilitate its integration into education.

Another study mentions that at the University of Bern in Switzerland, the three levels, macro, meso and micro, of action to include sustainable development in education are involved. The macro level incorporates the entire university, the meso level refers to a Sustainable Development Commission and finally the micro level involves collaboration between teachers from all programs of study of a faculty and the sustainable development team to provide materials, support and financial resources and thereby strengthen the faculty members (Lewis, et al., 2024).

In the case of Mexico, a survey of 569 university professors reveals two approaches to education for sustainable development: a proactive one (79%) that proposes comprehensive curricular and pedagogical changes, and a reactive one (60%) that considers it only as an additional subject without significant transformations (Zúñiga et al., 2022).

It is also common to find that, although HEIs have sustainability models, their effective implementation presents great challenges. For example, at the Autonomous University of Guerrero, although sustainability is highlighted in its educational model, it is not reflected concretely in the curriculum or academic programs, with a disciplinary approach prevailing over environmental elements (Piza-Flores et al., 2018).

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For its part, regarding the Autonomous University of Nayarit (AUN), it achieved in 2023 an outstanding recognition by participating for the first time in the UI Green Metric ranking, being positioned as a sustainable institution globally and ranking 26th nationally (Universidad Autónoma de Nayarit, 2023).

This ranking comprehensively evaluates university policies, commitments and actions in key areas such as infrastructure, energy, waste, water, transportation and education. Although this achievement demonstrates the university's efforts to consolidate itself as a leader in sustainable practices, the segmentation of its substantive functions of teaching, research, outreach and institutional management is notorious.

This fragmentation has caused the efforts to implement sustainability to have a limited impact, as they lack an integral institutional approach. As Beltrán and Canales (2021) point out, higher education institutions persist with the intention of fulfilling the three substantive functions, but what actually occurs is institutional segmentation aimed at different demanders.

Several authors have pointed out that sustainable development is a multifaceted concept that requires the harmonization of economic, social and environmental aspects, under a holistic approach (Olawumi and Chan, 2018, 2019; Da Silva-Junior et al., 2018). In this sense, Caeiro et al. (2020) state that HEIs are forced to adopt sustainable development through a systemic approach in their operations.

In the context of the Academic Unit of Accounting and Administration (AUAYA) of the AUN, it is relevant to identify the areas and strategies that can contribute to a more effective integration of sustainability.

This would enable the development of comprehensive and coordinated action plans that address sustainability in a holistic manner. However, there are still no studies with this integral approach in the AUAYA.

From a systemic perspective, the adoption of a holistic approach to sustainability in HEIs is presented as a key challenge to achieve an effective and high impact implementation.

Understanding the dynamics and areas of opportunity of the AUAYA in this regard would allow advancing towards a more coherent and transversal integration of sustainability in its substantive functions of teaching, research and outreach. Under this context, the objective of this study is to identify the areas and functional strategies related to the holistic incorporation of sustainability in the teaching and research practice of the AUAYA, in order to contribute to a more informed decision making and thus strengthen the integration of sustainability in a comprehensive manner in the academic unit. Strengths and weaknesses were identified in the four functions of the HEI: teaching, management, research and linkage. One third of the professors pointed out problems in curriculum development and evaluation. The generation and application of knowledge in research, as well as the relationship with society in outreach, were areas of opportunity.

Methodology

The purpose of the research was to identify the functional areas and strategies related to the holistic integration of sustainability in the teaching and research practice of a HEI. It is a theoretical research with descriptive scope. A field research methodology was used, collecting information through a Google form with teachers and researchers of the AUAYA. The quantitative approach predominated in the analysis and synthesis of the information.

As a first step to achieve the research objective, the key functional areas in higher education and their sub-functions were identified, consulting theoretical references from relevant authors and institutions on the subject. Among them, the documents created by the National Association of Universities and Institutions of Higher Education (NAUIHE) were highlighted. Subsequently, the coherence of the identified sub-functions with a holistic vision of sustainable development was evaluated.

This analysis facilitated the design of an instrument that allowed us to gather relevant information from AUAYA professors and researchers. As a final step, the instrument was applied and the functional areas and strategies for informed decision making were identified.

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Functions and sub-functions of higher education

In Mexico, one of the most relevant antecedents on the key functions of higher education that continue to be relevant is found in the documents elaborated by NAUIHE in 1978, entitled "Higher Education in Mexico" and "National Plan for Higher Education" (ANUIES, 1978a, 1978b).

These documents establish the existence of substantive and adjective functions. The substantive functions of higher education are teaching, research and dissemination of culture, while the adjective functions refer to complementary and support services.

In order to identify the sub-functions of Teaching, Research, Cultural Dissemination and Complementary and Support Services, an analysis and classification of each of the strategies and programs (activities) indicated by NAUIHE was carried out. Four sub-functions emerged for each of the aforementioned functions, as follows: Teaching (Curricular development and evaluation; Professional development and teacher training; Teaching and educational and technological innovation; Student support), Research (Generation and application of knowledge; Teaching of extracurricular courses; Training of human resources for research; Liaison with research groups), Dissemination of culture (Mobility, Social service and internships; Follow-up of graduates; Relationship with society in general), Complementary and support services (Administrative management, Academic and research management, Infrastructure and services management; Management of the environment).

Teaching

Objective: Promote a better response of the higher education system to the quantitative and qualitative demands in the training of its students.

Curricular development and evaluation

- To expand and improve attention to the demand for enrollment by strengthening existing professional studies and opening new careers and academic options, in accordance with the requirements and priorities of state, regional and national development.
- To form three higher secondary education subsystems: the first exclusively propaedeutic, the second exclusively terminal and the third with characteristics such that together with the propaedeutic formation it offers training for work. Likewise, efforts will be made to use more flexible curricula for propaedeutic training, so as not to force students to choose a specific baccalaureate prematurely.
- In relation to the admission capacity of each house of studies, apply the principle of academic capacity or competence for higher studies through the rational and objective selection of students, based on their previous knowledge and aptitude for study. In addition, higher education institutions will promote the generation or creation of other educational institutions to meet the expansion of demand as much as possible.
- Linking the productive sector with the professional training system.
- Curricular reforms.
- Development of educational alternatives.
- Unification of the common core of the higher secondary education curriculum, of a propaedeutic nature.
- Post-secondary professional education and short post-baccalaureate careers.

Student support

- Strengthen and broaden vocational guidance activities, with special attention to information services related to the profession, new study options and the conditions of the labor market. Such information should be extended beyond the school environment.
- Vocational orientation.
- Social service for students and interns.
- Scholarship and credit fund and assistance services for students.

Teaching and educational and technological innovation

- Encourage the use of teaching-learning methods and techniques that favor the creative participation of students in their education. This implies, among other things, a thorough strengthening of libraries and teaching equipment and materials.

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- Implementation of new undergraduate and graduate programs.
- Manufacture and distribution of didactic material.
- Development of the library and documentary information system.

Professional development and teacher training

- Establishment of regional units for human resources training and educational research.
- Training and updating of teachers.

Research

Objective: Strengthen humanistic, scientific and technological research in its basic and applied modalities; Extend the activities and fruits of research to all regions of the country; Link research to the solution of social, scientific and technological problems of the country.

Generation and application of knowledge

- To awaken the interest of the country's economic sectors in the basic and applied research that can be carried out in higher education institutions.
- Research planning.

Teaching of extracurricular courses

- Take into account the definition of priority areas, the training of human resources, the growth of infrastructure and the establishment of institutional, regional and national frameworks that guarantee the existence of high quality research and the formulation of development programs to strengthen it.

Training of human resources for research

- Take into account the definition of priority areas, the training of human resources, the growth of infrastructure and the establishment of institutional, regional and national frameworks that guarantee the existence of high quality research and the formulation of development programs to strengthen it.

Linkage with research groups

- National network of specialized units.
- Information system for research.
- Support for scientific and humanistic associations.

Dissemination of Culture

Objective: To complement and expand the functions of teaching and research, disseminating the goods and values of national and universal culture to all social sectors of the country and abroad.

Mobility

- Specialization and updating of personnel for the dissemination of knowledge and artistic manifestations.
- Specialization and updating of personnel for the dissemination of knowledge and artistic manifestations.

Social service and internships

- Improve the material infrastructure and train human resources for the social dissemination of culture.
- Identification and diversification of contents and purposes of cultural dissemination.
- Determination of methods, means and materials for cultural diffusion.
- Coordination of programs for the dissemination of knowledge and artistic manifestations.

Follow-up of graduates

- Promote the creative participation of the individual to whom the programs of cultural diffusion are directed, organizing activities that lead them beyond their contemplative attitude.

Relationship with society in general

- Intensify the non-commercial use of the country's mass media.

After analyzing the objectives, strategies and programs related to the function of Dissemination of culture, it was observed that they are closely related to the concept of "Linkage". For this reason, this function is hereinafter referred to in this document by that term.

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Complementary and Support Services

Objective: To create conditions and provide economic, political, legal and technical means for the institutions to carry out their substantive functions (teaching, research and cultural dissemination) in a systematic manner, both in terms of each institution and in terms of their interactions as a whole, be they state, regional or national in scope.

These are adjective areas: normative, organizational and coordinating, development, budgeting and financing, and follow-up and evaluation.

Administrative management.

- To formally define the rules or norms that will facilitate the relations of the institutions of higher education among themselves, with the State and with the public and private organizations that are considered pertinent.
- Establish structures and mechanisms that favor communication, exchange and concerted action among educational institutions.
- To increase the economic resources destined to higher education, as well as to establish the criteria and procedures to improve the elaboration, financing, management and exercise of the budget.
- To decisively promote institutional planning tasks through the strengthening of existing programs and the creation of planning units where they do not yet exist.
- Expand training and updating programs for personnel dedicated to planning tasks, general administration, academic administration, dissemination and extension, social service, etc.
- Create information units in those institutions that do not yet have them and orient their operation both to support planning and administration tasks, as well as to serve the community.
- Contribution of NAUIHE to elevate university autonomy to constitutional rank.
- NAUIHE' contribution to the legislation on higher education.
- NAUIHE' contribution to labor legislation.
- Inter-institutional agreements of national scope.
- Establishment of institutional planning units for higher education.
- Criteria and procedures for the estimation, allocation and management of federal and state economic resources for higher education institutions.
- National higher education information system.
- National tabulator for academic and administrative personnel of higher education institutions.

Academic and research management

- To formulate the desired future for higher education institutions and the higher education system in a timely and well-founded manner, in accordance with the development model to which the country aspires.
- Apply a rigorous and operative methodology in the permanent follow-up and evaluation of institutional, state, regional and national programs.
- Intensify the provision of recreational services for students and workers of higher education institutions.
- Stimulate the practice of sports among students and workers, giving it the sense of a formative activity.
- Elaboration of diagnoses, plans and programs for higher education institutions.
- Elaboration of monitoring and evaluation programs.
- Recreation and sports.
- Training and updating of academic and administrative personnel.

Management of infrastructure and services

- Support for regional and institutional programs to improve administrative services.

Environmental management

- Linkage with regional development.

It was observed that the objective, strategies and programs analyzed are related to the concept of "Institutional Management". For this reason, this document prefers to use this term to refer to Complementary and Support Services.

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Holistic consideration of sustainable development in HEIs and design of the instrument

According to Hernández-Ayón et al. (2022), sustainable development can be analyzed from four areas: environmental, economic, social and cultural. Since this approach considers all natural and anthropogenic aspects of reality (Pascual Trillo, 2013), this vision of sustainable development is considered holistic.

Based on the above statements, we proceeded to review the relationship of the environmental, economic, social and cultural aspects considered holistic, with the functions of higher education.

The functions of Teaching, Research and Liaison encompass sub-functions that are totally related to social and cultural aspects (D1-V4), given that they have an impact on the holistic formation of students, the advancement of knowledge and interaction with society (Table 1).

On the other hand, the Institutional Management function incorporates economic (G1, G3) and environmental (G4) aspects, such as the efficient administration of technology and resources, as well as the natural environment.

These observations suggest that the functions and sub-functions identified in the analysis consider a holistic vision of sustainability in HEIs, by encompassing aspects that go beyond the purely academic, integrating also social, cultural, economic and environmental dimensions in their institutional work.

Based on the functions and sub-functions identified, an instrument was developed that facilitated the collection of information on the strengths and weaknesses in teaching theory and practice, as well as in research, of AUAYA professors, from a sustainability approach. The quantitative analysis of this information allowed the identification of functional areas and strategies that facilitate more informed decision making.

Box 1

Teaching	D1	Curriculum development and evaluation	S, C
	D2	Professional development and teacher training	S, C
	D3	Teaching and educational and technological innovation	S, C
	D4	Student support	S, C
Research	I1	Knowledge generation and application	S, C
	I2	Teaching of extracurricular courses	S, C
	I3	Training of human resources for research	S, C
	I4	Liaison with research groups	S, C
Liaison	V1	Mobility	S, C
	V2	Social service and internships	S, C
	V3	Follow-up of graduates	S, C
	V4	Relationship with society in general	S, C
Institutional Management	G1	Administrative management	S, C, E
	G2	Academic and research management	S, C
	G3	Management of infrastructure and services	E
	G4	Environmental management	A

Table 1

Holistic consideration of sustainability in the functions and sub-functions of HEIs

Symbology: A: environmental aspects, E: economic aspects, S: social aspects, C: cultural aspects. D1-G4: subfunctions

Source: Own elaboration, based on (ANUIES, 1978b, 1978a).

Results

The opinions of AUAYA professors were gathered from all the academies and academic bodies of the institution. The participants presented 17 themes that reflected strengths in teaching, research and/or professional experience linked to higher education. The topics presented generated a total of 997 comments that addressed both strengths and weaknesses.

These opinions were classified according to the four functions of HEIs: teaching, research, linkage and institutional management (Table 2).

Box 2

Function	Ratio
Teaching	32%
Research	22%
Liaison	22%
Institutional Management	24%

Table 2

Functions of Higher Education Institutions

Source: Own elaboration.

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From the point of view and experience of the participating professors, and considering a sustainability approach, the opinions were related to a greater extent to teaching functions (32%), followed by institutional management (24%). Proposals related to research and outreach had the same proportion (22% each).

Teaching

The teaching functions in turn obtained the following percentages (Table 3):

Box 3

Teaching Subfunctions	Ratio
D1. Curriculum development and evaluation	34%
D2. Professional development and teacher training	18%
D3. Teaching and Educational and Technological Innovation	20%
D4. Student support	17%

Table 3

Proposals made to the Teaching sub-functions

Source: Own elaboration.

The largest number of proposals (34%) were related to curricular development, study plans and programs, as well as evaluation in general. Opinions related to teaching at different levels and systems reached 20%, followed by professional development with 18% and tutoring programs with 17%.

Research

Research functions reached the following percentages (Table 4):

Box 4

Research Subfunctions	Ratio
I1. Knowledge generation and application	57%
I2. Delivery of extracurricular courses	1%
I3. Training of human resources for research	17%
I4. Linkage with research groups	25%

Table 4

Proposals made to the Research sub-functions

Source: Own elaboration.

Among all the proposals, those related to the generation and application of knowledge stand out, representing 57%. Likewise, the opinions related to linkage with research groups reached 25%. On the other hand, the low number of observations related to the teaching of extracurricular courses is notorious.

Liaison

The proposals related to the Liaison functions reached the following percentages (Table 5):

Box 5

Liaison sub-functions	Ratio
V1. Mobility	15%
V2. Social service and internships	22%
V3. Follow-up of graduates	12%
V4. Relationship with society in general	51%

Table 5

Proposals made to the Liaison sub-functions

Source: Own elaboration.

Sub-functions related to society in general, including outreach, accounted for 51% of the comments. These were followed by proposals related to social service and professional internships, which accounted for 22%. Mobility and graduate follow-up had a similar participation, with 15% and 12%, respectively.

Institutional management

The proposals related to the institutional management functions obtained the following percentages (Table 6):

Box 6

Institutional management sub-functions	Ratio
G1. Administrative management	34%
G2. Academic and research management	33%
G3. Infrastructure and Services Management	15%
G4. Management of the environment	17%

Table 6

Proposals made to the Institutional management subfunctions

Source: Own elaboration.

The majority of the proposals made by the participating teachers (34%) considered administrative management as a key sub-function for the improvement of higher education at AUAYA. These were followed by comments related to academic and research management, which represented 35%. Finally, suggestions made to the management of the environment represented 17%, while those related to the management of infrastructure and services were 15%.

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Conclusions

The research conducted allowed us to evaluate the integration of sustainability in the teaching and research practice of the AUAYA, from a holistic approach. To achieve this, the following steps were carried out: 1) Key functions and sub-functions in higher education that considered a holistic view of sustainability were identified, and an instrument was designed for the collection of information. 2) The opinion of professors on the strengths and weaknesses of AUAYA's teaching and research practice was obtained.

From a quantitative approach, functional areas and sub-functions related to the holistic incorporation of sustainability were identified to contribute to more informed decision making.

In this regard, 1 out of 3 AUAYA professors indicated that most of the problems and/or areas of opportunity are found in the teaching functions, above research, outreach and institutional management. The above coincides with what Beltrán and Canales (2021) point out in their study "Teaching at the higher level in the last three decades in Mexico", where they point out that, in higher education institutions it is more frequent that teaching activity is underestimated, that is to say, that it is the function in which it is least fulfilled.

The focus on the teaching function, therefore, is key to achieving the organization's objectives.

Within the teaching functions, curriculum development and evaluation of higher education in general were identified as deficient sub-functions and/or with greater opportunities for improvement. In this also agrees with the study conducted by (Beltrán and Canales, 2021).

Regarding research sub-functions, those linked to the generation and application of knowledge were considered highly relevant and a priority for the quality of higher education at the AUAYA. It is also noteworthy that extracurricular courses for students and teachers are given very infrequently, which may mean that, in general, in the organization, these extracurricular courses satisfactorily meet the requirements of the teaching staff.

This is congruent with what is pointed out by Rodríguez-Varela et al. (2015: 55) in their study *The current challenges of educational institutions in the area of management*, where they state: "Higher Education Institutions have great challenges such as the generation of knowledge, training of comprehensive, competent professionals with values, ...".

A significant proportion of the linkage functions in higher education refer to relevance, and another to the dissemination and diffusion of knowledge. In relation to relevance, Fernández-Fassnacht (2017) points out that, in order to meet the expectations established by society, higher education institutions must establish solid connections with the environments that surround them.

In this sense, within the AUAYA's linkage functions, the sub-function of relationship with society in general is the one that is shown as the area with the greatest need of attention for improvement.

The sub-function that encompasses social service and professional practices is presented as the second area of opportunity for the improvement of higher education in the organization.

Management functions, also called adjective functions, play a key role in higher education.

They provide support to the substantive functions in the normative, organizational and coordination, development, budgeting and financing, monitoring and evaluation fields, among other complementary areas (ANUIES, 1978b). Among these management functions, administrative, academic and research functions are considered essential sub-functions in the improvement of higher education at the AUAYA.

Key to the achievement of AUAYA's organizational objectives is the strengthening and refocusing of leadership in the administrative areas in charge of carrying out these functions. Furthermore, the management of the environment, mainly related to the care of nature, was considered more relevant than the management of infrastructure and support services.

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In addition to the above organizational contributions, the functions and sub-functions identified provide an integral vision of higher education, as well as a holistic approach to sustainability.

In other words, they constitute a theoretical proposal of key variables for the holistic study of higher education from a sustainability perspective. This proposal can be used for the evaluation of other aspects of higher education.

Conflict of interest

The authors declare no interest conflict. They have no known competing financial interests or personal relationships that could have appeared to influence the article reported in this article.

Authors' Contribution

Hernández-Ayón, Francisco Javier: Contributed to the project idea, research method and technique. He supported the design of the field instrument. He carried out the data analysis and systematisation of results, as well as writing the article.

Figueroa-Verde, Brenda: Contributed to the project idea, research method and technique. She supported the design of the field instrument. She carried out the data analysis, as well as writing the article.

Arvizu-Narváez, Ana Carolina: Contributed to the project idea, research method and technique. She supported the design of the field instrument. She also worked on the writing of the paper.

Navarrete-Méndez, Adrián: Contributed to the project idea, research method and technique. He carried out the data analysis and systematisation of results, as well as writing the article.

Availability of data and materials

All data were derived from the opinions provided by the participating professors.

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Abbreviations

AUAYA	Academic Unit of Accounting and Administration
HEI	Higher Education Institutions
NAUIHE	National Association of Universities and Institutions of Higher Education
SDG	Sustainable Development Goals
AUN	Autonomous University of Nayarit

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Article

Developing 21st century skills: A proposal for a didactic sequence with a STEAM approach and active methodologies for basic education students in the Mexican Southeast

Desarrollando habilidades del siglo XXI: Una propuesta de secuencia didáctica con enfoque STEAM y metodologías activas para alumnos de educación básica en el Sureste Mexicano

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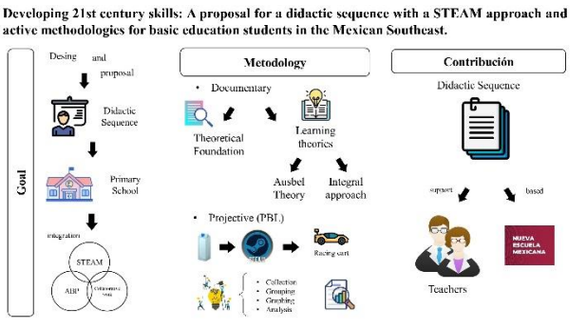
Abstract

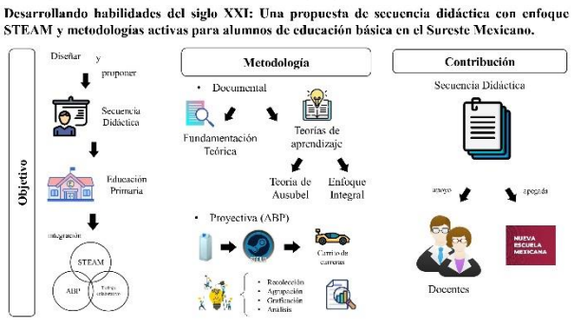
The objective of this article is to develop a didactic sequence to work on teaching in the classroom, comprising successive activities in order to teach educational content in basic education, in the context of a rural school in the Mexican Southeast; based on the theories of David Ausubel and adapting the model of a didactic sequence with a comprehensive approach; integrating Project Based Learning (PBL) and Collaborative Work with the STEAM methodology. This didactic sequence will be useful as a planning instrument for Basic Education teachers to improve their educational practice by making use of transversality between subjects so that the student can transfer learning to their environment and daily life, as well as reflect. on their actions and have the ability to make proposals for improvement.



Teaching proposal, STEAM, Comprehensive Approach

Resumen

El presente artículo tiene como objetivo elaborar una secuencia didáctica para trabajar en el aula la enseñanza, comprendiendo actividades sucesivas con el fin de enseñar un contenido educativo en educación básica, en el contexto de un escuela rural del Sureste Mexicano; fundamentada en las teorías de David Ausubel y adaptando el modelo de una secuencia didáctica con enfoque integral; integrando el Aprendizaje Basado en Proyectos (ABP) y el Trabajo Colaborativo con la metodología STEAM. Esta secuencia didáctica le será de utilidad como instrumento de planeación a los docentes de Educación Básica para mejorar en su práctica educativa haciendo uso de la transversalidad entre asignaturas para que el estudiante logre realizar la transferencia del aprendizaje a su entorno y vida diaria, así como reflexionar sobre su actuar y tener la capacidad de realizar propuestas de mejora.



Propuesta didáctica, STEAM, Enfoque Integral

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Introduction

Since its inception in 2000, the Programme for International Student Assessment (PISA), an assessment conducted by the Organisation for Economic Co-operation and Development (OECD), measures student performance in reading, mathematics and science. According to the results of the latest PISA test (OECD, 2023), in the case of Mexico, the educational performance of Mexican students is below the international average.

These results indicate that there is still a very marked gap in educational performance between Mexico and OECD countries, as no Mexican student was considered a high performer, especially in Mathematics. Therefore, there is a need to improve the quality of education and reduce educational inequalities to ensure that all students have the opportunity to acquire the skills and knowledge that are critical for long-term academic success from the earliest years of school.

Given the need to improve educational performance in Mexico, it is crucial to awaken students' interest in mathematics, science and technology from an early age. To achieve this, it is necessary to transform current educational content, adapting it to an increasingly interconnected world that demands skills that schools are not adequately developing.

It is essential to design educational activities that allow students to acquire basic skills in STEAM (Science, Technology, Engineering, Art and Mathematics) disciplines through active teaching methodologies.

These methodologies include Project Based Learning, Problem Based Learning, Inverted Classroom, Gamification and Cooperative Learning, among others. Implementing these strategies will not only foster greater interest in key areas of knowledge, but will also prepare students to face the challenges of the future with practical and relevant skills.

For this reason, education today requires new teaching methodologies to prepare students for an increasingly complex and changing world, largely due to technological progress, so that they acquire the knowledge and skills to face the challenges of the 21st century (Díaz, 2023).

In this context, STEAM (Science, Technology, Engineering, Arts and Mathematics) methodology emerges as an innovative strategy that seeks to integrate these disciplines in a cross-cutting and interdisciplinary manner to promote the development of skills and competences in students through the development of learning projects (Santillán-Aguirre et al., 2020). In this sense, the implementation of active teaching methodologies integrated with STEAM, such as Project Based Learning (PBL), as well as Collaborative Work, have become an effective strategy to promote meaningful learning and the development of skills in students, in addition to fostering critical thinking, creativity and teamwork in students (Castro, 2022, Cifuentes Piedrahita et al., 2022).

For García-Varcálcel, Muñoz-Repiso and Gómez-Pablos (2017), one way to implement these active learning methodologies is through Project Based Learning, which benefits and facilitates students to work proactively and collaboratively, based on conversations between participants.

In a study by Vargas, Vega and Morales (2020) proposed the application of Project Based Learning (PBL) through Information and Communication Technologies (ICT) to overcome difficulties in learning mathematics and focus on basic operations in sixth grade students in public schools in Colombia with learning difficulties in three skills: concepts, logical reasoning and solution operations; they conclude that PBL and ICT are excellent learning strategies for students with learning difficulties to acquire mathematical knowledge.

For the integration of STEAM with the active methodologies mentioned above, it is necessary to integrate them into a didactic sequence or learning sequence; according to Zavala (2008), a learning sequence is an ordered, structured and clear set of activities to achieve an educational objective with a starting point and an end point.

Objective

The objective of this article is to design and propose a didactic sequence in the context of a school in Southeast Mexico based on the theories of David Ausubel with the adaptation of the model of a didactic sequence with an integral approach.

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This didactic sequence integrates Project Based Learning (PBL) and Collaborative Work with the STEAM methodology, focused on the topics of basic statistics present in the new textbooks of the Ministry of Public Education (SEP).

Methodology

The methodology used is documentary, because it requires the search, analysis and interpretation of different sources, in this case to establish the theoretical foundation. It is also projective, since it requires the creation, design and elaboration of a specific project; in this case it is the development of a didactic sequence.

For Yuni and Urbano (2014) cited in Meleán et al., (2020), 'documentary research is based on the search, critical analysis and interpretation of secondary data in bibliographic sources, articles, videos, films, among others' (p. 951). For Hurtado (2010) cited in Meleán et al., (2020), 'projective research consists of the elaboration of a proposal that can lead to the solution of a problem' (p. 951).

Results

Theoretical foundation

The proposal of a didactic sequence comprising successive activities in order to teach an educational content in basic education is based on the theory of David Ausubel and adapting the model of a didactic sequence with an integral approach (Barraza, 2020).

Ausubel (1968, as cited in González et al. 2022) proposed that knowledge has a hierarchical structure that can be reorganised and prioritised through meaningful learning.

This is why a person, based on reflections on new knowledge and other psychological processes, begins to take a new position on certain issues or change their perspective on a general level based on how they perceive the environment. In the field of education, we assume that infants, regardless of their age, already carry with them a comprehensive set of prior knowledge that they acquire from various sources when they first enter the classroom, and will eventually consolidate and apply the knowledge acquired during their academic training.

Ausubel proposes meaningful learning, which consists of acquisition by relating new information to the previous knowledge that the subject has in his or her memory. In this sense, Contreras Oré, (2016) mentions that, 'this substantive and non-arbitrary incorporation produces an interaction between the new and the presence of ideas, concepts and propositions that are clear and available in the mind of the learner, which precisely endow the new content with meaning' (p. 132); that is, meaningful learning occurs when something is already known, involves acquiring a new meaning and allows transferring it to new problem situations (Meleán et al., 2020).

Ortiz et al., (2020) propose a learning sequence model with an integral approach that combines three aspects that they consider necessary in the formation of students, from the ability to feel the feeling of a satisfied and happy person, to the ability to think and act creatively.

That is, a person, despite adversity, is able to find solutions to his or her problems and those of society, his or her actions are guided by universal values and he or she is recognised as a capable person, aware of his or her abilities and limitations.

To achieve this goal, teachers should consider planning and organising a series of activities in a logical way to guide students along this path, using diverse and transversal learning resources, supporting teamwork, encouraging assessment activities and using problems that involve students in transferring learning both to their environment and to their everyday life, as well as questions that allow students to reflect on their own behaviour and the ability to suggest improvements as mentioned by Ortiz et al.

The didactic sequence

A learning sequence or didactic sequence is a set of activities designed by the teacher to organise the learning situations that students will develop mainly in the classroom, but also outside it.

Díaz-Barriga (2013) defines a learning sequence as an ordered series of learning activities that the teacher plans to use students' prior knowledge. When students learn a topic, they connect it to contextualised real-world problem situations to make the information meaningful to them.

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The learning sequence cannot be limited to solving routine exercises or applying simple formulae as a recipe, it requires students to engage in problem-solving activities, relate their knowledge to previous experiences and pose real-life problems and information.

Likewise, Díaz-Barriga (2013) proposes three types of activities: opening, development and closing, so the didactic sequence implemented was designed based on these activities indicated by the author, for each selected topic.

Given the theoretical foundations, this article proposes a didactic sequence that includes both the theoretical foundations of Ausubel and the adaptation of the didactic sequence model with an integral approach of Ortiz et al., (2020), which also integrates STEAM with active learning methodologies, Project Based Learning and Collaborative Work.

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In the proposed didactic sequence, the objective is for students to acquire knowledge and skills to measure, collect, graph and analyse data, in accordance with the basic statistics topics found in the new textbooks of the New Mexican School (NEM). To do so, students will build a race car from a Tetra Pak carton, measure the distance travelled by the constructed car, organise the data from the measured distances, graph the data and analyse the graphs obtained.

The proposed didactic sequence is developed over 15 sessions; integrating Project Based Learning (PBL) and Collaborative Work with STEAM methodology; the didactic sequence is structured in three phases: Beginning, Development and Closing. The following is a description of the activities carried out in each of the sessions, as well as the resources and materials used.

Start phase:

At the beginning of the activity, teacher intervention is suggested, which is considered important because with teacher intervention, students can make connections between what they know and new learning, for which the teacher will use different strategies, both descriptive and comparative.

These might include meaningful questions or other problem situations designed to allow students to draw ideas from their own cognitive structures from everyday experiences or previous learning in school and discuss them with peers and teachers (Meleán et al., 2020).

The Start phase takes place in sessions 1 to 4, and aims to present the challenge to the students, form the collaborative teams and define the project to be developed.

Session 1: Diagnosis. In this session, an evaluation instrument (test) is applied to find out the students' previous knowledge on the topic of measurement, data collection and analysis. The classroom and an evaluation instrument developed by the researchers are used.

Session 2: Starting point. In this session, the challenge is presented to the students through a PowerPoint presentation, in which some questions are shown to find out what they know about the topic and to motivate them in the development of the project. A computer, a projector and the classroom are used.

Session 3: Formation of collaborative teams. In this session, students are organised into working teams of 3 or 4 members, and each team is assigned a name. The classroom, a blackboard and markers are used.

Session 4: Defining the final challenge. In this session, the activities that the students will have to carry out during the development of the project are defined, such as the construction of the trolley, the measurement of the distance travelled, the organisation and analysis of the data obtained. A PowerPoint presentation, a computer, a projector and the classroom are used.

Development Phase:

Development activities aim to allow students to interact with new information through activities that add meaning and significance to the information.

The Development phase consists of sessions 5 to 14, and aims at building the race cart, measuring, collecting and analysing data obtained from experimenting with it.

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Session 5: Organisation and planning. In this session, students in teams define a role for each of the following activities: drawing the design of the racing trolley, organising the materials for the construction, building the trolley and decorating the constructed trolley. The classroom, a computer, a PowerPoint presentation, a projector, white paper, pencil and coloured pencils are used.

Session 6: First exchange of ideas. In this session the students, organised in teams, exchange ideas for the construction of the racing trolley to make it functional and eye-catching. The classroom is used.

Session 7: Searching for and collecting information. In this session, with the help of a family member (dad, mum or older siblings), each team member conducts a search for information on how to build a racing trolley from a Tetra Pak carton and other recycled materials. They also find out how to measure the distance travelled by the trolleys, how to organise the distances in a table and how to make a graph with the data in the table. Students work on this at home.

Session 8: Analysis and synthesis. In this session, according to the research done by each of the team members, the information is shared, discussed and decisions are made for the construction of the racing trolley; they draw their prototype. The classroom is used.

Session 9: Production. In this session, students organised in teams use their creativity to build and decorate a racing cart, which is fast enough to cover a longer distance, based on the roles assigned beforehand. They use a Tetra Pak container, 4 screw caps, 2 plastic straws, 2 skewer sticks, 5/16' electric silicone gun, silicone sticks, pencil-type soldering iron, mini comfort grip tweezers, scissors, cutter, classroom, acrylic paints (different colours), colouring board, paintbrushes.

Session 10: Carrying out tests. In this session each team performs the tests (5 attempts) with their constructed trolley, they measure the distance travelled in each attempt, collect the distance of each attempt in their notebook. They use the constructed racing cart, track, tape measure, notebook, pencil, eraser.

Session 11: Second brainstorming session. In this session the students organised in teams exchange ideas for a second time to make improvements to the constructed cart in order to make it go further. The classroom, a blackboard and markers are used.

Session 12: Implementation of the improvements. In this session, after brainstorming with their team, the students proceed to make the improvements. The classroom and the necessary materials are used to make the improvements.

Session 13: First teacher intervention. In this session the teacher teaches students how to organise data in tables and how to graph them for analysis. The blackboard, markers and classroom are used.

Session 14: Competition between teams. In this session each team with their constructed cart competes with the other teams in a single attempt, they collect the distance of each team in their notebook. They use the constructed racing cart, track, measuring tape, notebook, pencil, eraser.

Session 15: Second teacher intervention. In this session the teacher teaches the students how to organise data in tables and how to graph them in Microsoft Excel, in order to analyse them.

The, blackboard, computer, projector, tablets with Microsoft Excel, markers, classroom is used.

Closing phase:

This last phase can be an event where students present their work in a group and teachers are advised to describe the context in which the work is presented, e.g. whether it should be concluded in a plenary group, or involve parents or the whole school community.

The Closing phase takes place in session 16 and 17 and aims at presenting the final project and evaluating the learning acquired.

Session 16: Presentation of the project and evaluation. In this session each of the teams presents their final project in a public way, sharing experiences on how they improved their trolley and on learning about measuring, organising, graphing and analysing data. The classroom is used.

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Session 17: Application of the instruments. An evaluation instrument is applied to measure the learning acquired by the students during the development of the project and a survey is carried out to know the perception of the students about Project Based Learning and Collaborative Learning. Data collection instruments, pencil, eraser, classroom are used.

Conclusions

The proposal presented overcomes the traditional predominantly expository model for another, where the student is the protagonist of his own learning. Because a didactic sequence was generated for the development of learning schemes in the subjects of basic statistics for primary education, which was based on a literature review where the elements and strategies that were considered most appropriate were selected, taking as a basis Ausubel's theories of meaningful learning and the model of didactic sequence with an integral approach.

The didactic sequence included elements such as cooperative learning through the construction of a racing car from a Tetra Pak carton, which can enable the student to develop the necessary competences to face real-life problems.

The didactic sequence proposal presented aims to enable teachers to conduct courses that, in addition to taking into account the students, their needs and interests, also focus on the fundamental aspects of a complete, responsible and lasting education so that students are able to accept new challenges and work in teams to help others and society; that despite the heterogeneity that may exist in the classroom, it is important that the sequence is inclusive and that cooperative learning groups can be integrated.

With this, teachers will be able to enrich their teaching work through transversal activities (this was one of the reasons for adapting the integral approach in the proposal), in addition to having learning resources that stimulate the interest and motivation of students, and using reflective questions in which students analyse, think and reflect. The latter requires teachers to be trained in STEAM methodology in order to impart knowledge focused on the acquisition of competences, guiding students through any process.

This involves optimising the use of time, as well as planning activities in order to create a positive and motivating learning environment that can encourage students to continue progressing towards new goals.

Annexes

The proposed didactic sequence is attached at the end of the article.

Declarations

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that could have influenced the article reported in this paper.

Authors' Contribution

Trejo-Trejo, Gilberto Abelino: Contributed with the project idea, methodological approach, research design and writing; review of the theoretical background, literature review to define the model of the Didactic Sequence proposal, design of the Didactic Sequence proposal and writing of the article.

Domínguez-Gutú, Jesús: Contributed to the review of the theoretical foundation, literature review to define the model of the Didactic Sequence proposal, the methodological approach and writing of the article.

Gordillo-Espinoza, Emmanuel: Contributed to the literature review to define the model of the Didactic Sequence proposal and revision of the article.

Constantino-González, Fernando Exiquio: Contributed to the design of the Didactic Sequence proposal and revision of the article.

Availability of data and materials

The Escuela Primaria Rural Marcos Villanueva López made available the data and materials for the development of the teaching sequence.

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Abreviaturas

OCDE	Organisation for Economic Co-operation and Development
PISA	International Student Assessment Programme
STEAM	Science, Technology, Engineering, Arts, Arts, Mathematics
ABP	Project Based Learning
SEP	Ministry of Public Education
NEM	New Mexican School

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Annexes

Proposal of the didactic sequence			
School:			**School year:**
Teacher:			
Subject: Our knowledge	**Grade: 4th**.	**Group:**	**Her:** Measurement, data collection and analysis.
Competition	Students acquire knowledge and skills to measure, collect, graph and analyse data through Project Based Learning (PBL) and Collaborative Work using STEAM methodology.		
Expected Learning	Students will construct a racing trolley from a Tetra Pak carton, measure the distance travelled by the constructed trolley, organise the data from the measured distances, plot the data and analyse the graphs obtained.		
Materials, equipment and resources	1 litre Tetra Pak containers, screw cap, plastic straws, 30 cm bamboo skewer stick, 5/16" electric silicone gun, silicone sticks, pencil soldering iron, mini comfort grip tweezers, scissors, 6' cutter, 100 ml red acrylic paint, 100 ml black acrylic paint, 100 ml white acrylic paint, 100 ml yellow acrylic paint, 100 ml white acrylic paint, 100 ml acrylic paint blue, flat wooden paintbrush #2, whiteboard marker, small plastic caps (to make colour combinations), projector, tablet or smartphone, laptop, software (Excel), colour chart, flexometer or tape measure, notebook, pencil, coloured pencils, eraser, classroom, chart to generate a slope, extension cords, etc.		
Mainstreaming	Using STEAM methodology and active teaching methodologies, topics from the content of the new textbooks will be integrated into the development of the project. **Science).** - Students will gain new knowledge through observation, measurement, experimentation, analysis and modification during project development. **(Technology).** - Students will use ICT in education, through the use of Microsoft Excel. **(Engineering).** - Students will build a racing cart with the appropriate tools and recycled material. **(Arts).** - Students will design and decorate the race cart for the competition. **(Mathematics).** - Students will measure, organise and graph the distances travelled by the trolleys. - Students will analyse graphs for decision-making.		
Learning model	Learning through the STEAM model with active methodologies: Project Based Learning (PBL) and Cooperative or Collaborative Learning.		
Role of the teacher ● Guiding students in the development of activities. Giving students a leading role in the construction of their learning. Being aware of the achievements of the students. ● Acting as a guide or facilitator of learning when learners need it. The main role is to provide learners with a variety of learning opportunities. Helping your learners to think critically by guiding their reflections and asking important questions.		**Role of the student** Taking responsibility for learning. ● Work with different groups and manage any conflicts that arise. Have a receptive attitude towards the exchange of ideas with peers. Share information and learn from others. Be autonomous in learning (seek information, contrast it, understand it, apply it, etc.) and know how to ask for help and guidance when needed. Have the necessary strategies to plan, monitor and evaluate the steps they take in their learning.	

Didactic Sequence integrating PBL and Collaborative Work					
Sessions		**Project phases**	**Resources and materials**	**Description of activities**	**Weather**
Home	1	**Diagnosis.**	Assessment instrument (test), classroom.	Apply the diagnostic test, prepared by the teacher, to find out previous knowledge on the topic of measurement, data collection and analysis.	60 minutes
	2	**Starting point.**	PowerPoint presentation, computer, projector, classroom.	A PowerPoint presentation shows some questions to find out what they know about the topic: measurement, data collection and analysis, as well as to arouse the interest and motivation of the students in the development of the project of building a racing trolley with recycled material from a Tetra Pack. The questions could be the following: - What do you understand by measuring or metering? - What do you understand by data? - What do you understand by collecting data? - How do you think data is analysed?	30 minutes
Development	2	**Starting point.**	PowerPoint presentation, computer, projector, classroom.	- How do you think data is analysed? - How do you build a trolley with a Tetra Pak package? - How do you make the cart you build go the longest distance and win the competition? - How can we know which car will win the race? - How can the distance travelled by the constructed trolley be measured? - How can the distances travelled by the trolleys be organised? - How can the distances travelled be graphed? These questions should be posed to the students for them to answer and brainstorm.	30 minutes
	3	**Collaborative team building.**	Teacher, students, classroom, blackboard, markers.	Organise the students into teams, preferably of 3 or 4 members. Each team should be given a name consisting of a single word, e.g. Friends, Hares, etc. Write the names of the teams and their members on the board.	30 minutes
	4	**Defining the final challenge.**	PowerPoint presentation, computer, projector, classroom.	Students should: - Build a racing trolley from a Tetra Pak carton. - Measure the distance travelled by the constructed trolley. - Organise the data from the measured distances. - Graph the data. - Analyse the graphs obtained.	30 minutes
	5	**Organisation and planning.**	Teacher, computer, PowerPoint presentation, projector, classroom, white paper, pencil, coloured pencils, eraser, pencil sharpener.	The students in teams should define a role for each of the following activities: - Draw the design of the racing cart. - Organise the materials for the construction. - Construction of the trolley. - Decorate the constructed trolley..	30 minutes
	6	**First exchange of ideas.**	Teacher, collaborative teams, classroom	Students organised in teams should brainstorm ideas for the construction of the racing cart to make it functional and eye-catching.	30 minutos
	7	**Search and collection of information.**	Teacher, collaborative teams, classroom	With the help of a family member (dad, mum or older siblings), each team member will search for information on how to build a trolley from a Tetra Pak carton and other recycled materials. In addition, how to measure the distance travelled by the trolleys, how to organise the distances in a table and how to make a graph with the data in the table. In the student's notebook, the process of building a racing trolley should be written down.	Task
	8	**Analysis and synthesis.**	Teacher, collaborative teams, classroom.	Based on the research of each of the team members, they should share information, discuss and make decisions for the construction of the racing cart.	30 minutes

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Article

The importance of Netnography as a research methodology

La importancia de la Netnografía como una metodología para investigar

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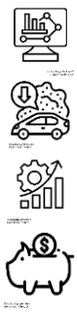
Abstract

In the post-COVID-19 era and faced with the necessary changes in research and its methodological processes, new ways of doing research are emerging, as well as the use of methodologies that are in line with the current times. Today's researchers are faced with this challenge that motivates them and demands a new way of doing research and responding to society with new elements, thus new approaches emerge, especially in education, abandoning the face-to-face approach and moving towards virtual education where distances become shorter through a medium or device. Netnography emerges from the need for a way to interact in a globalized world, where one can be in different spaces at the same time, with different means, and it becomes necessary to investigate in order to understand the virtual as a continuation of reality. In this paper, Netnography is theorized as a new methodology for research and an exercise is proposed where its value and usefulness in the current moment is appreciated.

The Importance of Netnography as a Research Methodology		
Objectives	Methodology	Contribution
Innovation in the approach to methodological practice. 	Qualitative research and text analysis. 	The theorization of Netnography as a new methodology for research, and an exercise is proposed to demonstrate its value and usefulness in the current moment. 

Netnography, Virtual, Discourse, Virtual Restricted

Resumen

Hoy en postpandemia del COVID-19, y ante los cambios necesarios en la investigación y sus procesos metodológicos van surgiendo nuevas formas para hacer investigación, así como la utilización de metodologías que vayan de acuerdo con el momento que se está viviendo. Los investigadores actuales se ven ante esta problemática que los motiva y exige una nueva forma para hacer investigación y dar respuesta a la sociedad con nuevos elementos, emergen así nuevos planteamientos sobre todo en la educación abandonando lo presencial y cambiando a la educación virtual donde las distancias se vuelven cortas a través de un medio o aparto. La Netnografía surge ante la necesidad de una forma de interaccionar en un mundo globalizado, donde se puede estar en diferentes espacios al mismo tiempo, con diferentes medios y se hace necesario investigar para poder entender lo virtual como la continuidad de la realidad, en el presente escrito, se teoriza sobre la Netnografía como una nueva metodología para investigar y se plantea un ejercicio donde se aprecia su valor y su utilidad en el momento actual.

La importancia de la Netnografía como una metodología para investigar		
Objetivos	Metodología	Contribuciones
La innovación sobre el planteamiento del quehacer metodológico 	Investigación cualitativa y análisis de textos 	La teorización sobre la Netnografía como una nueva metodología para investigar y se plantea un ejercicio donde se aprecia su valor y su utilidad en el momento actual 

Netnografía, Virtual, Discurso, Virtual restringido

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Introduction

The digital era in the world has caused a transformation of communication and the dilution of many aspects of life as Bauman (2005) says, modernisation and globalisation have made our positions and ways of life liquid, going from a state where nothing changes or solid and traditional.

These transformations force today's society to update its way of seeing the world and interpreting it, because when the human being generates a new culture such as cyberspace, it is an act of creation of the human being and this is culture where he recreates and creates, where he manifests needs and seeks to find answers for others who in some way coincide in their searches. Seeing reality combined with the virtual where it is possible to negotiate, learn and predict situations in society is the new task that those of us who do research in society have to take on, trying to interpret and understand what is happening in this digital era we are living in.

This also creates the need to be able to carry out research in this virtual environment or in cyberspace, which when we try to understand it, we take it to reality, and this forces the educational area to work in this field of cyberspace by applying a new methodology that has been called Netnography.

Netnography is a new discipline that will depend a lot on the research carried out to position it as a new methodology, which studies the relationships that occur and manifest themselves in cyberspace.

The purpose of this paper is to theorise about Netnography, its importance, its methodology and an application exercise.

Development

What is Netnography?

For me, Netnography is a new research method to know what happens in virtual communities and the way in which people interact in Internet spaces, through this medium and space, I can realise that, not only different languages can be observed and listened to, but also that these can be recreated and attitudes can be created and through them preferences can be deduced, because this methodology is born from marketing.

Netnography is assumed as a qualitative method to study and investigate what there is and exists in cyberspace and that allows it to be studied, reflected upon and made known.

Other contributions that have been made about Netnography are some words such as; cyberculture, new ethnography, virtual reality, online tools, research method, among others, this new way of life with the digital era and cyberspace has collaborated, so that society is building a new culture, where through an electronic medium can interact with other beings who communicate by similar means, talk about the conception of cyberspace, with the introduction of the internet and the creation of sites outside our physical reality and built by humans in meeting spaces through a medium has started a culture.

So it can be said that cyberspace is a cultural creation and from this point of view it is necessary to study it, because in some way it leaves its mark and it is necessary to study it, because it also presents other opportunities such as; actions, reflections, making agreements, work proposals, among others, so it can be understood:

- Netnography is a new method of investigation of virtual spaces, it is in the process of expansion and theoretical and methodological formulation.
- Netnography establishes a particularisation of the application of ethnography in studies of Internet experiences.
- The main orientation of Netnography was born in the study of the consumption habits and preferences of the products and services that virtual communities demand in their interaction relations.

The construction of this new discipline implies knowing who will do research in this field, and who will be most obliged to do this type of study, thus generating the creation of a new field of research that is building a culture.

How has research culture been transformed in the digital age?

Culture is a human act of creation, which makes it necessary to review it to see what is being said, what is being thought, and where is it going?

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And as is to be expected, it is those who do research who can carry out these studies which show what is happening with this culture, as the current conditions with the pandemic have accelerated the forms of use of cyberspace, reaching even the educational processes in schools.

A new culture in the use of these spaces. By doing research in cyberspace, the researcher also develops other skills that he/she did not have before, which makes him/her more capable of studying the little studied.

However, we want to state that this culture is not yet general, because if there are 7000 000 000 inhabitants on the planet and if only 15% of the population participates in cyberspace, it is not a general culture, so we propose to call it a restricted culture in expansion, until the general population of 80-90% manifests itself, we will be talking about a universal culture of cyberspace.

This does not mean that it is not necessary to investigate, but rather that the culture, being generalisable, will become a universal culture.

Netnography in culture manifests itself in a multidisciplinary way, because it is carried out in remote contexts, it is transformed by a digital culture that is underway among researchers, because nowadays much of the education that is given is virtual, because the digital era has created new forms of interaction, generating new forms of coexistence.

What is the identity and role of the researcher in virtual contexts?

The researcher will always be a researcher, but the virtual world provides another opportunity to understand the current world, such as the new ways of researching society in its forms of interaction in spaces created for its own benefit. The digital era has generated new research spaces which the researcher must review, by studying virtual spaces a different culture is generated in the researcher to that which he/she carries out on a daily basis, by studying cyberspace the researcher opens up the opportunity to know and understand the multiculturalism that exists in society and can come to understand the multidimensionality that society lives in.

In this process, it is necessary to create a culture of respect for cyberhumanism, understood as the use of the media and virtual spaces, not to see a fight against them, but to take advantage of them and obtain all the benefits they can provide us with to get to know the different social realities and enter into hypercyberhumanism understood as that whole, of which one is a part and the interactions that are lived in society, elements that constantly confront the human being in the virtual space of which he is a part when interacting in this way.

It is important to be careful not to abuse the information in these spaces, as there are also bad practices in these spaces.

Pointing out that there is a need for more research in this field since it exists and is expanding day by day, elements that researchers should consider for the study of science since this culture is in formation, there are great challenges that we face in virtual spaces such as social interactions, games, agreements, messages, there is a language and a transformation of this.

What will be the criteria to consider the construction of knowledge in a virtual environment?

In this sense to study them is the researcher who must or define what is understood as ‘virtual space or cyberspace’ the different virtual spaces, such as; images, audio, video, multimedia environments, blogs, microblogging, podcasts, the first forms of social software (Del Fresno 2011, 47) as well as the forms with which knowledge will be built a methodology, the characteristics is something that identifies, in that sense you can build networks, collaborative work, the formation of groups, the methodology in common among others, that leads us to propose:

- That we should not abuse this method, because we can lose the humanism and the direct attention to the participants.

How Netnography is considered a methodology under construction?

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It is necessary to mention that in cyberspace or virtual reality is the encounter and re-encounter between different entities, where there are spaces of uncertainty, because it is not really known if what is said is a truth and that physically can be demonstrable, but that there is, seen from the vision of Miguel del Fresno, this continuous relationship of social reality with the virtual can interact as a continum (2011,36). However, it cannot be said that it is a constant and general continuum as there is a restricted virtual relationship because it will only reach those who have the means to be able to enter these spaces such as devices, permissions, network authorisation.

It is considered that Netnography studies restricted spaces that are connected to reality, where it is necessary to conceptualise these spaces in reality and theorise about these places, in order to give them the value of their existence in a generalised way.

This is the point, then, at which the paper positions itself. What is Netnography in reality? It is considered to be a method that seeks to understand the interactions that occur in a restricted cultural creation, which manifests itself in a multidimensionality, where different entities or beings are related, where they can act at the same time in two or more virtual spaces at the same time, where they make decisions, make agreements and consciously or unconsciously construct other cultures different from those already established. So, from this perspective,

Netnography as a multidimensional method is able to register, review actions and reactions of different groups at the same time, in cyberspace, which allows it to decipher and study needs, interests and perspectives of a new society.

Is such a methodology necessary?

Yes, there is a need for a methodology to study these cultures that are being born and expanding in cyberspace, because from there they pass into reality and become present in their own space.

Can this methodology anticipate situations in this virtual world?

Yes, and the more it is applied and studied by researchers, the more they will be able to foresee situations that may occur in the expanding cyberspace, such as stopping or closing these spaces, depending on who directs or restricts and has created them. But it will also be providing information to prevent situations or problems for society.

Netnography is a necessary methodology for the study of cyberspace, as it is possible to define the different dimensions to be studied and the different interactions that take place between Internet users, as it keeps a record of the actions that are carried out, which gives certainty of their presence and existence.

The application of a methodology or path to follow to investigate the expanding Cyberspace and the creation of new cultures and subcultures that move in different dimensions should be defined by the researcher's study needs by specifying which culture or subculture he/she wishes to study, which aspects, the language or actions they develop, as well as the time in which the research should be carried out.

Development of a research study (Netnographic exercise).

Mapping the Study
Paradigm Methodology Approach
Interpretative Netnography Qualitative
Qualitative _ analysis technique
Discourse analysis.
Field of study _ Video conferences.
Conferences on National Technical Councils

Object of study

Analysis of the speeches of the Secretary of Public Education pronounced in the official channel of the Technical Councils in the schools of the country (Mexico). They are the fundamental basis for the Education Policy implemented by the administration on education at all levels and modalities, in which the lines to be followed are indicated, which contemplates the approach, the values to be rescued and implemented during the six-year term of office.

It is in this space where the contents to be worked on with their respective approaches are discussed and reported, as well as different programmes to be developed with a view to implementation in schools.

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These meetings and what is said at them are important in the country, as they provide all the information on the path to follow in the educational processes.

All the education authorities of the states participate in these Technical Council conferences, as well as the education structure, from the Secretaries of Education of the states, Directorates and sub-directorates, Sector General Supervisors, Supervisors, and in a differentiated way, information is taken for the participation of the operators in the schools, the teachers, which is why it is important to analyse the speeches that are made there, as they allow us to understand the direction of education in the country, the continuity of these speeches are given every month or every month and a half depending on the school calendar.

Time of monitoring of the speeches.

Intensive phase August_September, October, Nov. Dec., Jan.

General Objective

To understand the Public Policy of Education in the speeches given in the videoconferences of the Technical Councils for the educational reform called 'The New Mexican School'.

Purposes

To define the features of the New Mexican School Public Policy. To characterise the elements of the discourses, the contents to be worked on in schools.

Preparation of the field to be investigated: the first four speeches of the Mexican Ministry of Public Education were reviewed. The role of the Secretary in achieving the implementation of the New Mexican School.

Contextualisation

With the pandemic of COVID 19, in 2019 and less than a year into the administration of the Mexican Government, in the country there have been many expectations of a new education through 'the New Mexican School' in that sense all educational authorities and teachers in Mexico have wanted to understand what is the humanistic and egalitarian vision of education with the New Mexican School?

The educational authorities as well as the population in general seek to find in the New Mexican School an answer to a transformation of the Mexican society thirsty for change and improvement for the whole population.

This is how the 2019-2020 school year went, with changes that the pandemic forced the suspension of on-site classes since March 2019, leading to distance education, not only in our country, but also in many parts of the world to prevent the spread of COVID-19, to the bewilderment of the majority of the population who hoped that the disease would soon pass.

It took 19 months for students and teachers to be in schools in person, and in August 2021, the country will resume in-person classes where they have been taught in a mixed or hybrid way, depending on the conditions in schools and families' homes, but already attending school once or twice a week, for two or three hours maximum in schools and for 50% of the school population on one day or the other.

This start of the school year is aimed at reactivating the economy and the sociability of the population in order to face a pandemic that the world's population has not faced since 1913, with the Spanish flu, which also affected the world.

In Mexico, on-site classes began in August of the current 2021-2022 school year, with the aim of resuming daily life in schools, in the face of the desperation and concern of parents and the Mexican state to return to normality, a normality that will never be the same as before March 2019.

During the pandemic, at the beginning of this cycle with on-site classes, the plans and programmes have been the same as those of the previous administration in 2018, this administration has started with books and programmes that do not match the vision of what is sought with this administration of the Government of Mexico, a situation that many teachers have not liked and are uncomfortable with, as they expect a change to transform the country. In this context, from August onwards, what is known in the country as the Technical Council Meetings have been resumed.

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Since August 2021, meetings of Technical Councils have been held every month or month and a half at national level, as well as replicas in all schools in the country. In this sense, the National Technical Councils are working on what will be addressed in schools, implementing the Education Policy to be developed to define the New Mexican School, which is being specified by the speeches of the Secretary of Education in the country.

For the present exercise, the speeches from August to January of the current school year are taken up again.

Profiles of those listening to the speeches.

All the speeches in the Technical Councils are addressed to the education sector, which is made up of the Secretaries of Education, education directors, sector heads, supervisors, school directors and, at the end, the information is passed down to the group teachers.

The profiles are defined at least by subjects who are teachers by profession and who range between 22 - 55 years of age and have at least 5 - 10 years of service in the function of school management and education. All of them are familiar with the language used in education in the country, which allows them to understand the discourses that are addressed in these National Technical Councils (through video conferences).

Collection and analysis of texts and speeches.

For the review of the selected discourses from the video conferences (CONAEDU's YOUTOBE virtual field) of the Technical Education Councils already defined and mentioned above.

Having the four speeches of the Secretary of Public Education in the virtual environment, we proceeded to the observation and transcription of statements to carry out the corresponding analysis, for this, we resorted to review the different ways of doing a discourse analysis, which could clarify what is being sought from the different speeches.

It was decided to carry out a guided investigation with the objective of 'Understanding the Public Policy of Education in the speeches issued in the videoconferences of the Technical Councils for the educational reform called "The New Mexican School" in order to inductively deduce the meaning that the Secretary wished to give to the speech, which in turn would be transformed into action by those who listened to it.

In this sense, some elements were considered for the analysis that need to be clarified: in a discourse not everything is transparent, there is opacity, since there is a very strong line of semiological discussion, as Saussure (1997) points out, which has to do with signs and referents.

This can be observed from the very first discourse:

The presentation of the Secretary in her dress is formal and in a work office from which power and its space, different from schools, can be deduced.

A second discourse analysed where the Secretary is observed in another space, a museum, and with a non-formal dress, wanting to emulate a simple group teacher.

The third discourse took place in the place where the free textbooks are printed, dressed informally and once again trying to reflect that she is a teacher.

The fourth and last speech in the exercise is the Secretary's welcoming speech, after a winter holiday period in a classroom, showing her empathy and assuming that she is a teacher.

It is necessary to clarify that the Secretary of Education is the first person to work in basic education and has been questioned by the intellectual elite, as she presents herself as a real teacher.

This fact pleases the majority of teachers all over the country, knowing that education is in the hands of a teacher who has been trained like them and has worked in the group, in the school, hence so many expectations about her work.

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In order to analyse the discourses, the grounded theory method was used, as it allowed us to follow up with units of analysis of each one of them and a table was made to analyse and form categories about the discourse, for this we resorted to the theory, in reference to what it says 'the discourses are symptoms and not reflections of what is sought in them, as they leave traces and clues that must be analysed, described and interpreted, as they are not transparent' (Zizet, 2003). (Zizet,2003)

The purpose of forming the Units of Analysis (Table 1) was to have an easier view of the symptoms and to understand what Edmund Cros says about the 'discursive formations of image, being that which determines what can and should be said in a given circumstance' (1986. 64), since the Federal Public Administration started in 2018, and the expectations that are held by the population are quite high, especially in the area of education.
With this exercise, the aim is to identify whether the discursive formation corresponds to the ideology of the Fourth Transformation or (4T). In this discursive formation, in order to be coherent with the policy of the Mexican government, the beliefs, ideas and political stances that are taken to society must be expressed. Hence, having some categories makes it possible to understand the features of the discourse and the coherence with the educational transformation that is being sought with the New Mexican School.

It should be noted that generating the units of analysis of each of the discourses gave the opportunity to create the categories, which were completed to form small statements for presentation:

- Motivation to teachers.
- Education as a priority.
- Face-to-face education.
- Values and teaching strategies.
- School as a safe space.
- Health and care for teachers and students.
- Teacher training and updating.
- Recognition and relationship with parents.

This set of categories is presented in table (2).

Final considerations

The different analyses of the discourses were agglutinated. In them, a constant intention to motivate and recognise teachers for the work they do can be observed,

In the same way, the speeches highlight education as a priority for the Mexican state and as a strategic and important reality for the country, since it is through education that values are instilled.

Teachers are stressed as being important for the Mexican state, as shown by the fact that they were among the first citizens to be vaccinated against the pandemic, with the aim of ensuring that teachers return to their workplaces safe and healthy, as they are the ones who look after the new generations. But at the same time it is also important to mention that the updating of teacher training processes is transcendental and there is talk of training courses for teachers and the quality of collaborative work as a strategy.

It is argued that in the face of the pandemic, schools are safe centres and are not centres of contagion, which tries to show Mexican society the confidence they should have in sending their children to school, as it points out that face-to-face classes are very important, as students develop emotionally better.

The speeches show the necessity of the actions to be carried out, so that, in some way when watching the videos, they invite to continue the educational processes in the spaces that are for them, such as schools, with emulations of teaching knowledge, the Secretary of Education, tries in the videos to motivate the receivers, trying with her movements in front of the camera to be empathetic.

With the vision of the videos as a virtual space, it can be understood that it is an easy and economic means to inform more than 1.9 million teachers, which is why the importance of cyberspace and the ease with which it can reach distant spaces can be highlighted, with only having a means to enter the space, cyberspace through video comes to invite to form actions in the educational reality in the country.

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In the different speeches it can be observed and deduced that the Secretary, if she follows the concepts and line of the 4T, transformation by treating all listeners equally and always seeking empathy and giving a human sense to the speeches.

This is how Netnography can help us to see the different information that is given through cyberspace and how it impacts on the listeners in order to carry out actions and give continuity to processes, in this case the educational one, while at the same time it marks the lines of the New Mexican School, in addition, through the video speeches, agreements are made which are taken to reality, in this case they are taken as validated by the Ministry of Education.

In addition, the Netnography methodology allows us to review, analyse and reflect on proposals, indications, orientations and goals expressed and stored in the different virtual spaces. In this sense, continuing to strengthen a methodology that is being developed and applied qualitatively in a congress such as the one held by CISET is a way of discovering educational processes that are currently re-emerging, which is why making the present known is creating research so that the different researchers can carry out research in the virtual field, since it is a reality that has gained strength after the pandemic.

Like all human creation, cyberspace, in this digital era, is culture, it is necessary to study it, as it will provide information on how society is growing, its way of seeing the world, of acting and reacting to situations that are experienced, cyberspace has not only become a form of expression, but also a space of persuasion and transformation of society itself by inviting through this medium different actions that we see on a daily basis in our reality.

It is considered that the creation of groups and the formation of networks is a great opportunity but also a great risk, as it is not known exactly what these networks are looking for, hence cyberspace can contribute to the humanisation or dehumanisation of society, and it is here where education also becomes important as it can influence education through this medium and those who carry out research to study what happens in these spaces to help understand and improve society.

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Authors' contribution

Chávez Morales, Ignacio: I contributed with the basic idea of the project and analysis of works and references, as well as his contribution to the basic lines of research.

Lino-Gamiño, Juan Alfredo: I contribute with the analysis of citations and web research, as well as in digital journals.

Chávez-López, Pedro Jacob: I contribute with the categorical analysis and relation of constructs.

Moreno-Meza, Rocío de Jesús: I contribute with the style of the work.

Availability of data and materials

Total, all materials are on the web.

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Support

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Differences

Julio Rodríguez-Suárez. (2021) Department of Psychology, University of Oviedo (Spain) (rodriguezsjulio@uniovi.es)(https://orcid.org/0000-0003-4373-8905)) Networked Research, New Languages and Symbologies of Digital Activism: A Systematic Review.

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Annexes

The concentration table presented here is related to the different units of analysis that were formed from the different discourses where:

D = discourse
UA Unit of Analysis C = category and
The numbers from 1 to 17 show the units of analysis, in their different groups in each of the discourses.

Box 1

Table 1

D = speech
AU Unit of Analysis C = category

First speech	Second speech	Third speech	Fourth speech
Formal Office Attire	Dressed casually and transmitting from a museum	Informal dress	Casual dress in a classroom.
1. The Secretary of Education at the beginning tries to make it a motivational message for the listener, where she acknowledges the teachers and the work done remotely at home.	1. It starts with the motivation of the return to face-to-face classes to the number of pupils attending 18 000 000, 1.5 m. teachers in schools,170 schools open.	1.He starts his speech by pointing out the number of children attending face-to-face classes 22 M. in the classrooms in the country.	1.The Secretary welcomed everyone listening to the transmission to the 2022 cycle, and pointed out that this was the first of 6 meetings to be held during the school cycle.
2. Education is recognised as a strategic element for the Mexican state.	2. points out that educational establishments are not points of contagion.	2.They mentioned the attention of 1.7 million teachers for classroom attention in 187,000 educational establishments.	2.He acknowledged the teachers and called for the care of COVID.
3. Distance education is recognised, but it is agreed that face-to-face education is better.	3.It is important to point out the Mexican state's concern for the vaccination of teachers and how important they are for the country.	3.It points out as an important point when attending schools the school hygiene.	3.In that sense he mentions the variant of this disease OMICRON, and invites to take care.
4. It rescues elements in its discourse as values, teaching strategies, habits.	4. It highlights the face-to-face classes and the need for blended learning.	4.It addresses the importance of food and physical exercise for a healthy life.	4.He pointed out that the school is a safe and harmonious place for children as it is their second home.
5.The school is rescued as a space to grow harmoniously.	5.Points out the need for actions to be implemented in the community in order to continue with face-to-face classes.	5. Repeatedly points out that schools are not centres of contagion.	5.Recovers and points out the Mexican President's concern for teachers and how, in agreement with the state governments, they have been among the first to be vaccinated.
6.It favours the return of schools to face-to-face classes.	6.Thanks the parents for their collaboration in education.	6.Recovers the messages of the President of the Republic in this sense to take care of the teachers.	6.He points out the importance of monitoring the diagnosis in each school from August to February.
7.Health care is privileged.	7.Point out the children's rights in the learning process.	7.He also points out the joy of the students to return to school.	7.He highlights two fundamental elements for the recovery of reading and writing and basic mathematical operations in schools as being of paramount importance.
8.It points out the importance of a diagnosis of the situation in schools and the strategies to be implemented.	8.Emphasises education with equity, excellence, inclusion and relevance.	8.In this message he is careful to point out that this is the last meeting of the Technical Council in 2021.	In terms of teacher training, he points to the creation of refresher courses for head teachers and for school support staff.
9.Addresses the importance of teacher training, courses and action plans to be implemente	9. Addresses the importance of the emotional states of teachers and students as part of the school project.	9.In his speech he mentions and points out Christmas to all, wishing happiness and a better year ahead.	9. Reiterates the importance of collaborative work as a fundamental strategy for teaching work, which will make it possible to move forward in educational processes.
	10.It points out the emotional as part of the mental hygiene of teachers.	10.He addresses with affection all the teachers for their effort and his gestures show a smile of pleasure.	
	11.It addresses the promotion of collaborative work in schools.		
	12.It is reiterative in motivating teachers to continue working.		
	13.Talks about the creation of the S.E.P. and its 100 years of existence, and once again highlights the work of teachers.		
	14.Points out the importance of creating working groups to value the work of the teachers in these 100 years of existence of the Secretariat by recognising teachers (this has already been done).		
	15.Addresses the greatness of Mexico and continued to try to motivate teachers.		
	16.It highlights the importance of school actors such as: school authorities, teachers and parents.		
	17.He highlights the state's concern for health and sends a special greeting to the teachers.		

Box 2

Table 1

Categories according to the authors cited

Categories	Definitions
Motivation	What is Motivation: Motivation is the action and effect of motivating. It is the motive or reason that causes an action to be performed or omitted. It is a psychological component that orients, maintains and determines a person's behaviour. It is formed from the Latin word motivus ('movement') and the suffix -tion ('action', 'effect'). Intrinsic motivation In intrinsic motivation a person starts or performs an activity because of internal incentives, for the pleasure of doing it. The satisfaction of doing something or achieving something is not determined by external factors. It is therefore related to personal self-satisfaction and self-esteem. For example, there are people who do physical exercise because they enjoy the activity.. Extrinsic motivation In extrinsic motivation, the stimulus or incentive that moves a person to perform an activity comes from outside, it is an external incentive and does not come from the task itself. It functions as reinforcement. For example, when a person performs physical exercise not for the mere fact of enjoying doing it, but for social or other reasons..
Education	Education aimed at developing the intellectual, moral and affective capacity of individuals in accordance with the culture and the rules of coexistence of the society to which they belong. "the school is also concerned with education in values". Carmen López, Head The educational process is materialised in a series of skills and values, which produce intellectual, emotional and social changes in the individual. Depending on the degree of awareness achieved, these values may last a lifetime or only for a certain period of time. of Education, UNICEF Mexico Authors: Julián Pérez Porto and Ana Gardey. Published: 2008. Updated: 2021. Definition of: Definition of education (https://definicion.de/educacion/)
Presenciality	First, face-to-face education is not only about acquiring access to content. It is also a space where there are countless opportunities to permanently develop socio-emotional skills and acquire values for living in society. This 'other' type of learning, as important as the subjects and contents of the currícula, is more complex to stimulate in virtual environments. It is not that it is not possible, but they require additional efforts. On the other hand, in virtual environments it is very easy to emphasise transactional aspects. That is, it is easy to use the phone or an email to send materials or give access to different resources, but education is not only that. Motivation and the creation of student-teacher bonds (e.g. empathy, building trust to work in a team or knowing how to combine cognitive and socio-emotional aspects) also play a central role. Those who are deeply familiar with digital environments manage to overcome these difficulties more effectively, but this transition from face-to-face to remote is not automatic. Cristóbal Cobo, specialist in education and technology Theory of Education. Educación y Cultura en la Sociedad de la Información E-ISSN: 1138-9737 revistatesi@usal.es Universidad de Salamanca Spain
Values and strategies	The educational process takes the form of a series of skills and values, which produce intellectual, emotional and social changes in the individual. Depending on the degree of awareness achieved, these values may last a lifetime or only for a certain period of time. UNICEF Mexico's Education Department Authors: Julián Pérez Porto and Ana Gardey. Published: 2008. Updated: 2021. Definition of: Definition of education (https://definicion.de/educacion/)
Safe space school	School preparedness for emergency response As mentioned in the World Report on Disaster Reduction Initiatives (2004),17 in times of crisis, schools often serve as a place of refuge. School premises can serve as an example of a safe building, an appropriate and protected location, or a place where different actors in the community come together to exchange ideas on how to make the public environment safer. It is important for schools to have school emergency, safety or school protection plans, depending on what they are called in each country, in order to strengthen the capacity of the educational community and plan actions aimed at: a) Carrying out actions and adopting measures to prevent and reduce risk situations. b) Developing capacities to prevent and respond to emergency and disaster situations in order to protect the lives of the educational community and the school's property. c) Defining how to ensure the continuity of educational activities and identifying alternative sites, if necessary. It is essential, therefore, to encourage educational centres to organise solid structures and implement training programmes through which it is possible to reduce their vulnerability and develop capacities so that they can be multipliers of disaster risk reduction measures and emergency preparedness in their communities. United Nations. Inter-Agency Secretariat of the International Strategy for Disaster Reduction. Living with Risk. Global Report on Disaster Reduction Initiatives. 2004. pp. 264. 18 Arenas Romero, Antonio. Guía de la comunidad educativa para la reducción de riesgo y desastre: prevención y protección de la niñez y la adolescencia. San José; 1999. pp. 52.
Health and care	The WHO's 9th World Health Conference, which took place in Shanghai (China) in 2016, was entitled "Health Promotion in the SDGs: Health for all and all for health". The lines of action proposed were not only limited to individual attitudes, but underlined the responsibility of local, national and global institutions to develop policies that contribute to improving the health of all citizens. Areas of intervention focused on the importance of promoting good governance, on developing healthy environments (especially in urban areas) and on educating people about health, illness and self-care. 1. Eat a healthy diet 2. Be physically active, daily and in your own way. 3. Get vaccinated 4. Not using tobacco in any form 5. Avoid or reduce alcohol consumption 6. Manage stress for better physical and mental health. 7. Maintain good hygiene 8. Do not drive at excessive speed or under the influence of alcohol. 9. Wearing seat belts in the car and helmets when cycling. 10. Maintain safe sexual practices 11. Have regular medical check-ups 12. Breastfeeding is best for babies..
Teacher training	**THE DISCOURSE OF PROFESSIONALISATION IN THE TEACHING PROFESSION** The discourse of teacher professionalisation appears practically omnipresent in our teaching life: educational authorities resort to this discourse, international organisations make it the focus of their recommendations, the media repeat it, parents demand it, educational institutions echo it, trade unions use it and repudiate it at the same time, and so on. On the other hand, this discourse also has to do with the teachers who are trained and how it impacts on this training to consider teachers as professionals. In this paper, which is a reformulation of a postgraduate work of the Master in Education Policy and Management of the National University of Luján, we will review some documents of international organisations, we will present different approaches of authors who are in favour of professionalisation, or who deny it for teaching, and we will emphasise the relationship with teacher training and the quality of education. Throughout the paper, a critical view of the current discourse of professionalisation is emphasised, in particular when it is likened to traditional professions. These are just a few points for analysis, and in no way intended to cover the problem in all its complexity. It is a review of documents of international organisations and of some authors who have explored the issue. This review can help to visualise the complexity of the discourse of professionalisation, without neglecting the fact that, beyond adherence or not to this discourse, it is imperative to commit to training in theoretical and practical rigour with a view to teaching that is committed to the training of citizens, particularly those from the most disadvantaged sectors of society.

Continued…

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Teacher training	**TEACHER PROFESSIONALISATION ACCORDING TO INTERNATIONAL AGENCIES** All the documents of international agencies in recent years refer to the professionalisation of teachers using different strategies. Initial teacher education should also be directed in this direction: in this way we could say that in teacher education we are training an education professional. The Jomtien (Education for All) declaration states that 'if the learning process is achievement-oriented and based on the acquisition of knowledge together with problem-solving skills, then teachers must be prepared accordingly...' (World Conference on Education for All, 1990 :7). Arguably, this idea of professionalisation for the field of education is not new, however, it appears most strongly in the context of neoliberal policies. Therefore, we will begin by tracing the meaning given to the concept of 'professionalisation' in the current discourse of international agencies, trying not to get caught up in their arguments, heeding Adriana Puiggrós' warning about neoliberal slogans, in the sense that "they appropriate those words that express authentic demands and recycle them in an economistic hierarchy, altering their syntactic order and adding adjectives or adverbs that substantially modify them" (Puiggrós, 1995 :47). Although this work mainly takes documents from the period 1970-95, it is necessary to resort to others from earlier periods in order to follow the idea of 'professionalisation'. Thus, in the document on 'The Status of Teachers' (International Recommendation 1966, UNESCO/ILO), point 4 states: 'it should be recognised that the progress of education depends to a large extent on the training and competence of teachers, as well as on the human, pedagogical and professional qualities of individual educators'. Point 5 also refers to teachers 'enjoying a fair status and the teaching profession enjoying the public respect it deserves'. Point 6 clearly considers teaching to be a profession, not least because of the knowledge and skills that it Point 6 clearly sees teaching as a profession, not least because of the knowledge and responsibilities involved: 'Teaching should be regarded as a profession whose members provide a public service; this profession requires of educators not only profound knowledge and special competence, acquired and maintained through rigorous and continuous study, but also a sense of the personal and collective responsibilities which they assume for the education and welfare of the pupils for whom they are responsible.' Point 8 clarifies that working conditions should 'enable educators to devote themselves fully to their professional tasks'. Point 10(j) refers to professional training: 'with regard to the training and professional development of teachers, coordinated, systematic and continuous research and action are necessary'. Point 39 of the same document refers to a probationary period for new teachers, whose 'requirements should be of a strictly professional nature', and point 91 refers to time for teacher development activities: 'teachers should have sufficient time to participate in activities to promote their professional development during their tenure'. In general, the above-mentioned document views the teaching profession in relation to training for a role that requires special responsibilities for the education of pupils. In this way, the aim is to equalise the teaching profession with other professions that have a status and social recognition based on the seriousness and rigorousness of the degree studies and the way in which it is exercised. This could be related to the fact that in the 1970s, teacher training was elevated to the tertiary level of teaching, in charge of teacher training institutes, and in some cases with the insertion of teacher training courses in universities. The document of the Fifth Meeting of the Intergovernmental Regional Committee of the Major Project in the Field of Education for Latin America and the Caribbean (PROMEDLAC, Santiago de Chile) of 1993 also develops the theme of professionalisation. 'The Committee understands professionalisation as the systematic development of education based on action and specialised knowledge, so that decisions as to what is learned, how it is taught and the organisational forms for this to occur are made in accordance with advances in scientific and technical knowledge, pre-established frameworks of responsibility, the ethical criteria governing the profession and the diverse contexts and cultural characteristics' (UNESCO/OREALC, 1993: 26). It adds that 'such professionalisation is not exclusively a technical act, but must be conceived within the framework of stable and democratic educational consensus and agreements' (UNESCO/OREALC, 1993 :26). Although the document makes this last clarification about not considering professionalisation as an exclusively technical act, the definition it presents leaves virtually no doubt to the contrary. On the other hand, reference is made in various documents to the responsibility of acting professionally: responsibility for processes and above all for learning outcomes and the quality of education. In this sense, it is assimilated to the performance of a liberal profession, without taking into account the fact that teaching has been, and continues to be, most commonly carried out within the framework of salaried work (whether in the State or in the private sector). It turns out that they link responsibility to the transformation of institutions in search of greater autonomy in management. It would seem that there is a transfer of non-delegable responsibility for education from the state to the institutions and teachers. As Myriam Southwell says of the images of the teacher, 'The political discourse of Latin American neoliberalism seems to favour a new apostolic image of the teacher, no longer that of the lay priesthood, but that of a subject on whom fall responsibilities that were previously carried out by the State. This situation has generated in teachers a loss of specificity in their task, while at the same time all the responsibility for the success or failure of the educational process has been placed on them, despite the fact that they are rewarded with meagre working conditions' (Southwell, 1995: 14). Clearly, the issue of professionalisation is presented from different perspectives, and in the current discourse it contains a number of contradictions. The claim of teachers as a collective about the need to be respected as education professionals and to be treated as such, finds in this new international and national context a response that distorts its essence. We could say that, in this context, professionalisation does not come on its own, but rather hand in hand with other measures and demands that can only be understood within the framework of neoliberal transformations. This is how the need and demand of teachers is recognised (from different sectors), but the idea of professionalisation is linked to the transfer of responsibilities from governmental strata to individual agents (teachers) and their institutions; attempts are made to assign them more tasks; They are made responsible for solving serious problems (learning and social problems in general) not generated by teachers or educational institutions but by the education system itself (and often, beyond it, by the socio-economic system) through its regulations. **Publication of Editorial "Universo Sur".** **On-line version ISSN 2218**-3620

Continued…

Relationship P.Family	The relationship between teachers and parents must go beyond words, true dialogue is based on honest, empathetic, sensitive communication and the possibility of making commitments on both sides. Parents should not just be spectators in distance education, on the contrary, they should be a part of the ...23 Nov 2020 Erica Franco Lavín Teachers and parents: Partners in education at a distance ... https://www.educacionfutura.org › teachers-and-parents-partners in ... Generally, the relationship between teachers and parents is limited to handing out report cards, organising social events and reporting children's misbehaviour or poor school performance. There are few occasions in which these spaces are used to analyse aspects such as: family coexistence, communication, the affective relationship between parents and children, guidance for them to support school work at home, etcetera. It is necessary that together, teachers and parents find better ways of dealing with children. This requires that they plan this co-ordination, i.e. formulate strategies and conditions to achieve this. Parents often need more information about their children's development and how to deal with them. The teacher can promote meetings where some specialists talk about the child's characteristics and parents can express their doubts and build alternative solutions to improve their relationship with their children. If there is no specialised staff in the school's location, then organise experience-sharing sessions where some problems and the way they have been solved are discussed. Why is it important to address the issue of family communication? Because parents often have a very superficial knowledge of their children's tastes, interests and hobbies. Through communication, better elements and information are obtained to respond to the needs, goals and desires of each member of the family. Conversations in which everyone is involved and no one is judged or ridiculed, games and activities such as planting trees, telling or reading stories or legends, etc., serve to achieve the above. How can parents be guided so that their children acquire greater self-confidence? For the acquisition of this purpose it is suggested: - Emphasise that development is a slow and gradual process with advances, setbacks and skills that are formed day by day from the mastery and awareness of resources. - Encourage children in each of their efforts, however small they may be, so that they will have experiences of success that will make them more self-confident. - Encourage their self-esteem by trusting in them, in their talents and qualities. Encourage and respect them so that they learn to trust themselves, since it is in the approval or disapproval of significant adults (parents and teachers) that children define who they are and how much they are worth. Emphasise the importance of the sense of belonging to the family group, making them feel unconditionally loved and accepted within the family. Ensure that they do not feel compared to, or pushed to imitate, other children. Teach them to take risks. This is achieved when they are sure that they will not be punished if they make a mistake, motivate them to do what they are capable of doing and invite them to make their own decisions. Help children set goals and work towards them. Create an environment conducive to questioning. Curiosity is a natural trait and is a response to an interest in the world around them. The above suggestions will enable parents to realise that children learn from them the joy of life, confidence in their ability to control their personal environment and hope for the future, so they should spend time together and enjoy different recreational activities. source: cursosinea.conevyt.org.mx

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Article

Emotional intelligence and Locus of control in college students

La inteligencia emocional y su relación con el locus de control en estudiantes universitarios

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Abstract

The objective of this research was to know the correlation between emotional intelligence and locus of control in a sample of young university students from southern Sonora, as well as to know the levels of emotional intelligence and locus of control of the participants. It was a quantitative study, with a correlational scope and included the random participation of 204 students whose average age was 21 years, all belonging to the seventh semester of their respective educational programs. The results showed the presence of a significant correlation between different areas of emotional intelligence and the locus of control, which coincides with what was found by different authors. It is recommended to implement intervention programs in young people to help them better identify, understand and regulate their emotions, as well as remember the importance of perceiving themselves as self-sufficient and as a causal agent of what happens in their daily lives.

Objective
Was to know the correlation between emotional intelligence and locus of control in a sample of young university students.

Methodology
Sample: It was a quantitative study, with a correlational
Participantes: 204 university students.
Tools: TMMS-24 and Locus of Control Scale of Cervantes.

Results
showed the presence of a significant correlation between different areas of emotional intelligence and the locus of control.

Intelligence, Emotions, Control

Resumen

El objetivo de la presente investigación fue conocer la correlación entre inteligencia emocional y locus de control en una muestra de jóvenes universitarios del sur de Sonora, así como conocer los niveles de inteligencia emocional y locus de control de los participantes. Se trató de un estudio cuantitativo, de alcance correlacional y se contó con la participación aleatoria de 204 estudiantes cuya media de edad fue de 21 años, todos pertenecientes al séptimo semestre de sus respectivos programas educativos. Los resultados arrojaron la presencia de una correlación significativa entre diferentes áreas de la inteligencia emocional y el locus de control, lo cual coincide con lo encontrado por diferentes autores. Se recomienda implementar programas de intervención en los jóvenes para ayudarles a identificar, comprender y regular mejor sus emociones, así como recordar la importancia de percibirse autosuficiente y como un agente causal de lo que ocurre en la propia vida cotidiana.

Objetivo
Conocer la relación que existe entre la inteligencia emocional (IE) y el locus de control en estudiantes universitarios.

Método
Diseño: Cuantitativo, no experimental, de alcance correlacional.
Participantes: 204 estudiantes universitarios.
Instrumentos: TMMS-24 y escala de Locus de control de Cervantes.

Resultados
Se encontró relación significativa entre diferentes dimensiones de la IE y el locus de control.

Inteligencia, Emociones, Control

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Introduction

This study seeks to address the relationship between the variables emotional intelligence (EI) and locus of control, as we are aware of the impact that mental health can bring with it and its importance in achieving success.

In this regard, the World Health Organization (WHO, 2022) indicates that mental health is a state of well-being that favours coping with stressful moments in life, as well as strengthening the ability to make decisions and form relationships; it is an essential element for development and is not only the absence of mental disorders, as it is a complex variable that is affected by different reasons; psychological and environmental factors such as the emotional abilities of the subject have a broad impact on the way they process information from their environment and therefore, in problem solving.

EI has been extensively studied. Research by Sojer et al. (2024) analysed 277 data sets collected through an online questionnaire. Gender differences in EI were sought and in the results, women scored significantly higher than their male counterparts.

In addition, emotional intelligence and locus of control in higher education students have previously been studied in tandem, with the result that there is a significant correlation between the two variables (Duru and Söner, 2024).

On the other hand, the lack of mental health has serious consequences; the WHO (2021) reports that suicide is the second leading cause of death in people aged 15-29 years, so emotional education and attention to the regulation of emotions cannot remain in the background.

In addition, not having a good (internal) locus of control could lead to problems of security and self-confidence in the individual. In this regard, the Manuel Escudero Centre (2024) states that emotional insecurity is a trigger for the feeling of nervousness, discomfort or fear associated with different situations, both in the social context and when having to make decisions.

They go on to say that lack of security can lead to other problems, such as lack of confidence in their abilities, states of shyness or even social isolation.

For this reason, and taking into account the importance that has been given to emotional health in different studies carried out in recent times, it is planned to carry out an analysis of the levels of emotional intelligence and locus of control perceived by students from a university in southern Sonora, Mexico, belonging to different educational programmes.

This work seeks to provide relevant information for the analysis of attention, clarity and emotional regulation in young people, as well as the internal, external and affiliative control they perceive when making decisions and facing challenges.

Objective

To find out the relationship between emotional intelligence and locus of control through the application of different measurement instruments in order to provide relevant information that can be used to improve university emotional education.

The specific objectives were (1) to know the state of emotional intelligence of the participants according to gender in its three different areas; attention, clarity and regulation. (2) to analyse the level of internal, external and affiliative locus of control.

Method

Design. This is a quantitative, non-experimental study of correlational scope, as it seeks to find the relationship that exists between the variables of this study. Hernández et al. (2014) indicate that correlational studies are those that seek the degree of association between two or more concepts, categories or variables, which is why this scope of study has been chosen.

Participants. This was a random sample by convenience and was made up of 124 women (60.78%) and 80 men (39.22%), resulting in a total of 204 students from a university in Sonora, Mexico, with ages ranging from 18 to 37 and an average of 21 years old, all belonging to different educational programmes consisting of undergraduate and engineering degrees.

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Instruments

Two instruments were used, which are described below. The TMMS-24 was used to measure emotional intelligence, which is based on the Trait Meta-Mood Scale (TMMS) of Salovey and Mayer's research group in its Spanish translation (Fernández-Berrocal, 2004).

It is a scale that measures the perception of emotional states by means of 48 items with responses that are rated from 1 (do not agree at all) to 5 (strongly agree). The TMMS-24 has a validity of .932 according to KMO and Bartlett's Test factor analysis.

In addition to this, the instrument has a reliability of .947 according to Cronbach's Alpha.

To measure Locus of Control, the Cervantes Locus of Control Scale (2000, retrieved from Serrano, 2007) was used, which is a new version elaborated for a Sonoran sample.

The scale is composed of 59 items with 7 different response options, which are selected depending on how identified the person feels with what the item indicates; the more the person feels in agreement, the more he/she should select the answer that is closest to the question, and the more he/she feels in disagreement, the more he/she should select the answer that is furthest from the question.

The instrument presented a validity of .943 according to KMO and Bartlett's Test factor analysis, and a reliability of .959 according to Cronbach's Alpha.

Procedure

After the relevant theoretical analysis to support the present research, the instruments to be used were selected and transcribed into a Google Form so that they could be applied electronically and participants could respond from their devices.

After this, permissions were requested from the corresponding authorities of different educational programmes of the institution for its subsequent application, and thus to be able to access the classrooms of the students in the seventh semester of the different careers.

The students were informed of the objective of the data collection and the application of the instruments was carried out digitally, sharing the access link with the sample through electronic devices such as mobile phones and laptops. Participation was completely anonymous, so the subjects did not sign any informed consent.

Likewise, before starting, they were informed verbally and in writing that answering the instruments was completely voluntary and that they could stop at any time they wished.

At the end of the data collection, the data were transferred to an Excel spreadsheet and subsequently entered into the Statistical Package for the Social Sciences (SPSS) version 24, where frequency analyses were carried out to determine the mean and standard deviation of the sample, as well as the levels and scores of the different variables.

In addition, Pearson's correlation coefficient was applied to determine the relationship between the variables emotional intelligence and locus of control.

Results

The results obtained from the application of the instruments and the corresponding statistical analyses are presented below.

1. **Levels of emotional intelligence as a function of gender in university students**

Table 1 shows that the mean of the 80 male participants was 26.16 with a standard deviation of 7.118, while the 124 female participants obtained a mean of 28.09 and a standard deviation of 7.803.

In addition to this, 50.2% of the males and 43.3% of the females obtained adequate emotional attention scores, meaning that they pay enough attention to what they feel without it being detrimental to their well-being, however, 27.7% and 33.6% respectively pay little attention, as well as 22.7% and 22.5%, who pay a lot of attention.

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Box 1

Table 1

Emotional care dimension

	Men n=80	Woman n=124
Emotional care *	26,16 ± 7,118	28,09 ± 7,803
Levels of emotional attention** Pay little attention	27,7% (22)	33,6% (42)
Adequate attention	50,2% (40)	43,3% (54)
It pays a lot of attention	22,7% (18)	22,5% (28)

* Data presented as mean and standard deviation
**Data presented as a percentage

On the other hand, in Table 2 it is possible to observe that males obtained a mean of 26.29 and a standard deviation of 7.754 and females a mean of 25.02 and a standard deviation of 7.922. In addition, 31.4% and 18.9% of men showed adequate and excellent emotional understanding.

However, 50.2% need to improve their understanding and identification of their emotions. Contrary to this, the female sample obtained 46.6% of adequate and 11.2% excellent emotional understanding. However, 41.7% need to improve.

Box 2

Table 2

Emotional clarity dimension

	Men n=80	Women n=124
Emotional clarity *	26,29 ± 7,754	25,02 ± 7,922
Levels of emotional clarity ** It must improve its understanding	50,2% (40)	41,7% (52)
Adequate understanding	31,4% (25)	46,6% (58)
Excellent understanding	18,9% (15)	11,2% (14)

*Data presented as mean and standard deviation
**Data presented as a percentage

Finally, males presented a mean of 28.23 and a standard deviation of 7.383, while females presented a mean of 26.09 and a standard deviation of 7.851.

In addition to this, 58% and 18.9% of males presented adequate and excellent emotional repair; 46.5% and 15.2% of females also obtained adequate and excellent scores, meaning that they are able to regulate their emotions. On the other hand, 24.1% and 37.6% respectively, need improvement (see table 3).

Box 3

Table 3

Emotional repair dimension

	Men n=80	Woman n=124
Emotional repair *	28,23 ± 7,83	26,09 ± 7,851
Levels of emotional repair ** Regulation must be improved	24,1% (19)	37,6% (47)
Adequate regulation	58% (46)	46,5% (58)
Excellent regulation	18,9% (15)	15,2% (19)

* Data presented as mean and standard deviation
**Data presented as a percentage

Levels of locus of control in university students

The locus of control scale adapted by Cervantes (2000) for a sample from Sonora is composed of three dimensions: external, affiliative and internal. The results of the sample used in the present study indicate that university students tend to present a higher level of internal locus of control with a mean of 93.34 and a standard deviation of 40.795, which means that they tend to take responsibility for their success or failure, as well as for what happens in their lives. In addition to this, the affiliative locus of control obtained a mean of 79.34 and a standard deviation of 28.621, which means that, in addition to trusting in their own abilities for the achievement of their goals, they also tend to trust in external factors such as belief in God, fate or their sympathy (see table 4).

Box 4

Table 4

Locus of Control Levels

	Total n=204 X ± DE*
External locus of control	52,89 ± 23,721
Affiliative locus of control	79,34 ± 28,621
Internal locus of control	93,53 ± 40,795

*X Mean; SD Standard Deviation

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1. Relationship between emotional intelligence and locus of control

A Pearson correlation was performed in which a significant correlation was found between emotional clarity and affiliative locus of control, meaning that the clearer the participants' emotions, the higher their affiliative locus of control.

In addition, a correlation was found between emotional regulation and internal locus of control, which means that students are better able to regulate their emotions when they have a higher internal locus of control than the other categories.

Box 5

Table 5

Correlation between dimensions of emotional intelligence and locus of control

		Locus of affiliative control	Internal locus of control
Emotional clarity	Pearson correlation	0,158*	0,18
	Sig. (bilateral)	0,024	0,093
Emotional repair	Pearson correlation	0,115	0,144*
	Sig. (bilateral)	0,101	0,039

Discussion

The results of the present study indicated that there was no significant difference in emotional intelligence presented according to gender while 50% of male and 43.3% of female persons obtained adequate emotional care. However, 50.4% of males and 56.1% of females need to improve their attention. This is consistent with the results obtained by Bojórquez (2022) in his study of university students, where it was found that 52.7% of the total sample needs to improve their emotional attention, either because they pay too little or too much attention to their emotions.

In addition to this, a study carried out on Colombian university students found that the male sample obtained a mean of 25.58 and the female sample a mean of 28.69 in emotional attention. This is similar to the mean obtained by students from Sonora, where men had a mean attention score of 26.6 and women 28.09 (Castro et al., 2022).

In the emotional clarity dimension, the female sample managed to obtain a better identification of emotions compared to the males, obtaining a total percentage of adequate and excellent of 57.5% and a mean of 25.02, in contrast to the male sample, which needs to improve its understanding of emotions by 50.2% and obtained a mean of 26.9.

This is in agreement with the results obtained by Castro et al. (2022), who had similar results for students with a male mean of 25.49 and a female mean of 25.92; although the difference is very small, the female mean of the Sonoran sample was higher.

Comparing the sample of the present study with another university sample, a significant difference was found between the results, where 93.2% of the total sample did not present problems in understanding their emotions (Bojórquez, 2022).

Finally, in the repair dimension, 76.9% of the men and 61.7% of the women obtained adequate and excellent emotional repair, which means that they are able to control and regulate what they feel.

Although the majority of the sample presented adequate levels, 24.1% of the male sample and 37.6% of the female sample need to improve their emotional repair, which means that they need to improve the regulation of their emotions.

This contrasts with Bojórquez et al. (2022), where the sample does not need to improve. In addition, Gómez and Calleja (2016) indicate that emotional regulation is capable of having an impact on people's behaviour, as it is a determinant for them to evaluate what happens to them, as well as the effort they put into their work and academic activities.

On the other hand, the internal locus of control was predominant, which means that the participants in the sample tend to attribute what happens to them in life, as well as their successes and failures, to their own abilities, making them responsible for their achievements. Peña (2022) indicates that people who tend to have a higher internal locus of control are also people who tend to achieve greater life satisfaction.

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Secondly, the affiliative locus of control also obtained relevant scores, which means that the students in the sample, in addition to trusting in their own abilities, have a more moderate trust in factors such as spiritual beliefs, destiny or the sympathy they can generate in others.

In the present study, a correlation was found between emotional intelligence and locus of control, which contrasts with the results of Saenz (2022), who found no relationship between locus of control and emotional regulation in his sample.

On the other hand, in the study by Janampa (2019) a relationship was found between both variables, and in the research by Esquivel (2024) it was found that the higher the locus of control, the lower the emotional dependence of the participants, which could reinforce the evidence that emotional intelligence is related to locus of control; the importance of emotions on decision-making and, of course, the perception of control that the individual has over his or her life is well known. emotional skills and the perception of control held by young students.

From the above, it is possible to conclude that the better the emotional education, the stronger the decision-making skills and the visualisation of mastery over one's own life can be.

It is recommended to implement intervention programmes for young people to help them identify, understand and better regulate their emotions, as well as to remember the importance of perceiving themselves as self-sufficient and as a causal agent of what happens in their own daily lives.

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Article

Hardy personality and burnout in diving judges

Personalidad resistente y burnout en jueces de clavados

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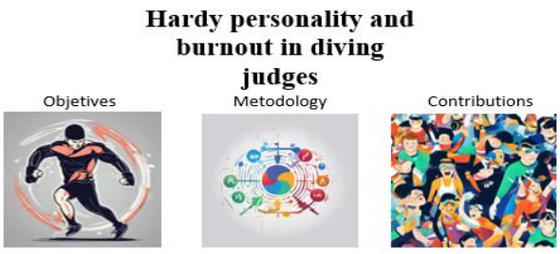
Abstract

The objective of this research is to find the correlations that occur between the Hardy personality variables and those of burnout, in a sample of national diving judges in a sample of 13 elite judge participants, where 11 of them are men (% 84.6) and 2 women (%15.4), the age of the participants ranges between 26 and 71 years with an M = 46.85 and SD = 12.83. The instruments were Hardy Personality in Central American and Caribbean Athletes and burnout syndrome in the Sports Burnout Questionnaire. The reliability results in both instruments are mostly adequate and above .70, in the bivariate correlations relationships were found between all the variables of the hardy personality, including in its unifactorial form and in conclusion, the diving judges have skills of control, commitment and challenge that do not allow them to perceive themselves as fatigued or burned out by their practice of evaluating athletes but on the contrary keeps them eager to learn and develop permanently for the benefit of their laudable activity in its quality as a qualifying jury for this discipline.



Control, Commitment and Emotional exhaustion

Resumen

El objetivo de esta investigación es encontrar las correlaciones que se presentan entre las variables de la Hardy resistente y las del burnout, en una muestra de jueces nacionales de clavados en una muestra de 13 elementos donde 11 de ellos hombres (% 84.6) y 2 mujeres (%15.4), la edad de los participantes oscila entre los 26 y 71 años con una *M* = 46.85 y *DT* = 12.83. Los instrumentos fueron Hardy Personality in Central American and Caribbean Athletes y burnout syndrome in the Sports Burnout Questionnaire. Los resultados de la fiabilidad en ambos instrumentos son en su mayoria adecuados y por encima del .70, en las correlaciones bivariadas se encontraron relaciones entre todas las variables de la personalidad resistente incluyendo en su forma unifactorial y en conclusion, los jueces de clavados poseen habilidades de control, compromiso y desafío que no permiten que se perciban a sí mismos fatigados o quemados por su práctica de la evaluación de los deportistas sino que por el contrario les mantiene con ganas de aprender y desarrollar de forma permanente en beneficio de su loable actividad en su calidad de jurado calificador de esta disciplina.

Control, compromiso y agotamiento emocional

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Introduction

Sport has been found to have various benefits in society (Rodríguez et al. 2020), such as we can identify its amenities when the masses have various concerns that lead them to remain stressed, sports activities help to lower these stress levels (Fernández-Barradas & Herrera-Meza, 2022) and to keep people in balance, however, the degrees of stress affect people differently, since in their nature and due to their history, people resist stressful situations more or are more affected by it (Jaenes et al. 2009).

The resistant personality, hardiness or hardy personality, is a construct based on existential psychology under a positivist line, this concept proposed Maddi and Kobasa, from this approach, establishes that the human being has dynamic and changing traits, which build their personality over time and the experiences they have gone through (as cited in Peñacoba and Moreno, 1998).

Maddi and Kobasa, together with their research group identified that stress has direct effects on people's health, some had stress-related diseases, people with a low Hardy Personality perceive life as boring, when facing stressful and threatening situations that lead to illness and others experienced difficult situations as learning, growth, and development experiences, people with this resistance perceive themselves as curious, restless, unafraid of challenges, they are people who have courage, a positive attitude and the drive to always continue, even if it seems complicated.

This concept for researchers is a tool that can be learned, they did not consider it as something that is already known, originally in this time of the 80s, these studies began in research in contexts of caregivers of the sick, doctors, nurses and some in education teachers (Maddi, 2006).

The resilient personality is made up of three variables, the first is control, referring to the ability that the person considers he or she has to modify all the surprising or stressful situations that arise in his or her life, the second is commitment, this refers to the implication, or involvement in the activities of his or her life, and considers that these actions give greater meaning to things and finally the challenge.

Is an ability where a difficult, surprising, or stressful situation for the individual is stimulating, people who have this ability, perceive these situations as novel and interesting, hoping to grow and learn from these difficult events (Kobasa et al. 1981).

In the sports area, a validation work on the properties of the instrument was carried out by Jaenes and collaborators in 2008 and 2009 in Spain, in samples of marathon runners (Jaenes et al. 2008; 2009), in Mexico studies have been carried out on samples of national selected athletes of various sports in the Central American and Caribbean games (Ponce, 2017), in World Cup and Olympic athletes of various sports (2021b), also in university athletes (Ponce-Carbajal et al. 2020), high diving (Villarreal-Aranda et al. 2022), Judo (2021a) soccer players (Ponce-Carbajal et al. 2023), it is worth mentioning that there is still a need to continue carrying out such research in order to generate greater contributions with which athletes, judges or coaches can rely to increase their skills in stress resistance.

And at the same time we have another important construct for the sports area since when stress is not being well managed by the athlete, mental, physical and emotional fatigue occurs that can lead to retirement from activities such as training and competitions, however, in the lives of coaches and judges the same thing can occur and we refer to the concept of burnout or also called the syndrome of being burned out. Burnout is a concept that has historically been related to work stress, and is characterized by negative self-dialogue, such as helplessness, negativity, self-criticism, anger, irritability, appearance of fatigue among others (Manzano, 2001), it is defined as the inadequate coping with chronic stress, with emotional exhaustion, depersonalization and an evident poor personal performance (Aceves, 2006; Saborio and Hidalgo, 2015).

Around the 70s, the psychiatrist Herbert J. Freudenberger formulated the first conceptualization of this condition, based on observations made while working in a drug addiction clinic in New York and did not touch many of his coworkers after sharing about 10 years, presented a progressive loss of energy, loss of empathy with patients, idealism, emotional and physical exhaustion, demotivation, anxiety problems and depression (Aceves, 2006).

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In the 80s, psychologists Cristina Maslach and Michael P. Leiter from the University of Berkeley, California and the University of Acadia Scotia, together created the Maslach Burnout Inventory (MBI), this being one of the most used tools to date (Borda et al. 2007).

So, in these two decades, research was carried out on social workers (Rísquez et al. 2011) and nurses.

Later, interest arose in studies within the sports context, since competitions had effects on athletes similar to those on other people.

Researcher Smith (1986) proposed a model to explain the negative effects on athletes based on a cognitive-affective model of stress.

This researcher detected some symptoms that affect them physically, mentally, behaviorally and emotionally.

Those athletes who presented these situations perceived that they had insufficient resources to face their daily participation in training, with increasing difficulty and with fewer possibilities of achieving success in their sport.

In this situation, athletes began to disengage and present emotional and psychological abandonment and sometimes also physical abandonment, without wanting to train to improve their abilities.

At this point, the athlete has stopped enjoying the activities of training and competition in his sport and has lost interest and motivation to continue.

Burnout is made up of three variables: the first is the reduced sense of achievement, this refers to the perception that the athlete has between success and his sporting achievements and the degree of importance that he gives to each one.

The second is emotional and physical exhaustion, this variable is focused on the exhaustion that can be caused by training or sports practice depending on the physical or mental demand that this implies, as well as anger and tiredness of his sport, and the third and last is the variable of devaluation of sports practice, this concept includes the negative feelings that could be generated by continuing in his sport and the loss of interest in training or competition, an attitude that leads to poor performance, there is no desire to improve and therefore leads to neglect of the sport. Burnout has been studied by various research groups with the aim of finding academic support to promote the improvement of these attitudes and avoid the abandonment of activities and improve the quality of life, both mental and physical, of athletes.

Interest in this construct has been increasing, since it is a tool that helps to discover a problem and in the sports environment some research has been carried out promoted by research groups in Spain (Rodriguez et al. 2007; De Francisco et al. 2014; García-Parra & Garces de los Fayos, 2016), Mexico (Cantú-Berrueto et al, 2015) with various sports and specifically in Judo (Ponce-Carbajal et al. 2021a), in Ecuador Cabrera-Gordillo, & Bravo-Navarro, (2023). Within this theme, the aspect of a study on Hardy Personality and burnout in judges is presented, a sample that needs to be explored since there are few studies on the subject and it is necessary to generate new knowledge and feedback for the various actors in the sports environment.

Methodology

The sample of this research is made up of 13 national diving judges who participated in the national children's and youth championship of the 2024 CONADE national games, of these judges, seven have participated only in national championships, three have participated in international events, two have been invited to evaluate worldwide and one has participated as a judge in the Olympic games, so the sample is presumed to be of high quality in the qualification or evaluation of the dives of the more than 100 athletes who participate in the national events, Nine of the participants belong to Mexico City, two to Baja California, one from Nuevo León and one from Jalisco, 11 of them men (% 84.6) and 2 women (% 15.4), the age of the participants ranges between 26 and 71 years with an M = 46.85 and DT = 12.83.

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The procedure carried out to obtain the sample was requesting permission from the coordination department of the judges of the Mexican Diving Federation, which through its leader accessed the application of the battery of tests, establishing direct communication with the members who would evaluate in said competition as judges, requesting their participation during the meeting prior to the competition, in order to inform the importance of participation in this research and the contributions that this could provide them in the future, once the judges were aware of the importance the coordinator of judges indicated the appropriate time to electronically send the digital battery of tests that was carried out in Google forms in this form the participant was informed of the importance of their answers, of informed consent and that at any time they decided to withdraw they could do so since this participation is completely voluntary and anonymous, in addition they were informed that the answers given in the form would be used exclusively for scientific academic purposes, At the time of being sure to accept the conditions each of the participants proceeded to answer And if at any time during the questionnaire they had any questions we were pending via WhatsApp to be able to answer any questions and that the participant felt accompanied during the process in order to resolve any doubts regarding the form.

Instruments

For this investigation, 2 cuetionaries were used, the first is assessment instrument is about the stress resistant. The questionnaire name is Hardy Personality in Central American and Caribbean Athletes (PRDCC; Ponce, 2017; Ponce-Carbajal et al. 2015); This questionnaire is integrate up of 18 items, and has three variables: commitment, control, and challenge, each variable have 6 items.

Some times this questionnaire in other investigations has been used as a global Hardy Personality, in a unifactorial way (Kobasa, 1979; Kobasa, Maddi and Kahn, 1982), and in other works also in a trifactorial way (Jaenes, Godoy-Izquierdo and Román, 2008), usually in both cases we see that the properties are adequate (α> 0.7) The response scale is of the Likert type from 0 to 3 where 0 is "totally disagree" and 3 is "totally agree".

For measure burnout syndrome in the Sports Burnout Questionnaire (Athlete Burnout Questionnaire; ABQ; Cantú, 2016) in the Mexican version, of 15 items and three variables: Reduced Sense of Achievement (RSL), Physical and Emotional Exhaustion (AFE) and Devaluation of Sport Practice (DPD). Frecuent this instrument has been used insome investigations presenting adequate internal consistency (α>0.7).The response scale is of the Likert type from 1 to 5 where 1 is "hardly ever" and 5 is "almost always".

Data Analysis

The statistics performed in this work were descriptive analysis, frequencies, means, standard deviation and normality of the data using kolmogorov-smirnov, reliability through Cronbach's alpha (∝) and bivariate correlations with Spearman correlation coefficients, with the Statistical Package for the Social Sciences (SPSS) version 25.

Results

The results found with respect to the reliability of the instruments in the case of the Hardy Personality, we have that they go from ∝ = .70 to ∝ = .90 results adequate for the sample, The control had ∝ = 70, the commitment had as a result ∝ = 87 The challenge presented ∝ = 70 and the total Hardy Personality ∝ = 90.

In the burnout instrument in sport the reliability oscillated between ∝ = .50 and ∝ = .80, which although in the case of .50, it is a Moderate reliability and not entirely adequate, considering that the sample is very small and perhaps this is the reason that it has come out below the standard. the variable of reduced sense of achievement ∝ = 50, emotional and physical exhaustion ∝ = 73 and devaluation of sports practice with a value of ∝ = 80.

In the correlations, the results were presented in all the variables of the Hardy Personality with the variable devaluation of sports practice and only in the variable of the challenge with emotional and physical exhaustion.

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The values found in the variables of the Hardy Personality in control and devaluation with R = - . 681 *, In commitment and devaluation of sports practice R = - .603 *, challenge and devaluation of sports practice R = - .742 ** and total Hardy Personality with a value of R = -. 765 **, confirming that the sample works in a trifactorial and unifactorial way.

The greater the control, commitment and challenge, the lower the devaluation of the practice and the greater the total Hardy Personality, the lower the devaluation of the practice, and the greater the ability to face challenges, the lower the emotional and physical exhaustion.

Conclusions

The diving judges have skills of control, commitment and challenge that do not allow them to perceive themselves as fatigued or burned out by their practice of evaluating athletes but on the contrary keeps them eager to learn and develop permanently for the benefit of their laudable activity in its quality as a qualifying jury for this discipline.

Declarations

Conflict of interest

We declare no interest conflict.

Author contribution

Ponce-Carbajal, Nancy: Data analysis and take sample
Ramirez-Nava, Rubén: Introduction.
Jaenes-Sanchez, José Carlos: Results redaction
Sosa-Aldape, Blanca Lilia: Traduction

Availability of data and materials

We requested the permission from the authorities to the FMN and they granted it to us and the judges were very willing to participate.

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Abbreviations

UANL Universidad Autónoma de Nuevo León
FOD Facultad de Organización Deportiva

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Article

Generation of knowledge for the intervention of community integration projects and recognition of diversity, proposed in the plans and programs of the New Mexican School in Multigrade Primary Schools

Generación de conocimiento para la intervención de los proyectos integradores comunitarios y de reconocimiento de la diversidad, planteados en los planes y programas de la Nueva Escuela Mexicana en Escuelas Primarias Multigrado

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Abstract

The purpose of this research project is to generate cutting-edge knowledge that will allow us to analyse the application of integrative, community-based and diversity-recognition projects, proposed in the plans and programs of the New Mexican School in multigrade primary schools in the Municipality of Acaponeta in the State of Nayarit; as well as the design of a proposal to strengthen the operation of these projects through the recognition of community knowledge, which will allow us to systematize and establish teaching and dissemination materials that will contribute to improving the operation of multigrade primary education and thereby contribute to reducing the gaps between this type of education and the education provided in fully organized schools. The project is intended to be carried out in three stages, these stages structured on the basis of the Second Generation Knowledge Management Model of Firestone and McElroy (2003). This project will contribute to narrowing the historical gaps of discrimination between educational actors and lay the foundations for future inclusive educational paths.

Diversity, gaps, educational paths

Abstract

El presente proyecto de investigación tiene como objetivo generar conocimiento de frontera que permita analizar la aplicación de los proyectos integradores, comunitarios y de reconocimiento de la diversidad, planteados en los planes y programas de la Nueva Escuela Mexicana en escuelas primarias multigrado del Municipio de Acaponeta del Estado de Nayarit; así como el diseño de una propuesta de fortalecimiento de la operación de dichos proyectos a través del reconocimiento de los saberes comunitarios, que permita sistematizar y establecer materiales de didácticos y de difusión, que contribuyan a mejorar la operación de la educación primaria multigrado y con ello contribuir a reducir la brechas entre este tipo de educación y la educación impartida en escuelas de organización completa. Se pretende realizar en tres etapas, dichas etapas estructuradas sobre la base del Modelo de Gestión del Conocimiento de Segunda Generación de Firestone y McElroy (2003). Este proyecto contribuirá al estrechamiento de las brechas históricas de discriminación entre los actores educativos y se sienten bases para futuras para trayectorias educativas inclusivas.

Diversidad, brechas, trayectorias educativas

Citation: Zea-Verdín, Aldo Asunción, Guzmán-Álvarez, Alejandra and Castellón-Lepe, Alma Jazmín. Generation of knowledge for the intervention of community integration projects and recognition of diversity, proposed in the plans and programs of the New Mexican School in Multigrade Primary Schools. ECORFAN Journal-Colombia. 10[18]1-6: e61018106.

Introduction

The aim of this project is to generate knowledge through analysis, strengthening and innovation of the implementation of inclusive projects that are proposed in the plans and programmes of the New Mexican School in Multigrade Primary Schools.

The generation of knowledge from integrative, community and diversity recognition projects is based on the national strategy of basic education in Mexico to strengthen multigrade education in the country, as it is considered a type of education offered in marginalised areas, and with particular characteristics for its development, such as having one to three teachers per school, a situation that implies that the teacher covers at least two school groups.

The needs of Multigrade Education given by its own organisation, as well as the possibilities that are being proposed in the New Mexican School, to convert the school as a centre of integration, where the community is the basis for the generation of learning experiences and the recognition of diversity as a horizon for growth.

This allows us to generate a structured research proposal based on community education and the creation of communities of practice, whose purpose is to strengthen the capacities of teachers, school and community for the integration of education, society and the generation of contextual knowledge to face the challenges of a complex and changing world.

Project background and description

The ability to prioritise knowledge, transform it, disseminate it and use it with a prospective vision, to create and apply it in a relevant way in the development of human society, is what has positioned the knowledge society as an emerging concept, which favours autonomy, a sense of plurality and is present in issues of social participation.

As Marrero (2007) argues, the idea of the knowledge society as a model is not fully determined; it refers to a phenomenon that is still trying to define its contours and forms of behaviour.

This characteristic, associated with the constant variation in the contexts in which we speak of the knowledge society, demands a recognition of the differences and inequalities that can be found and described in relation to its understanding and, therefore, its implications as a form of organisation, production and distribution of knowledge. In the case of education, the knowledge society represents the scenario on which it determines its vision and work. The discussion on the implications and relations between society and school is a priority in order to ensure that the universities' capacity for autonomy (UNESCO, 2005) and the contextual differences that determine the changes (Marrero, 2007) in the educational practice of teachers are privileged.

Generating innovative proposals that strengthen multigrade primary education in the country requires the use of methodologies that are closer to the recovery of experiences and meanings, where teachers can intervene and contribute to improve integration projects, but also the recovery of contextual knowledge is necessary, recognising the problems faced by the actors is of relevance.

In this sense, the research project is shaped by two processes: the production and integration of knowledge, where production has to do with the creation of knowledge, while integration refers to the processes by which an organisation introduces new statements of knowledge into its operational environment.

This process of knowledge creation and integration is based on what Firestone and McElroy (2001) define as the Knowledge Life Cycle (KLC), for which they establish a series of processes that start from a problematic situation, where its solution requires actions such as the acquisition of information, formulation and validation of statements, which leads to the creation of knowledge. This integration process involves actions such as: disseminating statements, teaching, sharing, redefining and shaping. The research project 'Generation of knowledge for the intervention of community integration and diversity recognition projects, proposed in the plans and programmes of the New Mexican School in Multigrade Primary Schools' is intended to be carried out in three stages, these stages structured on the basis of the Second Generation Knowledge Management Model of Firestone and McElroy (2003).

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The aim is to generate an innovative proposal for putting into practice the community integration and diversity recognition projects proposed for primary education in the New Mexican School. For this purpose, the following activities, among others, are planned:

1. Identification and geolocation of multi-grade schools in the municipality of Acaponeta.

2. Characterisation of the elements that mark the educational policy in the plans and programs of study for primary education.

3. Identification and bio-characterisation of multi-grade primary school teachers in the municipality of Acaponeta in the State of Nayarit.

4. Recovery of experiences and meanings of teachers who have participated in multigrade primary education and applied the integrative projects from August 2023 to June 2024.

5. Design and discussion of an innovative proposal for the operation of the integrative projects.

6. Generation of at least one printed textbook to serve as a basis for the operation of inclusive projects focused on community, recognition of diversity for multigrade education.

General objective

To generate frontier knowledge that allows for the analysis of the application of integrative, community and diversity recognition projects, proposed in the plans and programmes of the New Mexican School in multi-grade primary schools in the Municipality of Acaponeta in the State of Nayarit; The design of a proposal to strengthen the operation of these projects through the recognition of community knowledge, which allows for the systematisation and establishment of didactic and dissemination materials that contribute to improving the operation of multi-grade primary education and thus contribute to reducing the gaps between this type of education and the education provided in schools with a complete organisation.

Specific objectives

1. To analyse the application of the integration, community and diversity recognition projects proposed in the plans and programmes of the New Mexican School in multi-grade primary schools in the Municipality of Acaponeta in the State of Nayarit, through an explanatory study of the general operating conditions that were developed from August 2022 to July 2023.

2. Design of a proposal to strengthen the operation of inclusive, community and diversity recognition projects, as set out in the plans and programmes of the New Mexican School in multi-grade primary schools in the Municipality of Acaponeta in the State of Nayarit, through the establishment of a methodology for the generation of knowledge that recovers community knowledge and allows the creation of learning communities.

3. To produce didactic and dissemination materials that contribute to improving the operation of inclusive, community-based projects and the recognition of diversity in multi-grade primary education, thereby helping to reduce the marginalisation gaps between this type of education and the education provided in fully organised schools.

Research questions/hypotheses

How will the community integration and diversity recognition projects proposed in the plans and programmes of the New Mexican School operate in multigrade primary education? What is the participation of teachers, students and parents in the implementation of community-based curricula for multigrade primary education?

What are the ideal characteristics for inclusive projects to operate in multi-grade primary schools?

What are the general orientations that teachers need in order to be able to implement the multigrade primary education curriculum?

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Methodology

Stage 1, Goal 1

To develop a characterisation of the general and specific conditions, on the basis of which the community integration projects have been implemented, with recognition of the diversity proposed in the primary education curriculum of the New Mexican School, in the multi-grade primary schools of the Municipality of Acaponeta.

Methodology of stage 1

For stage 1 of the research project, the explanatory method will be used, where quantitative variables will be used, from which explanations will be generated based on their behaviour. The study will be based on a characterisation of the 70 multi-grade schools in the municipality of Acaponeta, which will include three sets of variables.

Contextual variables

- Location
- Access capacity
- Degree of marginalisation where it is located
- Productive orientation where the school is located
- Indicators of violence, drug addiction
- Among others

School variables

- Number of groups
- Number of teachers
- Age and seniority of teachers
- Number of students per group and per school
- Average age of students
- Characterisation of infrastructure and services

Variables of the New Mexican School's operation

- Form of implementation
- Phases or periods of training
- Number of projects carried out
- Integration of projects with contents

Expected products:

1. Explanatory study of the general and specific conditions, on the basis of which the community integration projects have been implemented, with recognition of the diversity proposed in the primary education curriculum of the New Mexican School, in the multi-grade primary schools of the Municipality of Acaponeta.

2. Socio-demographic characterisation of the multigrade primary schools in the municipality of Acaponeta.

Stage 2, goal 2

Design a strengthening proposal for the operation of inclusive, community and diversity recognition projects, set out in the plans and programmes of the New Mexican School in multi-grade primary schools in the Municipality of Acaponeta in the State of Nayarit, generated from the methodology of knowledge management.

Methodology stage 2

The methodology of the second stage of the project is configured around the Second Generation Knowledge Management Model of Firestone and McElroy (2003) and the Organisational Knowledge Creation Model of Ikujiro Nonaka (1994), as well as integrating different substantive and transversal elements of the theoretical models of Petter M. Senge (2005) and Etienne Wenger (2001), which deal with systemic thinking and the conformation of communities of practice respectively.

The combination of the above models and strategies for knowledge generation allowed to establish a series of phases and moments to carry out the process of knowledge generation and management, the four main activities are:

1. Forming the community of practice
2. Negotiating the method and techniques of work.
3. Sharing experiences among the actors
4. Acquire external information
5. Initial validation
6. Create concepts, formulations and make clarifications
7. Establish boundaries and connections
8. Validation among actors and externals

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9. Sharing with other communities of practice
10. Design of the first proposal.

Expected products

1. Mapping of the knowledge of the multi-grade primary schools in the municipality of Acaponeta.

2. Innovative proposal to strengthen the operation of inclusive, community and diversity recognition projects, as set out in the plans and programmes of the New Mexican School in multi-grade primary schools in the Municipality of Acaponeta in the State of Nayarit, generated from the methodology of knowledge management.

Stage 3, goal 3

To produce a book that contributes to improving the operation of inclusive, community-based projects and the recognition of diversity in multi-grade primary education, thereby helping to reduce the marginalisation gaps between this type of education and the education provided in comprehensive schools.

Methodology of stage 3

For the third stage of the project, the methodology of knowledge management will be used, with respect to its knowledge integration stage, according to Canals '[...] there are only two fundamental processes in knowledge management: creation and transmission. All the others, such as the organisation of knowledge or its storage, are only aids to facilitate the first two' (2002, p.18).

Hence the need to have adequate processes of organisation and storage of knowledge, which allow the creation or transmission; in this way Canals (2002), recognises the importance of formalising the processes through which ideas and experiences will be systematised and thus facilitate the process of sharing knowledge.

1. Printed textbooks that contribute to improve the operation of inclusive, community and diversity recognition projects in multi-grade primary education and thus contribute to reduce the marginalisation gaps between this type of education and the education provided in full organisation schools.

Result

The New Mexican School (NEM) proposes a comprehensive educational reform, which takes into consideration a curricular and administrative change, together with a change of perspective within the pedagogical model, where the student becomes the guiding axis of the formative process, in order to generate the conditions in their context for a holistic development, which considers the context and the actors around them.

With a civic and humanist perspective, the NEM seeks to generate a positive impact on 7 areas of inequality in Mexico through equity-oriented educational policies; in order to universalise, redistribute and adapt the tangible and intangible assets of the Mexican educational system.

The new Mexican school proposes to positively influence the development of students from an early age, which transforms cognitive and socio-emotional differences into learning differences, but not from exclusion, but as the recognition of difference as a meeting and development point to generate inclusion and equity.

Recognising the current Mexican system as a consequence of past political periods implies identifying the accumulation of inequality as a systemic problem, which can be achieved through the recognition of diversities, and generating training spaces for teachers, who are the main protagonists in developing conditions for learning in the classroom.

The linking of the new Mexican school is not limited to basic education; it is possible to generate a relevant relationship with frontier policy, given that it tends to focus on promoting areas of research and innovation considered strategic for the economic, social and technological development of a country.

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The NEM proposal conceives schools as spaces that promote knowledge, which encourages research to generate objects of study that are relevant and contextualised to each region, in addition to fostering culture and innovative knowledge, reducing the gaps between areas of knowledge, in order to propose an interdisciplinary strategy.

Conclusions

The integral vision of knowledge is the driving force that allows the generation of methodological bridges between the knowledge generated by the new Mexican school and frontier research, since the traditional is no longer relevant and innovation to approach the educational situation requires a structural rethinking of the educational system.

The generation of frontier research projects is essential to close historical gaps. By blurring the differences that discriminate against educational actors from an early stage, the basis for future inclusive educational trajectories is laid.

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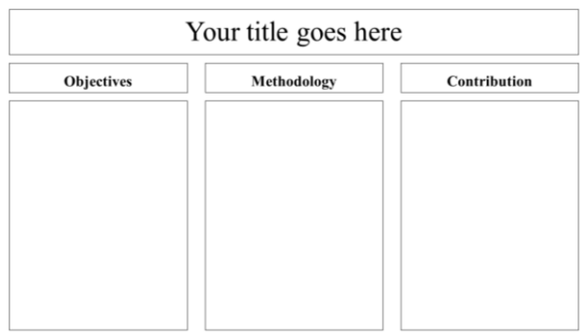

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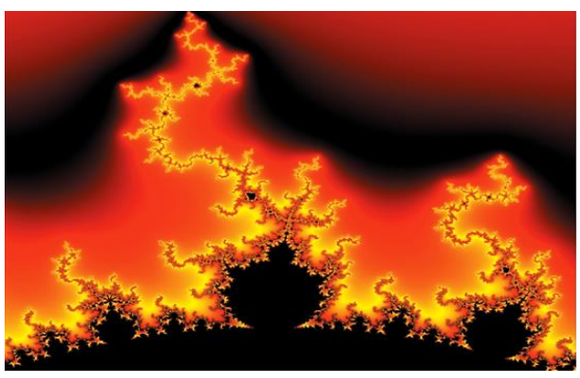

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