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Abstracts Collection

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SERRUDO-GONZALES, Javier

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Preface

In ECORFAN® we are attached to the RENIECYT-CONAHCYT / 1702902 and integrated in the National System of Researchers - SNI - at Levels I-II and III in the areas of Physical Mathematics and Earth Sciences - Biology and Chemistry - Medicine and Health Sciences - Humanities and Behavioral Sciences - Social Sciences - Biotechnology and Agricultural and Livestock Sciences and Engineering, We are aware that in order to build the Scientific Digital Identity of Authors in Mexico, we must increase the optimal allocation of scientific, technological and innovation production to meet the needs of the country. Establish the instances and mechanisms of coordination with the governments of the federal entities, as well as the linkage and participation of the scientific and academic community of the institutions of higher education, of the public, social and private sectors for the generation and formulation of policies for the promotion, dissemination, development and application of science in the priority areas of Mexico. To promote the development, linkage and dissemination of scientific research derived from basic and applied research activities, quality technological development and innovation, associated with the updating and improvement of education and the expansion of the frontiers of knowledge supported by new information technologies, according to the order of priority and international scientific indexing, which is why we present the results of our 18th International Conference - doing science, technology and innovation in the world.

CDMX.
December 11, 2023.

Serrudo-Gonzales, Javier BsC.

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1 Physical and Mathematical Sciences and Earth Sciences

Design of a web platform for registering tourist locations in San Martín Texmelucan using augmented reality

Diseño de plataforma web para el registro de lugares turísticos de San Martín Texmelucan utilizando realidad aumentada

MORALES-ZAMORA, Vianney, PAREDES-XOCHIHUA, Maria Petra and SÁNCHEZ-JUÁREZ, Iván Rafael

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Abstract

This project aims to create an online tool that allows users to register, explore, and promote tourist destinations in San Martín Texmelucan using augmented reality technology, enabling visitors to fall in love with and appreciate the greatness of each place. The web platform seeks to boost tourism in the area, enhance the tourist experience, and promote the local economy by attracting more tourists and highlighting local tourist destinations. Additionally, the platform aims to provide detailed and enriched information about registered tourist spots, including photos, videos, descriptions, and user reviews, so that visitors can make informed decisions and have a more enriching experience. With this initiative, the goal is to promote tourism in San Martín Texmelucan and provide a useful and engaging tool for tourists, as well as for entrepreneurs and businesses in the local tourism sector.

Platform, tourist, Texmelucan

Development of a Medical Application as an Integrative Activity

Desarrollo de una Aplicación Médica como Actividad Integradora

MORA-LUMBRERAS, Marva Angélica, SÁNCHEZ-PÉREZ, Carolina Rocío, PORTILLA-FLORES, Alberto and SÁNCHEZ-SÁNCHEZ, Norma

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Abstract

The importance of collegiate work in educational instutets of all levels has been increasing in recent years. In the case of the Universidad Autónoma de Tlaxcala with the incorporation of integrative activities combining different learning units, accordingly the development of specific software becomes more complete, helping the Computer Engineering student to combine their knowledge in a planned manner. This paper presents a Medical Application project, specifically focused on the development of a medical appointment generator called Vida Sana, which was built as an integrative activity using the reference model CMMi Dev Level 2 model, under the waterfall methodology. The idea is that software development is done by the students in an organized manner, coordinating individual learning of seven learning units to achieve a quality application for Android mobile devices.

Integrative Activity, Medical Application, CMMi

Analyze vehicular flow at the intersection, Fernando Baeza avenues and Chuvíscar River, applying work sampling

Analizar afluencia vehicular del cruce, avenidas Fernando Baeza y Río Chuvíscar, aplicando Muestreo del Trabajo

AGUIRRE-OROZCO, Mario Abelardo, DELGADO-MARTÍNEZ, Martha Lilia, MÁRQUEZ-MONÁRREZ, Olivia and CONTRERAS-MARTÍNEZ, Jesús José.

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Abstract

It is an innovative work to carry out this analysis of vehicular flow that will be very useful for the city of Delicias Chihuahua, this town is relatively young and lacks road engineering (traffic lights) in some specific points, given the demographic growth of the neighborhoods on the outskirts, this avenue has been a key point to vent the vehicular flow to the different neighborhoods. The continuous improvement technique was applied, which is work sampling, according to ILO establishes that Work sampling is a technique to determine, through statistical analysis and random observations, the percentage of appearance of a certain activity. It will be necessary to continuously observe each of the points in the area and record the moment, at a previously selected time in the same period of time, but at different random times provided by the work sampling. For this investigation, the general objective is: identify the vehicular flow at the intersection of Fernando Baeza and Río Chuvíscar avenues in Ciudad Delicias, Chihuahua. The contribution of this study will benefit more than 79,907 vehicles that are registered in the vehicle registry of the Revenue Collection Office (2022) in the town and in this way apply continuous improvement for the benefit of citizens, identifying the hours of more vehicle capacity and consequently take advantage of cutting-edge technology, and build a road engineering focused on traffic lights for the benefit of its entire population.

Vehicular Flow, Traffic Lights, Work Sampling, Continuous Improvement

Proposal to improve productivity for companies providing comprehensive automation and control services

Propuesta de mejoramiento de la productividad para las empresas de servicios integrales de automatización y control

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Abstract

The concept of productivity has evolved over the years to represent more than an efficiency index. From issues of cost and quality, its scope has expanded to encompass social concerns such as job creation, job security, poverty alleviation, resource conservation, social responsibility, to business excellence, governance and environmental protection (Referred to as Green Productivity). Today, other concepts of productivity that have evolved include social productivity and knowledge productivity. There are several ways to understand productivity, but there are at least two essential definitions that are frequently used and adopted today. Productivity is key to maintaining competitiveness, both at the organizational and country level, and to ensure sustainable socioeconomic development. The various productivity-enhancing tools, techniques, methods and practices that have been developed and adopted over the years in the production and consumption of goods and services are essential for the dynamism of economies.

Productivity, Efficiency, Development

3 Medicine and Health Sciences

Levels of depression in pregnant women attending the Ticul community hospital, Yucatan, Mexico

Niveles de depresión en mujeres embarazadas que acuden al hospital comunitario de Ticul, Yucatán, México

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Abstract

Objective. To describe levels of depression in pregnant women treated at the Ticul community hospital, Yucatan, Mexico. **Methodology.** Cross-sectional design. The participants were pregnant women who attended their prenatal check-ups at the community hospital in Ticul, Yucatán, Mexico, to whom the Aron T. Beck Depression Inventory (BDI-II) was applied. **Results.** 121 pregnant women participated. The age range was from 16 to 42 years old. 81.5% of pregnant women were in the third trimester of pregnancy. 85% presented levels of depression with ups and downs considered normal, 5% mild disturbance in mood, 10% presented levels of depression located between intermittent states of depression, moderate depression and severe depression which are indicators that it can need professional help. **Contribution.** This study contributes with results that show that levels of depression occur during pregnancy that may require professional support as preventive measures for serious complications.

Level, Prenatal, Preventive

Parents' knowledge of nutritional labeling and its impact on food choices

Conocimiento de los padres de familia sobre el etiquetado nutricional y su impacto en la elección de alimentos

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Abstract

The nutritional label is a tool that helps parents to make decisions about their eating plan, in order to make safe purchases. The objective was to analyze the knowledge that parents have about nutritional labeling and its impact on food choices, for which an observational, prospective and analytical study was used. A questionnaire made up of 14 questions was applied to 36 settlers from a community in the State of Zacatecas. As a result, it was obtained that 97% do know the nutritional information table, and of these 69% if it seems important to read and understand the label, which influences when making the choice of food purchases, more than half of the population considers that the current design greatly favors reading. It was concluded that although the majority of the population already knows it, it is of vital importance that the totality of this, in addition to knowing it, fully understand it and take into account all the nutrients or substances that may harm it and thus be able to choose the best products for their diet and that of the family and thus have a better nutritional status.

Knowledge, Nutritional Labeling, Food choice

Serum albumin levels and fluid overload in patients with hemodialysis: study in a private hospital in Zacatecas

Niveles de albumina sérica y sobrecarga hídrica en pacientes con hemodiálisis: estudio en hospital privado de Zacatecas

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Abstract

One of the markers to evaluate health in patients with hemodialysis is the level of serum albumin, water overload is a common complication in this type of people that can affect albumin, the objective in this work was to know the levels of serum albumin and its relationship with fluid overload in patients with chronic renal failure on hemodialysis. A descriptive, cross-sectional and analytical study was carried out in a renal therapy unit of a private hospital in the city of Zacatecas, the sample consisted of 50 patients of both sexes. The variables considered were serum albumin, body mass index (BMI), water overload, anthropometry and sociodemographic factors. An intermediate negative correlation (-0.382) was found with a p of 0.003, which suggests a significant association between the two variables. These results are of clinical relevance, since maintaining adequate levels of serum albumin can contribute to the prevention or control of fluid overload in these patients, which in turn can positively impact their health and quality of life.

Serum Albumin, Fluid Overload, Hemodialysis

4 Humanities and Behavioral Sciences

Future expectations in secondary and high school students from a rural community in the state of Yucatan

Expectativas de futuro en estudiantes de secundaria y bachillerato de una comunidad rural del estado de Yucatán

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Abstract

Objective: to analyze future expectations, which, from the students' perspective, are important; as well as to determine if the expectations are different for secondary level students compared to those of high school and to explore the behavior of future expectations in men and women. Methodology: a study with a non-experimental, cross-sectional design was carried out with students from two schools: a secondary school and a high school in the rural area. This work contributes to understanding the adolescent population of the rural area with which we work, since each approach contained in the questionnaire induces them to reflect and assess their current situation; In the medium and long term, it is expected that the results obtained provide elements that can be translated into Public Policies so that the Ministry of Public Education incorporates them into its educational programs and in this way the adolescent population at all educational levels can be trained as individuals capable of visualize and build their expectations for the future incorporating elements of modern life, but at the same time, valuing their origin and the cultural diversity of their present time, as well as the impact of modernity on their lives

Future Expectations, High School Students, Rural Communities

The perception of students of the Autonomus University of Nayarit regarding sustainable development in organizations

La percepción de estudiantes de la Universidad Autónoma de Nayarit ante el desarrollo sustentable en las organizaciones

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Abstract

The main objective of this research is to know the perception that young students of different profiles have about the existing problems regarding sustainable development, their awareness and actions to be taken as agents of change. The perception of university students, specifically from the Bachelor's Degrees in Administration, Marketing and International Business who are currently in their second semester at the Academic Unit of Accounting and Administration. The study arises from the importance for our country to be proactively aligned with the 2030 agenda about the 17 goals of the United Nations. The purpose of the article is to make a qualitative statement, making a comparison with different researches. Due to its scope and approach, the research is descriptive in nature with a mixed approach. For the collection of data, an instrument was designed, which is the Google Forms survey, to know the perception of students on sustainable development in organizations. As main results, it is concluded that students have the vision to carry out concrete actions that have a positive impact on society

Sustainable development, Organizations, Perception

Trends and Challenges in the Upskilling and Reskilling of the Workforce in the 21st Century: An Analysis of the Strategies and Results in the Acquisition of Skills for Adaptation to Technological and Labor Change

Tendencias y Retos en la Mejora y Recualificación de la Mano de Obra en el Siglo XXI: Un Análisis de las Estrategias y los Resultados en la Adquisición de Competencias para la Adaptación al Cambio Tecnológico y Laboral

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Abstract

The successful implementation of upskilling (improvement of existing skills) and reskilling (acquisition of new skills) strategies in the industry is a crucial process to maintain competitiveness in a constantly changing work environment. It begins with identifying training needs, which can be obtained through interviews, performance analysis, competency assessments, and collaboration with experts. Once skills gaps are identified, customized training programs are designed that include various training methods, such as in-person and online classes, and time is allocated during work hours for employees to participate in these development activities. Progress measurement and continuous evaluation are essential to ensure that employees acquire the necessary skills. Additionally, as technology continues to evolve, a continuous adaptation process is established to keep workforce skills up to date. Ultimately, this approach benefits both the company, by improving efficiency and competitiveness, and the employees, by providing them with opportunities for career growth and adaptation to new technologies skilling, acquiring strategies job.

Competitiveness Job, Adaptation, Efficiency Job

Knowledge of professional ethics in students of the accounting career of an HEI

Conocimiento de la ética profesional en estudiantes de la licenciatura de contaduría de una IES

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Abstract

This research focuses on analyzing the level of knowledge about professional ethics among accounting students in a Higher Education Institution (HEIs). To achieve this, four specific objectives are proposed: the first is to identify the perceptions of students about integrity and honesty, the second, to evaluate the understanding of social responsibility of accounting professionals, we continue with the third that consists of analyzing attitudes of professionalism and finally to evaluate the perception about personal development in the context of the degree they are currently studying. The relevance of this research lies in its ability to provide valuable information and improve the ethical training of future accountants. The results obtained will provide the opportunity for the educational institution to adjust its curriculum and training programs in order to address the identified deficiencies in the ethical knowledge of students. This adjustment will contribute to the training of ethical and responsible accounting professionals, trained to make appropriate decisions in their work performance. In addition, the application of a quantitative approach and the use of sound statistical techniques ensure the reliability of the results, further strengthening the contribution of this study to professional ethics in the field of accounting.

Professional Ethics, Accounting Students, Social Responsibility

Relevance of a community care program from the perspective of its stakeholders: educational practices based on social responsibility

Pertinencia de un programa de atención a la comunidad desde la perspectiva de sus actores: prácticas educativas desde la responsabilidad social

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Abstract

Educational desertation is an educational problem that affects part of the school-age population. In order to contribute to the reduction of these problems, there are several mentoring programs in support of children and adolescents that are developed from the public university, whose main objectives are aimed at strengthening the comprehensive training and increase the educational expectations of its participants to achieve their welfare. This qualitative-phenomenological study aims to understand the perspective of mothers and fathers on the relevance of a mentoring program in the academic area; a structured interview was used to collect data. The results obtained indicate that, through a series of identified categories, mothers and fathers are able to recognize the incidence of the program in the academic area, concluding that the program is relevant to achieve favorable results in school activities.

Educational Desertation, Mentoring, Program Effectiveness

Parental homework support and technostress in the family context

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

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Abstract

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

Parental Involvement, Homework, Techno-Stress

Leadership as a factor of subsistence of MSMEs in Tenosique, Tabasco.

El liderazgo como factor de subsistencia de las MIPyMES en Tenosique, Tabasco

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Abstract

The importance of leadership in Micro, Small and Medium Enterprises (MSMEs) is undeniable in today's business landscape. These organizations, often characterized by small size and limited resources, rely heavily on effective leaders to navigate challenges of competitiveness, thrive in competitive markets, and achieve sustainable growth. Therefore, this research, through a qualitative approach, with inductive and interpretative logic, based on documentary analysis and non-experimental, cross-sectional and correlational-causal type, seeks to propose a leadership model that fits the context of study and positively influences the growth of MSMEs in Tenosique, Tabasco, in order to achieve their subsistence, growth and competitiveness. The study is supported by the use of surveys conducted with previously identified experts in the field and is supported using the Minitab statistical software with the linear regression technique for the analysis of the data.

Leadership, MSMEs, Minitab

Organizational climate and its effects on job satisfaction: A case study

Clima organizacional y sus efectos en la satisfacción laboral: Un caso de estudio

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Abstract

Today, organizations are increasingly recognizing the importance of organizational climate in human resource management and business success. As work dynamics, employee expectations and the demands of an ever-changing business environment evolve, it plays a crucial role in the success and sustainability of organizations. For this reason, organizational climate influences aspects such as emotional well-being, motivation and commitment, stress reduction, as well as effective communication and professional development. In view of this, the present research aims to evaluate the influence of organizational climate on the job satisfaction of the staff of a public sector General Hospital in Villahermosa, Tabasco, in order to generate a conceptual model based on the dimensions established by the analysis of the current context of the Hospital. The study has a quantitative approach of a transectional, explanatory type, carried out by collecting data through the application of a previously validated measurement instrument.

Organizational Climate, Job Satisfaction, Conceptual Model

The digital marketing: The technological response to Nayarit's tourism challenges

El marketing digital: La respuesta tecnológica a los retos turísticos de Nayarit

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Abstract

This study highlights the importance of digital marketing in the revitalization of tourism in Nayarit. Digital marketing is essential to maintain competitiveness in a constantly evolving market and to adapt to the changing demands of modern tourism. The adoption of digital marketing strategies, widely used by major tourism companies, is crucial to remain relevant and appealing in the industry. The effectiveness of the Inbound methodology is emphasized, supported by a systematic review that attracts and fosters long-term relationships with tourists. It is imperative that tourism entities in Nayarit stay up to date with the latest trends and developments in digital marketing, in addition to providing continuous training to their staff. This will ensure that Nayarit continues to be a preferred destination for both domestic and international tourists. In summary, digital marketing is an essential strategic ally for the sustainable development of tourism in Nayarit. Its proper implementation, along with ongoing training for tourism personnel, will significantly contribute to maintaining the competitiveness and appeal of the region in the global market.

Sustainable development, Organizations, Perception

Student Perspectives Inspiring Change: The Vital Role of Surveys

Perspectivas Estudiantiles que Inspiran Cambios: El rol vital de las encuestas

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Abstract

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

Update, Syllabus, Survey

Teacher autonomy support and psychological control, gender and academic engagement in secondary school students

Apoyo a la autonomía y control psicológico del docente, género y compromiso académico en estudiantes de educación secundaria

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Abstract

Objective: The present study analyzed the relationships between autonomy support, teacher psychological control, gender and academic engagement. **Methodology:** The sample consisted of 324 high school students aged 10 to 13 years ($M = 12.88$ years, $SD = 1.52$) from six public high schools located in different school zones of the state of Durango. **Results:** Multiple linear regression results indicate that student autonomy support favors students' academic engagement, while teacher psychological control is negatively associated with students' academic engagement. Furthermore, gender does not seem to be associated with students' levels of academic engagement. **Contribution:** It is concluded that autonomy support and psychological control are predictors of academic engagement of secondary school students.

Autonomy, Psychological Control, Engagement Academic

Alcohol Consumption in Nursing Students of a Private Institution

Consumo de Alcohol en Estudiantes de Licenciatura en Enfermería de una Institución Privada

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Abstract

Currently, alcohol consumption is a health problem. According to the National Survey on Drug, Alcohol and Tobacco Consumption 2016-2017 (ENDOCAT), compared to 2011, an increase from 0.8% to 2.9% has been reflected, with a greater prevalence in men, but women also show high consumption. Therefore, the objective is to know the risk of alcohol consumption in nursing students. Methodology: A descriptive quantitative research study is carried out through the application of the AUDIT instrument which is applied to 25 higher education students. Results. It was found that they have a high risk of consuming alcohol, the risk is similar in men and women. Contribution through the results obtained to develop programs or strategies that reduce the risk of alcohol.

Consumption, Alcohol, Nursing Students

The well-being of teachers favored by emotions, integral human development and the organizational climate

El bienestar de los docentes favorecido por las emociones, el desarrollo humano integral y el clima organizacional

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Abstract

This research seeks to integrate and structure in order of relevance the main elements of emotional development, integral human development, and the organizational climate that favor the well-being of preschool, primary, and secondary education teachers in the state of Zacatecas. The population was made up of all the basic education teaching staff, a total of 17,695 -sector heads, supervisors, Pedagogical Technical Advisors, managers, deputy principals and group teachers -, the instrument was applied from a Google form and 5,593 were received. answers. Factorial analysis was carried out with the principal component extraction method, obtaining a total of 20 components that explain 60.68% of the phenomenon, taking into account the first 8 factors that yield a level of explanation of 50.31% of teacher well-being. The main results highlight and confirm that teacher well-being is related to: 1. Emotional development in the aspects of: self-efficacy 0.74, emotional knowledge 0.72, emotional awareness 0.69 and positive emotions 0.68; 2. Integral human development in the aspects of: building social well-being 0.77, social responsibility 0.76, suitable habitat 0.76, common decisions 0.75 and physical exercise 0.74; 3. The organizational climate in the aspects of: camaraderie 0.72, school organization 0.68, trust in the director 0.67 and cooperation 0.65.

Teacher Well-Being, Emotional Development, Organizational Climate And Integral Human Development

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

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

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Abstract

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

Learning Climate, Teachers, University Student

Commitment and quality of teaching, source of training for professional teaching service

Compromiso y calidad de la enseñanza fuente de capacitación al servicio profesional docente

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Abstract

It is an analysis of the responsibility and commitment of teachers to achieve a constant update of the teaching profession with a philosophy of professional ethics, to provide quality formative teaching to students. The quality of teaching is lost when teachers lack work commitment and lose interest in their work performance. The non-experimental, quantitative research design, in data collection, an instrument of 9 complex and 136 simple variables is applied, validated with 0.93 Cronbach's alpha, has three axes: professional teaching service, teaching commitment and quality in teaching, of which the latter are explored in depth. It is measured with a randomly selected sample of 392 primary school teachers from a population of 12,640. The analysis is descriptive with percentages and measures of central tendency, correlational with a Pearson r^2 0.50 and multivariate principal components method. Among the notable conclusions about the professional teaching service is not that it omits to evaluate the performance and commitment that teachers show in their professional work, which is the basis of the quality of teaching. Work commitment is reflected by being motivated to train to develop ideal learning environments, they conduct themselves ethically, they are professionals concerned about student learning, they use assertive communication, they prepare classes, they innovate teaching strategies, they allow performance evaluation as a source. of professional innovation, they also work collaboratively with shared leadership with colleagues in schools.

Commitment, Quality, Teaching Professionalization

Comparative analysis of the curricular designs of teachers who are postgraduate students

Análisis comparativo de los diseños curriculares de los docentes que estudian posgrado

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Abstract

This article tries to elucidate the relevant differences between two training groups in the disciplinary field of education. The sample was made up of postgraduate students, both from a university and from a normal training school. Given the above, significant information is retrieved from the way in which each institution treats the programmatic contents of their respective educational plans. This research has three axes: the curricular design of the educational figure, the development of emotional intelligence limited to empathy and the professional praxis of the respondents. The objective of this study is to analyze how institutions, regardless of belonging to the same disciplinary field, tend to form particular traits as the case may be. Within the results, differences are shown regarding sex, academic level and institution in which they carry out or carried out their postgraduate studies. The methodology used was under a quantitative process, with a *t* Student analysis, an instrument was developed for this purpose, applied through *Microsoft Forms*, with 84 variables measured with a decimal ratio scale.

Curriculum Design, Graduate Students, Education

5 Social Sciences

The importance of tutorial action in the improvement of educational quality with a human perspective at the Universidad Autónoma de Querétaro (UAQ)

La importancia de la acción tutorial en la mejora de la calidad educativa con perspectiva humana en la Universidad Autónoma de Querétaro (UAQ)

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Abstract

In this article we describe tutoring actions which transcend in the quality of education and have an impact on the students' human behavior in society. In the next sections we address different perspectives on performing tutoring actions. These actions are fundamentally based on identifying the students' circumstances and designing the best actions to accompany, orient, guide and direct them in their learning process and integrated development. This considering that the teachers training and integrated development are relevant to accomplish good practice in the students. Thus, affectionate relationships will be established based on respect, comprehension, and acceptance.

Alterity, Educational Quality, Humanistic Approach, Tutoring, UAQ

Proposal of an integral model for measuring productivity in a convenience store in Villahermosa, Tabasco

Propuesta de un modelo integral para la medición de la productividad en una tienda de conveniencia en Villahermosa, Tabasco

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Abstract

Nowadays, any company needs to be productive and competitive in order to function well, which signifies that productivity means doing the job in the best way, optimising the resources available to achieve the goals set within the company, and in turn is based on tangible and intangible factors. This project was based on measuring productivity in a grocery store in Villahermosa, Tabasco. For this purpose, a tool was developed to measure 8 basic criteria for creating and maintaining productivity, to be applied to each department of the store. We then developed a productivity improvement model to address these opportunities.

Productivity, Competitiveness, Instrument

Proposal to improve the process of administration of projects financed by CONAHCYT by the Treasuries of the Universities of Campeche

Propuesta para mejorar el proceso de administración de proyectos financiados por CONAHCYT por parte de las Tesorerías de las Universidades de Campeche

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Abstract

The treasuries of the universities and educational institutions of the state of Campeche, have processes for the administration of projects that are generally made up of many steps to follow to carry out the different procedures such as payments to suppliers, per diems, scholarships, among others, which usually takes from days to weeks, making it impossible to meet the commitments made by the institution. The objective of this work is to evaluate the flow of the current financial administration process of the projects of the National Council of Science and Technology (CONAHCYT) to propose a reengineering of the processes. The technique of direct observation and the survey was applied to learn from the users the perspective of the administrative process and to identify critical points in conflict. The study of time and movement proposed by Tejada et al (2017) was applied, a tool that determines the standard times of the operations that make up a process; and the movements of the people involved to carry out said operation. With this application of this method, the following were achieved: minimizing the time required in each step and the costs, providing a reliable and high-quality process, eliminating inefficient steps, and accelerating the efficient ones.

Projects, Universities, Treasuries

Learning experience in a virtual environment: Student perception

Experiencia de aprendizaje en un entorno virtual: Percepción del estudiante

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Abstract

As a result of the COVID-19 pandemic, the working dynamics in the educational area have been transformed. An important change has been the incorporation of digital tools, which have taken a leading role in the learning process. For this reason, the goal of this research is to identify the perceptions that students have regarding the use of technology and how it relates to their learning experiences online or virtual modality. To achieve the research objective, a qualitative methodology was applied; a questionnaire consisting of 9 items was applied to collect the data, of the characteristics and the assessment of the technological tools and online experience in virtual learning. The sample was taken from high school students. The results confirmed that virtual learning provided students with positive experiences. The students gave a favorable evaluation of the digital tools applied to virtual learning. The main advantages were; it took less time to finish activities. These activities were focus on learning for life. Therefore, the use of technology applied in a virtual learning environment allowed students to experience emotions such as curiosity, doubts and insecurity, all of these factors contribute to their learning process.

Virtual Environment, Experience, Perceptions

The student profile in virtual environments

El perfil del estudiante en ambientes virtuales

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Abstract

The use of technology in the virtual modality intensified from the confinement stage and is still in force in the post-pandemic period because higher-level institutions chose subjects from their curriculum and programs to be taught under such a modality as it is the context of the present investigation. Nonetheless, for teachers and students, it is challenging to teach and learn in technology-enabled environments. In this situation, the objective is to describe the student's profile in virtual environments to contribute to their learning process. Considering the methodology, a questionnaire was applied to characterize the students' profile in quantitative data, finding the following results. Four categories describe how a student could work in digital spaces: the approach to knowledge in a critical, creative way and with analytical-systemic thinking, autonomy, skills (responsibility, empathy, commitment, and participation), and competencies (technical, pedagogical, communicative and collaborative) which together will allow us to achieve the knowledge representation. The contributions of the research lie in the attributes of the appropriate profile to enhance virtual learning that responds to different learning preferences.

Student Profile, Virtual Environments, Teaching-Learning Process

Implementation of Corporate Social Responsibility in commercial MSMEs of the Construction Industry, based on CEMEFI

Implementación de la Responsabilidad Social Empresarial en MiPYMES comerciales de la Industria de la construcción, con base al CEMEFI

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Abstract

The implementation process of Corporate Social Responsibility is presented for micro, small and medium-sized commercial companies in the construction industry, taking the Mexican Center for Philanthropy (CEMEFI) as a reference. And the concept of Corporate Social Responsibility (CSR) was shown, as well as the selection criteria of the companies, in addition to the challenges and opportunities derived from the implementation of CSR, in the methodological aspect it is proposed to apply a survey to employees to know the organizational climate that prevails in the organization, and another customer satisfaction survey. Considering the impact of the company's activities, internally and externally in the economic, environmental and social aspects, to finally evaluate the MSMEs again, and apply continuous improvement in its activities to achieve the objectives. The benefits of the implementation of CSR will be reflected in employees, customers, suppliers, but above all in the image of the MSMEs before the community in which it operates, thus creating a competitive advantage over MSMEs that are not Socially Responsible.

Management, financial, Sustainability

Natural treasure of Acapulco: Preserving the magic of Roqueta Island

Tesoro natural de Acapulco: Preservando la magia de la Isla Roqueta

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Abstract

In the context of the climate crisis, community resilience is vital in addressing environmental challenges. This study examines climate change resilience on Roqueta Island, Acapulco, Mexico. The objective was to assess Roqueta Island's resilience strategies in the face of climate threats, hypothesizing that these measures encounter challenges due to climate threats and tourism. Justification: Acapulco bay faces tropical storms, and Roqueta Island is crucial; understanding how resilience and tourism impact sustainability is essential. Methodology: We conducted comprehensive documentary research on climate change, resilience, and island tourism. Six field trips with participant observation took place from January to July 2023. Results: Acapulco bay faces constant climate threats. Roqueta Island, vital to Acapulco, is impacted by intensive tourism. Local conservation efforts, sometimes with tourist concessionaires, aid preservation but face challenges. Conclusions: Extreme weather increasingly affects the Mexican tropics. Despite resilience measures, they're deemed insufficient to address climate change and tourism. Robust strategies are urgently needed to safeguard Roqueta Island's environment

Environmental, Resilience, Sustainability

State of the Art: “Social and Solidarity Economy as a Driver of Sustainability”

Estado del Arte: “Economía Social y Solidaria como agente de Sostenibilidad”

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Abstract

The article presents a comprehensive analysis of the current state of convergence between Social and Solidarity Economy (SSE) and sustainability, covering the period from 2009 to 2023. SSE, with its principles of cooperation, equity, and citizen participation, is considered a key tool for addressing inequality and promoting decent employment, while sustainability focuses on improving living conditions without compromising the future. The article argues that SSE promotes sustainable economic practices aligned with the 2030 Agenda. The proposed methodology combines heuristic and hermeneutic approaches, allowing for a thorough and up-to-date review of the literature on SSE and sustainability. The application of SSE in various regions is illustrated through case studies that encompass areas such as urban agriculture, circular economy, recycling cooperatives, and socio-economic development projects. Overall, it is emphasized that the combination of SSE and sustainability offers a promising approach to addressing socio-environmental challenges, highlighting cooperation, inclusion, and the pursuit of a sustainable and equitable future.

Social and Solidarity Economy, Sustainability, cooperation

Urban Renewal to Touristification: Oaxaca de Juárez's Historic Downtown

De renovación urbana a turistificación, centro histórico de Oaxaca de Juárez

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Abstract

The city of Oaxaca, renowned for its rich history and cultural diversity, has undergone a major transformation in recent years. Seeking urban renewal and increased tourism, authorities have dramatically altered the character of the historic city center. This study analyzes Oaxaca's urban renewal and resulting touristification, as well as the socioeconomic and cultural impacts on local residents, with a focus on the historic downtown. Qualitative research methods like interviews, observations, and analysis of historical documents were used, along with quantitative data assessing tourism's effects. While urban renewal can provide economic revitalization, an overemphasis on tourism leads to 'touristification,' generating tension between tourism interests and local needs. The findings indicate a rise in Oaxaca's tourism, attracting investment and renewal, but also leading to increased housing costs, resident displacement, and potential cultural loss. Citizens are divided: some welcome economic growth, while others believe tourism undermines Oaxaca's essence. This analysis aims to understand the interplay between urban renewal and tourism in places with deep cultural and historical roots.

Urban Renovation, Touristification, Heritage

Analysis of the impact of the COVID-19 pandemic on hotel occupancy in the main tourist destinations in Mexico

Análisis del impacto de la pandemia de COVID-19 en la ocupación hotelera de los principales destinos turísticos de México

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Abstract

The article takes an innovative approach by longitudinally assessing the impact of the pandemic on hotel occupancy in key Mexican tourist destinations. Its solid quantitative methodology, through statistical comparisons before and after the crisis by season, denotes a rigorous scientific approach. The segmentation of destinations by cluster analysis according to post-pandemic recovery is a valuable contribution. The empirical findings provide deep insight into the resilience of destinations. It highlights the importance of diversifying sources of demand and strengthening human and social capital in the face of disruptive events. The study will set methodological precedents for future research given its replicability. Its modeling of the interaction between government policies and market response provides useful perspectives on public-private sector dynamics. The solid analytical basis will facilitate designing differentiated strategies to boost the sector's recovery. The recommendation to implement tourism intelligence systems denotes visionary public policy. In conclusion, this doctoral work exemplifies a holistic and innovative approach to a phenomenon of global interest.

Hotel Occupancy, Semáforo Epidemiológico, Tourism in Mexico

State of the art of social entrepreneurship

Estado del arte del Emprendimiento social

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Abstract

Social Entrepreneurship (SE) has different connotations from different authors, resulting attractive to many, since within its lines it encloses multiple dimensions according to the context in which it is developed, both geographically and culturally, without leaving aside the social, therefore, it is preponderant to generate a literary review through the social and / or environmental objectives over the economic ones, The term ES is understood as any business initiative, for profit or non-profit, whose objective is the generation of social value, is an attractive topic of new creation that has quickly captured the interest of many researchers to address it from different perspectives, which is why the objective of this study is to generate a documentary analysis through the State of the art, through a two-phase methodology: Heuristic and hermeneutic, based practically on discovering, investigating, collecting and consulting the documents to be analyzed using the Scopus database. The hermeneutic phase allows to generate procedures without rigorosity, relying on documents, research works, articles, which were previously consulted, filtering these findings, to retake only the documents that serve as a source of information.

Social Entrepreneurship, Social Innovation, Local Development

Business competitiveness in the handicraft sector. Case study of San Antonino Castillo Velasco, Oaxaca

La competitividad empresarial en el sector artesanal. Estudio de caso de San Antonino Castillo Velasco, Oaxaca

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Abstract

The artisanal sector represents a means of subsistence for a large number of families worldwide, mainly in marginalized indigenous communities. The companies belonging to this sector produce and market products that transmit the culture and identity of their communities. Oaxaca is a state of the Mexican Republic rich in cultural diversity where the artisanal sector is extremely important for its economy, artisanal companies have had to adapt to the new conditions of a globalized market, making use of different tools and strategies that enhance their competitiveness. This article aims to describe the triggering elements of the competitiveness of the artisan sector of San Antonino Castillo Velasco, Oaxaca, Mexico, a community recognized for its production of textiles and artisan embroidery, the methodology is based on a documentary analysis of different theoretical models contrasted with an ethnographic study based on observation and unstructured interviews within its specific reality.

Competitiveness, Communities, Artisanal

Strategic Analysis of the Development Hubs for the Well-being of the Transisthmian Project in Oaxaca

Análisis estratégico de los polos de desarrollo para el bienestar del Proyecto Transístmico en Oaxaca

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Abstract

The Transisthmian Project in Oaxaca is essential for regional development. It seeks to create development hubs for local well-being in an area with historic economic and social challenges. The main objective is to apply strategic planning in the development hubs for the welfare of the Transisthmian Project in Oaxaca to ensure its success and regional sustainability. The strategic planning methodology allows through the MEFÉ and MEFI matrix: 1. Identify the necessary resources, financial, human and technological, in the area to establish and maintain the development hubs. 2. Management and mitigation of risks to constantly evaluate results. 3. Evaluating, adjusting and improving the progress of the development hubs on an ongoing basis. The MEFÉ matrix is used to evaluate external aspects that impact a region. The MEFI evaluates internal factors that affect community development. In conclusion, the Transisthmian Project's strategic planning methodology in Oaxaca is key to achieving development objectives in the region. It aligns stakeholders, allocates resources efficiently, addresses risks, and evaluates progress. With sound planning, the project drives sustainable development and local well-being.

Stakeholders, Strategic, Evaluating

Strategy to promote the Social and Solidarity Economy in informal microenterprises in Oaxaca: The case of mezcal producers from Santiago Matatlán, Oaxaca. (2020-2023)

Estrategia para impulsar la Economía Social y Solidaria en las microempresas informales de Oaxaca: El caso de los productores de mezcal de Santiago Matatlán, Oaxaca. (2020-2023)

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Abstract

The informal economy has served as a short-term alternative to the lack of formal sector jobs in the capitalist economy, providing a means of livelihood for thousands of people living in marginalized conditions. However, it must be acknowledged that in the long term, the informal economy only contributes to maintaining low productivity and competitiveness in the economy of the state of Oaxaca, thereby reinforcing the vicious cycle of poverty. To formulate a strategy for transitioning informal microenterprises in Oaxaca into formal organizations within the social and solidarity economy, while analyzing the case of mezcal producers in Santiago Matatlán, Oaxaca. We deem it appropriate to conduct a strategic analysis of the threats and opportunities presented by the current external environment and the strengths and weaknesses of the informal economy sector in the state of Oaxaca, starting from the specific case of Santiago Matatlán, Oaxaca. The goal is to identify potential strategies that should be implemented to promote social and solidarity economy in this locality and, in a broader context, in the state of Oaxaca. The aim is to contribute to the formulation of public policies aimed at enhancing the productivity and competitiveness of the economy, specifically in Santiago Matatlán and in the broader context of the state of Oaxaca.

Capitalist crisis, informal economy, Social and Solidarity Economy

Novice Teachers' Perceptions of e-teaching modality

Percepciones de los profesores noveles sobre la modalidad de enseñanza digital

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Abstract

The teaching process in a virtual environment has marked a change in the skills and abilities of novice teachers to innovate their teaching practice during the post-pandemic period. Due to these implications, it is crucial to investigate this topic specifically at a higher level, the context of the present investigation. The objective is to know how they perceive this new educational modality and identify if the platforms used in their praxis are useful for their educational purposes. For this, cross-sectional-descriptive quantitative research took place on a sample of 20 novice teachers from the English Bachelor (BUAP, obtaining the following results: Teachers affirm that the modality is ideal for working in a post-contingency. However, they need the training to use ICTs with a pedagogical approach since the effectiveness and success of the teaching process depend on the knowledge and use of both. Besides, teachers perceived the Moodle platform as more acceptable than Blackboard or Schoology.

Novice Teachers' Perceptions, Virtual Teaching, E-Teaching Modality

Impact of the Sembrando Vida program on the forms of Social Organization, from the Good Living approach in San Blas Atempa, Oax.

Impacto del programa Sembrando Vida en las formas de Organización Social, desde el enfoque del Buen Vivir en San Blas Atempa, Oax.

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Abstract

The objective of this paper is to identify the relationship between the forms of social organization from the perspective of good living in the indigenous communities that belong to the Sembrando Vida Program in the municipality of San Blas Atempa, Oax. The study is qualitative in nature, and is supported by non-participant observation and semi-structured interviews. The selection of the sample was convenient, in combination with the "snowball" technique. Data collection was carried out in March 2023 and consisted of a sample of 22 planters. The research results indicate that in the operation of the program, the forms of community organization in the interior of the state of Oaxaca have been strengthened, provided that the Sembrando Vida Program has taken advantage of traditional forms of organization and institutions, of an indigenous nature, among which are the mano vuelta, the tequio and the guelaguetza, especially in communities that became more vulnerable after COVID.

Communality, Good living, Sowing Life

Benefit-cost analysis of the optimum level of giberellic acid as an inductor of the germination of chiltepín chili (*capsicum annum*. Var avicular) cultivated in backyard

Análisis beneficio-costo del nivel óptimo de ácido giberélico como inductor de la germinación de chile chiltepín (*capsicum annum*. Var avicular) cultivado en traspatio

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Abstract

The gastronomic culture of Mexico is linked to various vegetables, to certain species and, in particular, chili. It is clear that chilies are plant species that have great importance in the identity of the people of Mexico. The objective of this research was to analyze the cost-benefit of sowing chiltepin-type chili in the backyard using the optimal level of applying gibberellic acid as a germination inducer. Prior to the cost-benefit analysis, seven treatments were evaluated to select the best one to induce chiltepín germination. The treatments were supported by the application of gibberellic acid in different percentages, plus a control (T1-no application). The results showed that the optimal level of germination was obtained with the application of substrate, perlite, vermiculite and 5% gibberellic acid. With this treatment, a greater number of plants and 95% rooting were obtained, compared to the control treatment (T1) as well as a greater yield of chili (171 g plant⁻¹) compared to the control (128 g plant⁻¹). A cost-benefit ratio of 1.33 was calculated for the best biological treatment, so it is concluded that it is possible to improve family income through the production of chiltepin-type chili under backyard conditions.

Evaluation, Production, Alternative Cultivation

Economic-financial analysis of a swine farm in Rosales, Chihuahua

Análisis económico-financiero de una granja porcina en rosales Chihuahua

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Abstract

Pig cattle are characterized by their high productive capacity and adaptability to different environmental and climatic conditions. The present work was carried out in the Municipality of Rosales, Chihuahua with the purpose of knowing the economic and financial feasibility of an investment project for a small backyard pig farm with six females of the Landrace breed and one male of the Duroc breed. The marketing of pork will be through local butcher shops and chorizo processors in nearby communities. The management of the herd was designed with emphasis on nutrition and health. The results of the economic and financial analysis showed a positive evaluation of the IRR and the NPV, and the benefit-cost relationship was obtained, which also yielded a viable result for its implementation.

Pigs, Costs, Micro Business, Financial Evaluation

Productivity of management skills in educational institution, in Villahermosa Tabasco

Productividad de las habilidades directivas en institución educativa, en Villahermosa Tabasco

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Abstract

Objectives: Analyze the productivity of the management skills exercised in an educational institution in the city of Villahermosa Tabasco, designing a proposal for improvement. Methodology: To collect information on the productivity of managers' skills. An investigation will be carried out through an instrument (survey). For the research, the Likert scale technique will be used, which will be applied to the collaborators, so that they give their opinion on the productivity of the skills of the managers in the educational institution. Determining how each of the independent variables influences the research variable. Contribution: It will allow managers to make good decisions and design strategies to achieve objectives of the institution

Productivity, Managers And Education

Organizational diagnosis of an Industrial outsourcing company located in the State of Veracruz, Mexico

Diagnóstico organizacional de una empresa de externalización Industrial ubicada en el Estado de Veracruz, México

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Abstract

Today's business world seeks to improve processes and renew business plans to guarantee profitability over time and permanence in the market. Strategic planning processes make all important decisions, which requires a systematic vision of the company and its environment to increase competitiveness and productivity. In this sense, organizational diagnosis is a specialized study that every organization requires. It is mainly responsible for evaluating the current strategic situation of the company, its weaknesses reflected in its problems, as well as its possibilities and scope, including its growth. The objective of the research is to carry out a theoretical tour of the organizational diagnosis, its components and how they are developed, which must be systematically prepared and that, by addressing all its factors, becomes a fundamental strategy for achieving business purposes, avoiding improvisations and ensuring the profitability, positioning and competitiveness of the company.

Organizational Diagnosis, Internal Factors, External Factors

Digital tools that MSMEs need to survive any crisis

Herramientas Digitales necesarias para que las MiPymes sobrevivan a cualquier crisis

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Abstract

Crises such as the COVID-19 pandemic have radically transformed the way businesses operate around the world. Particularly MSMEs, as they were severely affected by this crisis. In Mexico, 1.6 million of these establishments closed, and the rest were forced to adapt quickly to the sanitary restrictions imposed due to the pandemic. Some of the measures implemented by MSMEs to survive the pandemic were home-office and online sales, for which the use of digital tools was indispensable. The objective of this research was to identify which digital tools were used by MSMEs to survive the pandemic so that they are prepared to face future crises. The research was quantitative and descriptive, a questionnaire was applied to 100 MSMEs on digital tools used in business operations. Regarding the results, it was found that the most used digital tools are social networking platforms, among which WhatsApp, Facebook, and Instagram stand out in areas such as sales, marketing, and internal communication. In addition, the most used digital tools for payments are electronic transfers, Clip, and Mercado Pago.

Crisis, Pandemic, MSMEs, Platforms

Analysis of the Most Influential Social Networks in Online Shopping in Mexico

Análisis de las Redes Sociales más Influyentes en las Compras en Línea en México

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Abstract

The present study addresses the relationship between the use of social media and consumer purchasing decisions, with the purpose of providing valuable information for entrepreneurs to effectively allocate their resources on relevant social platforms. The focus is based on the Mexican context, with the primary objective of identifying the most influential social networks in purchasing decisions and assessing whether the variable of age plays a significant role in this process. The methodology employed combines a literature review using the Web of Science database with a quantitative analysis of data collected from the National Survey on Availability and Use of Information Technologies in Households (ENDUTIH) conducted by the National Institute of Statistics and Geography (INEGI) for the year 2022. The findings reveal that the social media platforms with the greatest influence on online purchases in Mexico are Instagram, Facebook, WhatsApp, and Twitter. Surprisingly, the study did not find significant evidence supporting the influence of age on online purchasing decisions. These results have significant implications for online marketing and advertising strategies within the Mexican context.

Social networks, Online Shopping, Marketing

Implementation of an e-commerce sales channel for small and medium-sized businesses

Implementación de un canal de venta de e-commerce para pequeñas y medianas empresas

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Abstract

E-commerce has transformed sales strategies, providing various options for small and medium-sized enterprises (SMEs). The surge of e-commerce has posed significant challenges for SMEs, especially due to the rise of massive sellers during the COVID-19 crisis. This research stems from the need to understand how SMEs can implement e-commerce strategies effectively and profitably. The objective is to analyze key factors such as costs, product variety, user experience, brand positioning, and reputation, to offer strong recommendations to SMEs in their choice of digital sales channels. This study compares three e-commerce channels: online stores, social media, and marketplaces. A detailed review of existing literature and an exploratory analysis evaluating different key factors was conducted. Specific criteria are used to compare and contrast these options. Some of the results suggest that online stores and social media offer greater control and customization, although they entail initial costs and constant development. Marketplaces, while optimizing sales, can limit brand customization and reputation. The findings suggest evaluating the objectives and needs of the SME before choosing an e-commerce channel.

Smes, E-Commerce, Marketplace

Quality of life of institutionalized older adults. Quasi-experimental study in a residential center in Tlaltenango, Mexico

Calidad de vida de adultos mayores institucionalizados. Estudio cuasi-experimental en un centro residencial de Tlaltenango, México

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Abstract

This chapter presents the results of a study that sought to modify the level of quality of life reported by older adults institutionalized in a residential center. A quasi-experimental study of repeated measures was carried out, without a control group. The study was carried out in three stages. First, users were evaluated using the WHOQOL-OLD BREF scale. Second, they were provided with treatment to modify their quality of life. Third, they were re-evaluated using the same scale. Adults in the care home reported a low level of quality of life before treatment. After treatment the levels increased. The Student t test was applied to compare the scores reported by the study participants before and after treatment. The result of this test allows us to attribute a statistically significant increase in quality of life to the treatment developed. This result is relevant in practical terms, because it partially suggests that the treatment is effective and can be expanded for clinical purposes.

Quality Of Life, Older Adults, Autonomy, Social Interaction, WHOQOL-OLD

Psychological Impact of Femicide

Impacto Psicológico Ante el Femicidio

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Abstract

This paper was designed with the objective of describing the characteristics and consequences of femicide in order to raise awareness in society about the psychological impact of its normalization and minimization. This crime is due to the fact that the conduct itself develops within an unequal power relationship between men and women, due to different factors, among which can be found: economic, political, social, religious and sexual, to mention a few. Affecting not only the life and integrity of women, but also third parties, such as the family. It is for this reason that this paper seeks to provide a look at the effects that femicide has on society, as well as the characteristics and consequences of the same and some intervention strategies that can be applied, giving importance to the psychological area and the way in which, as a society we can contribute something to stop normalizing this type of violence.

Femicide, Psychology, Crime, Intervention

Interdisciplinary Collaboration in the Training of Entrepreneurs: Learning Outcomes of Biology and Food Science Students Working Together in the Classroom

Colaboración Interdisciplinaria en la Formación de Emprendedores: Resultados de los aprendizajes de Estudiantes de Biología y de Ciencia de los Alimentos trabajando juntos en el aula

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Abstract

Before the new world scenarios, graduates of public universities require new skills and competencies in the management of information and technologies capable of solving real contemporary problems. Entrepreneurship gains value and sets trends for its incorporation into educational programs, including basic education, aimed at solving real problems in the field, outside the classroom. The validated methodologies *Design Thinking* and *Lean Canvas* were used for the detection of problems and development of solutions with a business vision with sustainable impact. Two groups, from different careers, created a multidisciplinary course with an emphasis on meaningful learning per session, with products from each stage of the process, from the final portfolio. A satisfaction survey was applied to the students at the end of the course. The results of educational practices developed entirely in an immediate geographical environment, in a multidisciplinary way, with the focus on the solution of contingent socioeconomic problems are presented; The data obtained in the evaluation of the learning signified by the students are analyzed to know their perceptions of the immersion experience in a target locality and the creation of their projects with individual business potential and elaborated in a collaborative way.

Entrepreneur, Classroom, Collaboration

Gender Wage Gap in the Formal and Informal Sector in the COVID-19 Crisis Period, of the National Labor Market and the State of Coahuila

Brecha Salarial por Género en el Sector Formal e Informal en el Periodo de Crisis COVID-19, del Mercado Laboral Nacional y del Estado de Coahuila

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Abstract

One of the Sustainable Development Goals of the 2015-2030 agenda establishes guaranteeing equal remuneration between women and men for work of equal value. This objective is taken up in the 2018-2024 nation project for Mexico. In the project, the Federal Government aims to eliminate inequality gaps between women and men, as well as the obstacles that women face in all areas. The objective of this research is to estimate the Gender Wage Gap in the formal and informal sector of the labor market of the country and the state of Coahuila in the period of the COVID-19 crisis, to observe the trend of wage differences in the period 2019 – 2022. Mincerian wage equations (1974) were estimated for each gender with data from the National Occupation and Employment Survey (ENOE), for subordinate workers. The variables considered the sector in which the employee works and the condition of the working day. The Gender Wage Gap was estimated using the Blinder and Oaxaca (1973) methodology, with selection bias correction (Heckman, 1979). It was observed that the Gender Wage Gap in the context of crisis generally tended to close, this was because in the formal and informal sector the salary difference for women tended to decrease in 2020, while in 2022, during the economic recovery the Gender Wage Gap returned to the parameters of 2019 both nationally and in the state of Coahuila.

Gender Wage Gap, Formal and Informal Sector, Crisis Periods

Agro-ecotourism and socio-cultural animation as an alternative for tourism development in the town of El Refugio in the municipality of Ruiz, Nayarit

El agro ecoturismo y la animación sociocultural como alternativa de desarrollo turístico en la localidad del Refugio en el municipio de Ruiz, Nayarit

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Abstract

The main objective of this work is to propose a product made up of agro ecotourism and sociocultural tourism animation in the town of El Refugio, in the municipality of Ruíz, Nayarit, to contribute to tourism development. This work is based on the results previously obtained from the tourism diagnosis of the municipality of Ruiz, Nayarit and its Tourism Characterization carried out by Altamirano et al. (2019), in which a documentary, field and descriptive research was developed, where tools were used for the characterization, compilation, classification and ranking of the natural resources of the municipality of Ruiz Nayarit, as well as the determination of the tourist inventory, the degree of knowledge about tourism, its potential, the acceptance of tourism and the tourism product of the town of El Refugio, through the tourist inventory survey form and finally it was known through interviews with the residents of the town. locality, the degree of knowledge about tourism, its potential, acceptance of tourism and the tourism product. Once all the evidence was documented, the design of the agroecotourism product proposal was carried out as a viable and valuable option for tourists who visit the town and who are interested in knowing the agricultural process of coffee and pineapple, as well as that of carrying out activities in contact with nature and social integration, applying the techniques of sociocultural tourist animation to contribute to the tourist development of the community.

Agroecoturismo, Tourist Diagnosis, Characterization

Covid 19 in the restaurant sector of San Juan Del Rio, Qro., effects and prospects

Covid 19 en el sector restaurantero de San Juan Del Río, Qro., afectaciones y perspectivas

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Abstract

COVID-19 burst in the whole world and put Mexico in challenging situations in several areas, in the State of Queretaro the government in turn implemented a series of measures decreed and suggested at national and international level to preserve the health of its citizens, among these measures was the temporary closure of various establishments where there was contact and coexistence of people, including local restaurants, which faced great challenges such as: dismissal of staff, emergent adaptation with survival strategies and sales, among others. The objective of this work is to find the impact of COVID 19 in the restaurant sector of San Juan del Río, Qro., as well as the future perspectives on the part of the businessmen, emphasizing the effects on the workers. The need to collaborate on the part of the local government in the total reactivation of the sector included in the program for the activation of tourism in the city is what summarizes the justification for this research. The synthetic analytical method was used, descriptive, mixed type, using an instrument with quantitative and qualitative elements to detect the impact of COVID 19 in the restaurant sector of the city, the perception of future perspectives and affectations in its human capital; 76 establishments were surveyed out of a total of 955 recognized and with denomination according to the National Statistical Directory of Economic Units (DENU) and by the representative of the Queretaro Council of restaurateurs AC, although a tourist blog in the country, reports that there are 124 main ones. The main meetings: the variation in income, number of workers, salaries, priority activities, investment in pre and post COVID items, the future prospects of the sector and information on human losses and worker capacities by COVID 19.

COVID 19, Restaurant Sector, Workers

Environmental Accounting as part of Corporate Social Responsibility in Mexico

La contabilidad medioambiental como parte de la responsabilidad social de las empresas en México

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Abstract

Corporate social responsibility (CSR) has become a crucial commitment for companies, reflecting their dedication to environmental care and sustainable development. This commitment involves a focus on preserving the planet and promoting practices that ensure respect for the natural environment, along with a balanced attention to the fundamental aspects of the economy and society. While Mexico has made significant progress in disclosing environmental financial information through the Bolsa Mexicana de Valores, there is a limitation in disseminating this information among smaller companies. This raises the question of whether corporate social responsibility could create an obligation to issue sustainable information and whether specific regulations are necessary to govern the disclosure of environmental financial information. To address these questions, a thorough investigation involving the careful review of representative documents, information issued by national and international organizations, and current legislation on the subject is essential. Therefore, it is crucial for Mexico to strengthen its efforts to ensure a better response to the need for transparency in environmental issues, and CSR is a valid tool to achieve this

Corporate Social Responsibility, Environmental Accounting, México, Sustainability

NOM-037-STPS-2023 as a mixed work alternative for HEIs (Case of the Academic Unit of Accounting and Administration of the Autonomous University of Nayarit)

La NOM-037-STPS-2023 como alternativa de trabajo mixto para las IES (Caso Unidad Académica de Contaduría y Administración de la Universidad Autónoma de Nayarit)

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Abstract

The following research paper aims to investigate the partial implementation of teleworking for the teachers in the Department of Accounting and Administration in accordance with NOM-037-STPS to offer an alternative solution for the lack of installed resources (furniture, equipment, and internet network). The situation of the Department of Accounting and Administration is no exception. On one hand, the institution demands an 8-hour workday and strict compliance with academic performance indicators; however, the institution does not have the necessary academic spaces to carry out these tasks. The total number of cubicles is insufficient to accommodate all the teaching staff in the morning, afternoon, and for semi-school shifts. In addition to the fact that these cubicles do not have computer equipment, very few have appropriate furniture, and the quality of the Internet is very unstable, especially when the university professors and students saturate the bandwidth. It is important to point out that the NOM-037 establishes as an obligation of the employer to provide their workers with all the necessary equipment to be able to do their work in the Telework modality, however; in this specific case the idea is to know if the self-employed teachers have the conditions to adhere to such modality of work.

Alternative, University Professors, Shift, Modality, Remote Work

Evaluation of the management and operation of micro and small companies in the manufacturing sector

Evaluación de la gestión y operatividad de micro y pequeñas empresas del sector manufactura

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Abstract

This research work aims to show the initial results of a situational diagnosis through the identification, description and evaluative analysis of the current situation in micro and small businesses (M&SBs), through a qualitative study with the objective of identifying the particular needs of the directors (owners) of the manufacturing sector in the Texmelucan area (in the state of Puebla, Mexico) and surrounding regions, in relation to their management, administration and direction with the purpose of developing a training program. Six businessmen were visited and interviewed. The methodology was qualitative, with direct observation, process mapping and unstructured interviews. The first investigations suggest that training should be focused on productive areas, with greater emphasis on inventory and warehouse management. The results obtained will contribute to the design of the training program according to the needs observed in each of the M&SBs.

Situational Diagnosis, Directors, Micro And Small Businesses

Strategy for the development of the commercialization of handicrafts in the town of Santa Cruz Pueblo, Calkini

Estrategia para el desarrollo de la comercialización de las artesanías de la localidad de Santa Cruz Pueblo, Calkini

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Abstract

The purpose of this research is to design a global strategy to improve the conditions of the artisans of Santa Cruz Pueblo. The **method** is descriptive with a qualitative approach. To obtain the information, interviews were conducted with the artisans of Santa Cruz Pueblo in the municipality of Calkini. There is a strong dependence on the local market for the sale of their products.

Strategy, Marketing, Handicrafts, Global dependence

Entrepreneurial Skills of the Millennials and Centennials Generation in the North of state of Campeche, Mexico

Competencias Emprendedoras De La Generación Millennials Y Centennials en el Norte del estado de Campeche, México

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Abstract

Many young people of working age find it necessary to leave their places of origin to find work due to the characteristics of the economic conditions of the moment, but also, it occurs over time between decades and generations. Mastering skills in the area of entrepreneurship is of vital importance today to mitigate migration from rural areas to urban areas, to self-employ and improve their abilities to know how to generate a business. The objective of this work is to compare the entrepreneurial skills of the Millennials and Centennials generations in the north of the state of Campeche, Mexico. It is a quantitative study, with a descriptive scope and non-experimental cross-sectional design, since the variables of entrepreneurial skills are compared at two different times, that is, the year 2011 and the year 2021. Some of the results found are that for the Millennial Generation, the least developed competencies were Previous technical experience with 3.7 and Tolerant society with 3.8. For the Centennials generation, it was observed that the most developed entrepreneurial competencies were Family Culture, Credibility and Need for the business to exist with a value of 4.4 each.

Entrepreneurial competencies, Millennials, Centennials

Theoretical approach to the Financial Impact on MSMEs in the San Martín Texmelucan region, Puebla, Mexico, in the application of the 2023 labor reforms

Acercamiento teórico al Impacto Financiero en las MIPYMES de la región de San Martín Texmelucan, Puebla, México, en la aplicación de las reformas laborales del 2023

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Abstract

The labor reforms established in 2023 include modifications in social benefits such as an increase in vacations, a greater integration factor in the calculation of the base contribution salary and the increase in unemployment rates in advanced age and old age at the expense of employers. . Although this represents progress in workers' rights, the increase in quotas and vacation days causes companies to have to adapt their strategies for business productivity and competitiveness

Financial impact, MYPIMES, Business productivity, Labor Reforms, Corporate Social Responsibility

Marketing action plan in Micro and Small Enterprises of San Martín Texmelucan, Puebla

Plan de acción mercadológico en Micro y Pequeñas Empresas de San Martín Texmelucan, Puebla

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Abstract

This article is part of a research that develops a strategic plan according to the needs of companies in the region to improve their profitability, and due to its nature, qualitative research is carried out. The section of the research is exploratory-descriptive, to know and describe the characteristics of the companies under study, which correspond to a highly commercial region, being located in a strategic geographical point. A research instrument (interview) was developed and applied to the directors/marketing managers at Mypes in the San Martín Texmelucan region, complemented with observation of the means used to promote the company and its products/services offered; supporting the identification of areas of improvement in the operation of those involved, preparing proposals and from said research emerged the development of two undergraduate theses and the training of resources through around 20 undergraduate students who contributed to the research, as interviewers. and information processing.

Micro And Small Business, Marketing, Strategic Plan

Financial evaluation for the solar heater prototype made with recycled tire rubber

Evaluación económica del prototipo de calentador solar fabricado con caucho de neumático reciclado

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Abstract

The objective of this research is to carry out the economic feasibility study of the prototype of a solar heater made of recycled tire rubber in the metropolitan areas of Puebla. Regarding the methodology, the type of research was applied qualitatively. The project was initially developed with a significant acceptance survey of the solar tire heater product in the study area, developing a questionnaire for the collection and analysis of information, the market and the technical factors to which the prototype is subjected were analyzed. Afterwards, an economic analysis is prepared with production forecasts for a pilot test of the development of the solar tire heater. Obtaining as results an approval of the Project for its development and a feasible innovation Project for its implementation in the metropolitan area of Puebla.

Economic, Solar Heater, Methodology, Analysis

Development of management skills for MSMEs, as support for their permanence and regional growth

Desarrollo de habilidades directivas para las Mipymes como apoyo para su permanencia y crecimiento regional

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Abstract

Micro, small and medium-sized businesses play an important role in the economic development of nations, both in industrialized countries and in those with a lower level of development, however there are various factors that limit them, such as the lack of management skills. of its managers, which is why this work seeks to identify the skills profile of the director of the MSMEs, in the San Martín Texmelucan region, in order to be in the position of proposing a means that helps to remedy this lack, according to the particular characteristics of this type of business. The analysis and proposal of this work are based on the study and results of the research titled: Training and development of skills of the directors of Mypes in Latin America, a project in which they participated as members and surveyors of the Latin American Studies Network in Administration and Business, in 2022. Using the R program version 4.0.2 (2020), the values of the mean, standard deviation and Cronbach's alpha coefficient were determined. These values presented have a reliability of values greater than 0.8 in their Cronbach's alpha recommended by Nunnally and Bernstein 199

Development, Management Skills, MSMEs, Region

Analysis of the tax provisions and development of a proposal for a solution to the tax discrepancy according to the LISR of SMEs

Análisis de las disposiciones fiscales y desarrollo de una propuesta de solución ante la discrepancia fiscal de acuerdo a la LISR de las PyMes

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Abstract

This article presents the results of the research carried out in the first quarter of 2023 using SMEs in the San Martin Texmelucan region as a study factor. The general objective of the research was to analyze the tax provisions and develop a proposal for a solution to the tax discrepancy in terms of income tax in SMEs. The methodology that was carried out was developing a mixed research, the data collection technique was a questionnaire of 30 closed questions with a Likert scale was applied, 376 surveys were applied to different companies in the region of San Martin Texmelucan. The most important contribution made was the design of a tax protection plan for SMEs in order to minimize the economic and criminal consequences of the tax discrepancy.

Tax Discrepancy, SMBs, Strategy

Study of the dynamics of urban solid waste management considering the characterization of the collection routes in the municipality of Huatusco, Veracruz

Estudio de la dinámica de la gestión de residuos sólidos urbanos considerando la caracterización de las rutas de recolección en el municipio de Huatusco, Veracruz

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Abstract

This study was conducted in the municipality of Huatusco de Chicuellar, in the state of Veracruz, to characterize the urban solid waste collection system, and to identify the pertinent logistical indicators to propose and analyze possible strategies that contribute to the redesign of the current collection system. For the development of the study, sampling was carried out to identify the micro waste collection routes with the help of technological tools such as the Global Positioning System, known as GPS, and they were represented graphically on the Google Earth platform. Through the evaluation of the collection routes, the main logistical indicators were identified, such as the mileage traveled on the routes, diesel consumption and the cost of final waste disposal. The information obtained in the characterization of the routes, in addition to other data obtained in previous studies of MSW generation and composition, carried out in the city, made it possible to develop a dynamic model with which it is possible to present an improvement scenario that consists of separating waste at the source (in families) and to observe the economic impact that this action can have for the municipality.

Municipal Solid Waste Management, System Dynamics

Recommendation of account effect by CFDI Based on Machine Learning

Recomendación de cuentas afectadas por CFDI basado en aprendizaje automático

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Abstract

This work presents a neural network model for recommending accounts that a CFDI affects. FactureApp is an invoicing application with different services developed by the company LionDev S.A de C.V. The accounting module for generating policies based on Boolean algebra is one of their main services. This application implements the laws established in the Federal Tax Code and applied by the Tax Administration Service SAT of Mexico. This work defines the elements of the CFDI that can be used to determine the account it will affect. Also, the modeling and training of neural network with 327 input data, a hidden layer with 364 neurons and an output layer of size 200 is presented. Python and the Keras module of TensorFlow are used to model and train the network. Also, an API based on the Flask Framework is modeled for requesting recommendations. At the end of this article, improvements in the model and work that must be developed to integrate it into production are discussed.

Factureapp, Machine Learning, SAT And CFDI

Financial education among university students

Educación Financiera entre Universitarios: Ahorro y Crédito

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Abstract

Financial education is one the driving factors of the economy, so its attention must be a priority. The present research study investigates the knowledge that a sample of university students from a Higher Education Institution in the city of Merida, Yucatan, Mexico has regarding the variables savings and credit. The research was descriptive, with a non-experimental cross-sectional design, in which the survey was used as a means of collecting information, with a 25 item questionnaire. It was found that both men and women reported knowledge about what savings, is however, it was men who demonstrated greater knowledge about what credit is compared to women, as well as a general interest among university students, both men as women, to continue educating themselves in savings and credit, to make better financial decisions.

Economy, Finance, Education

CO₂ absorption using LIs functionalized with amino acids

Absorción de CO₂ utilizando LIs funcionalizados con aminoácidos

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Abstract

A comparative study was conducted on the absorption of carbon dioxide (CO₂) using ionic liquids (ILs) based on imidazole derivatives as cations and amino acids as anions ([BMI][AA] and [OMI][AA]). The synthesized ILs were characterized using Fourier Transform Infrared Spectroscopy, and absorption studies were conducted using a pressurized batch system under stable pressure and temperature conditions. Amino acids demonstrated an enhancement in the absorption of this acidic gas when compared to monoethanolamine, which is the most commonly used commercial absorbent compound.

Absorption, Ionic Liquids, CO₂

Strategic planning for a food preparation company

Planeación estratégica a una empresa de preparación de alimentos

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Abstract

The objective of the research is to apply principles of strategic planning in a food company, with the purpose of making it more competitive. A SWOT analysis was used to have a context of the current situation, as well as a study of the forces of Michael Porter, through the application of the diamond of the five forces and the client's window was applied to determine the desires and requirements From the market. Applying the set of tools mentioned above will allow testing their effectiveness with a strategic planning approach, with the purpose of having methods that allow organizations to be more competitive.

Planning, Strategy, Competitiveness

Community Water Management in Veracruz. Current Challenges and Perspectives

La Gestión Comunitaria del Agua, en Veracruz. Retos y Perspectivas Actuales

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Abstract

Adjective. In this article we will present a situational diagnosis of community systems in water management in the national and state context, taking as a specific case community management in the Sierra del Gallego, Córdoba, Veracruz. The research methodology applies an analysis of the legal framework of community water management, returning to some specific studies that glimpse the potential for participatory, democratic and community water management; Some experiences of regional and national organizations in defense of water and community managers participating in the 3rd National Congress of Water for All are included. The diagnostic situation in the state of Veracruz is reviewed, highlighting some paradigmatic cases of social management; Finally, we will analyze a specific experience of community management. Finally, a series of social, regulatory and programmatic policies are proposed to recognize the potential of community and social drinking water systems in the state of Veracruz and in compliance with the additions to article 4 of the Constitution, which guarantee the human right to water.

Community Water Management; Water Legislation; Access To Water As A Human Right

Initial Evaluation Exercise of a Higher Education Unit: In Response to the Guidelines of a National System

Ejercicio de Evaluación Inicial de una Dependencia de Educación Superior: En Respuesta a los Lineamientos de un Sistema Nacional

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Abstract

This article addresses the importance of assessment and accreditation in higher education, highlighting its crucial role in ensuring quality and relevance. It focuses on the methodology used in a specific analysis of a Higher Education Unit in Northern Mexico, to evaluate academic programs through the requirements posed by the National System of Evaluation and Accreditation of Higher Education in terms of social responsibility, equity, inclusion, excellence, social innovation, avant-garde and interculturality. The results reveal strengths and areas for improvement, especially in aspects such as social equity and inclusion. The analysis concludes by highlighting the need for evaluation and accreditation to not be mere bureaucratic requirements, but rather dynamic processes that drive the constant evolution of higher education at a global level.

Evaluation, Accreditation, Criteria, Education, Improvement, Academic Programs

Framework for addressing the challenges of digitalization in organizations

Marco para afrontar los desafíos de la digitalización en las organizaciones

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Abstract

Many organizations are currently making efforts to achieve digital transformation, but a high percentage do not achieve the expected results. The aim of this article is to outline the actions that, according to existing literature, should be implemented in organizations to face the challenge of digitalization. A classification of barriers to digitalization is proposed and a conceptual framework that covers four categories, each of which comprises five phases. Each phase describes the actions that could be undertaken within organizations. The suggested actions are discretionary, which means that there is the freedom to choose among them depending on the nature and requirements of each organization. The contribution of this work consists in the integration of elements from various perspectives, models and frameworks into a logical and coherent structure to address the challenges of digitalization in organizations.

Digitalization In Organizations, Barriers To Digitalization, Conceptual Framework For Digitalization

6 Agricultural Sciences and Biotechnology

Exploitation of the genetic variance in maize (*Zea mays* L.) populations for the mexican tropic

Aprovechamiento de la varianza genética en poblaciones de maíz (*Zea mays* L.) para el trópico mexicano

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Abstract

VS-536, The most used maize variety in the southeast of México, present favorable plant and ear traits and adaptation to the tropical conditions. The objectives of this research were to exploit the genetic variance present in maize populations, particularly in the improved version of VS-536. In mass selection is exploited the additive portion of the genetic variance. In varietal crosses of maize formed and evaluated during 2016 to 2023, there was found in the best hybrids, the presence of the VS-536 variety as parent. It suggests that an important portion of the genetic variance corresponds to dominance and overdominance gene action and they can be exploited through varietal crosses as SINT4BxVS-536 and V-537CxVS-536; These crosses registered the highest grain yield across the 10 environments in Veracruz and Tabasco states of 6.84 and 6.34 t ha⁻¹ statistically similar to H-520, used as check, that registered 6.73 t ha⁻¹; Heterosis values with respect to the best parent were 15.80 and 11.21% for each cross respectively. The varietal cross SINT4BxVS-536 present short plant and ear height, tolerant to lodging, good plant and ear aspect and sanity, the leaves above the ear are in semierect position, excellent husk cover, the grain is white and present semident texture.

Gene action, *Zea mays* L., Additivity, overdominance

7 Engineering

Evaluation of the photocatalytic performance of ZnO nanostructures obtained by different synthesis methods

Evaluación del desempeño fotocatalítico de nanoestructuras de ZnO obtenidas por diferentes métodos de síntesis

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Abstract

The industrial revolution gave way to the generation of pollutants that are harmful to the environment and that have been increasing, contaminating bodies of drinking water; For this reason, solutions are currently being sought to eliminate some of these contaminants, such as dyes from the textile industry. This work describes the synthesis by different methods (physical and/or chemical) of zinc oxide nanostructures: nanopowders, nanowires and thin films, to evaluate their potential in the degradation of methyl orange in aqueous medium. The characterization of the materials was carried out by scanning electron microscopy and UV-vis spectrophotometry.

Photocatalysis, Zinc Oxide, Nanostructures

Addie model as a methodology for the design of distance courses

Modelo addie como metodología para el diseño de cursos a distancia

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Abstract

The ADDIE model is an iterative approach aimed at designing and implementing distance learning courses that are adaptable to the needs and characteristics of students. It allows for improvements and adjustments in each of its phases, ensuring a quality learning experience for students immersed in virtual environments. This article reflects on the experience of designing distance courses for a postgraduate educational program using this methodology, highlighting the advantages and challenges that arose during the process.

Virtual learning environments, ADDIE Model, Instructional Design, LMS, Chamilo, Virtual Classrooms

Implementation of emerging virtual classrooms: case study, master in innovation and creativity in education

Implementación de aulas virtuales emergentes: caso de estudio maestría en innovación y creatividad en la educación

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Abstract

Emergent virtual classrooms served as a rapid solution for millions of students worldwide to continue their professional-level teaching and learning processes during the COVID-19 pandemic. However, despite the significant efforts made by institutions, educators, and services, school dropout rates, socio-economic issues, and health problems had a substantial impact, causing students to abandon their studies. In the quest to provide different alternatives that motivate future professionals to resume their academic lives, it was found that the implementation of emergent virtual classrooms combined with an adaptive learning strategy tailored to the contexts of students and teachers yielded findings that could be considered within the new hybrid learning strategies now being promoted in the post-pandemic era.

E-Learning, LMS, Chamilo, Emerging Virtual Classrooms, adaptive learning

Analysis of mobile applications for adults with Autism Spectrum Disorder

Análisis de aplicaciones móviles para personas adultas con Trastorno del Espectro Autista

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Abstract

The article aims to present an analysis of mobile applications that currently serve adults with Autism Spectrum Disorder (TEA) in any of the types or levels that are identified, since the literature varies with respect to the terminology they use. Therefore, an investigation of the applications they can access was carried out to identify what kind of support they provide to users, since these can be focused on the adaptation of the environment in which the person works, to organize their days and identify how they should behave at certain events, or in their case they work as support for family members. Derived from the analysis, a minimum percentage of the applications that serve adults with TEA is identified, giving guidelines to the fact that mobile applications can be designed and developed that can serve them with the aim of improving the way they interact with their family, school, social and work environment.

Analysis, Mobile App, Autism, Spectrum, Technology

Economic valuation of the proper management of municipal solid waste in an educational space

Valuación económica del manejo adecuado de los residuos sólidos urbanos en un espacio educativo

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Abstract

The correct management of Municipal Solid Waste (MSW) in any population center is essential to guarantee the quality of life of its inhabitants and the surrounding environment. The study carried out involved the quantification of MSW generated in specific areas of the Juan Pablo II campus of the University of Guanajuato, with the use of two complete recycling stations with primary and secondary labeling, graphically specifying a subclassification with infographic type posters. For 5 weeks we separated and sold the most commercially valuable solids in Celaya, delivering the proceeds to the corresponding university agency, and the lids of the different food containers were donated to an association that supports children with cancer. With the amount obtained, an economic feasibility analysis was carried out using the financial evaluation criteria Net Present Value (NPV) and Internal Rate of Return (IRR) to know the feasibility in monetary terms; to complement this, the equilibrium point (Q) and the sensitivity analysis were used; trying to exploit the maximum recycling capacity and move to the circular economy.

Economic feasibility, Municipal solid waste, Circular economy

Quality Control System for the Tomato Release Process produced in Greenhouse

Sistema de Control de Calidad para el Proceso de Liberación de Jitomate producido en Invernadero

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Abstract

Quality control is considered a primary feature to determine the commercial value of the tomato (*Lycopersicon esculentum*) and the acceptability of the product by the customer, this based on standards and parameters that guarantee a high level of quality of the tomato accepted in the process of releasing it and affirm customer confidence. This project was carried out in an agro-producing and marketing company of tomato produced in a greenhouse in the Region of Tehuacán, Puebla, Mexico, and proposes a quality control system in the tomato release process through an analysis and study of the physical and chemical attributes of the fruit that is entered into the company, to subsequently assign a quality according to the behavior of the fruit, The quality of the tomato is based mainly on the uniformity of the shape and the absence of growth and handling defects present in the fruit. Size, although not a factor that defines the degree of quality, usually has an important influence on the expectations of its commercial quality.

Tomato, Greenhouse, Quality Control

Application of automation with Arduino ONE in a rustic pond aquaculture farm, to increase productivity

Aplicación de la automatización con Arduino UNO en una granja acuícola de estanque rustico, para incrementar la productividad

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Abstract

This project has the goal of monitoring the Mechatronic Design process carried out for the implementation of an automated monitoring and control system of the necessary physical-chemical conditions that must be considered in a rustic pond dedicated to the production and breeding of tilapia; with the purpose of optimizing fish production in Jalpa de Méndez, Tabasco. Through a mechatronic system based on ARDUINO UNO consisting of: control, actuation and sensing system that achieves intelligent decisions to problems in branches of the rural aquaculture sector that do not have equipment for the development of automated products.

Control Arduino, Aquaculture

Architectural Design of a Cyber-Physical System (CPS) for Irrigation Automation in Ornamental Horticulture

Diseño Arquitectural de un Sistema Ciber Físico (CPS) para Automatización de Riego en Horticultura Ornamental

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Abstract

The Internet of Things (IoT) in agriculture has contributed to the efficient and effective automation of agricultural production processes. However, automating irrigation is a complex task due to the technological adoption challenges faced by producers using unsustainable, inefficient, and ineffective conventional methods, as well as the actions it entails in the environment based on sensed data. Therefore, as a proposed solution, the design of a Cyber-Physical System (CPS) for automating irrigation in ornamental horticultural production is presented. This system follows a spiral methodology, allowing the efficient construction of the prototype due to its iterative and sequential capabilities. The result is the modeling of the irrigation system based on a CPS, which will enhance water usage efficiency, reduce labor efforts and production costs, providing a mechanism for preventing and controlling mite-type pests in ornamental horticultural production.

Irrigation Automation, Cyber-Physical System, Pest Control

Prediction model of the terminal efficiency of Computer Engineering at the Autonomous University of Tlaxcala applying Data Mining

Modelo de predicción de la eficiencia terminal de Ingeniería en Computación de la Universidad Autónoma de Tlaxcala aplicando Minería de Datos

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Abstract

This work presents the design of a prediction model of the terminal efficiency of the Computer Engineering Degree Program, belonging to the Autonomous University of Tlaxcala. For the development of this work, the KDD (Knowledge Discovery from Databases) process was used, which provides a complete representation of the life cycle of a Data Mining project; and to obtain the prediction model, the data mining technique of linear regression was used. Personal and academic data from two generational cohorts of the educational program were used to adjust and validate the model. It was determined that it is necessary to develop a specific model for each semester, in order to identify the academic variables that have the greatest influence on whether or not the student can graduate from his or her career.

Data Mining, Terminal Efficiency, Linear Regression, Prediction Model, Weka

Sustainable Design and Manufacturing Strategies, Review in an Appliance Company

Estrategias de Diseño y Manufactura Sustentable, Revisión en una Empresa de Electrodomésticos

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Abstract

This article describes an overview of the concepts and main techniques related to sustainable design and production that are being developed in companies today to maintain a balance of resources. Using an information documentation method, the practices in a Mexican company that manufactures household appliances are examined. The information obtained suggests that the company has adopted measures and strategies to improve the environmental performance of its products. The product and process design phase is fundamental not only in the search for operational excellence for companies, but also in achieving benefits that have an impact on the environment.

Sustainable, Strategies, Environmental

Thermographic analysis and influence of colour on the temperature of building materials in a warm sub-humid climate

Análisis termográfico y la influencia del color en la temperatura de los materiales de construcción en un clima cálido subhúmedo

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Abstract

This work presents the results of the research carried out in the Bachelor of Architecture of the FEPZH; research that was also presented in the event of the 29th edition of the summer of science of the UASLP, and deals with the fluctuation in the balance of thermal comfort that can cause the color of the constructive elements; It analyses the oscillation and differences in the temperature of the different walls built with block of different thicknesses; 10cm, 12cm, 15cm, and 20cm; in order to obtain objective information to be able to recommend the range of colors for the sub-humid quality zone, such as Ciudad Valles, and thus support the decision making of urban planners and professionals who are dedicated to architectural design. In June 2023, the nine objects of study were built; walls with a surface area of one square meter, to which paints of different shades were applied, and subsequently the temperatures were recorded with the help of measuring equipment obtained thanks to the support of PRODEP.

Comfort, Temperature, Color Walls

Analysis and studies of high voltage transmission in direct current

Análisis y estudios de la transmisión de alta tensión en corriente continua

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Abstract

The present work is especially interested in the analysis and studies of the transmission of high voltage direct current HVDC, "high tension direct current", the interest in this system is motivated by an alternative to transmission of electrical energy, due to the advantage that It can provide more than the transmission of energy by direct current, which is the most used currently, since it is enough to go outside to notice its presence; Some of the advantages that direct current energy transmission offers are the ability to control the transmitted power quickly and continuously. Through this, it is also possible to generate different frequencies, resulting in the possibility of connecting electrical systems of different types. frequencies or voltages.

Transmission, Saving, Energy, Improvement, Installation

Use of the Quality Function Deployment tool for the design of a humidity transformer system in drinking water

Uso de la herramienta Despliegue de la Función de Calidad para el diseño de un sistema transformador de humedad en agua potable

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Abstract

Water is a resource of vital importance for the life of living beings, the demand required is so great that in some areas of the planet it has begun to be scarce or to restrict use and consumption. In spite of the technological advances and the procedures to send this liquid, zones are detected in which the supply does not arrive, on the other hand every day the world population keeps increasing and generating a greater consumption of the same. The present study makes use of the deployment of a quality function better known as QFD as a way of listening to the voice of users and specifically determining the different aspects that must be addressed for the design of a moisture sensing device, as well as an estimation of the demand focused on the southern zone of Tamaulipas Mexico is also presented in order to know the potential market.

Qfd, Moisture Collection, Design Engineering

System implementation for gait gratification for analysis with a low-cost development board and a real-time application

Implementación de sistema para gratificación de la marcha para análisis con una placa de desarrollo de bajo costo y una aplicación en tiempo real

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Abstract

Gait analysis is important to detect abnormal patterns caused by disease or injury in human body parts such legs, ankles, arms, elbows, back, and hips. Suitable treatments and routines can be established from this analysis, and it is possible to determine what may be appropriate for each patient according to the walking pattern and body movements presented by them. In this project, a wearable system with accelerometers and low-cost effective development board is implemented, which can be a practical tool for health professionals for measuring spatiotemporal gait characteristics and assign a proper treatment. Finally, it can be concluded that the system presented has a reliable performance.

Spatiotemporal Analysis, Gait, Sensor Technology, Accelerometer; Wearable Sensors

A computational approach to predict unsaturated soil phases

Un enfoque computacional para predecir las fracciones no saturadas de los suelos

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Abstract

The unsaturated fractions in a porous medium such as soil are the result of the process of natural humidity changes that occur in environments where both the temperature and the relative humidity of the environment are constantly changing. These processes, important in environmental geotechnics, need to be studied to predict the resistance and permeability that the porous medium may have under various scenarios. This article allows us to establish a computational model that allows us to predict the volumes of the unsaturated fraction. The predictions of the model and its contrast with the Rojas model allow us to conclude that the model can be used on a large scale to be used in engineering applications related to water flow in soils.

Unsaturated Soils, Degree Of Saturation, Computational Algorithm

Automatic identification of false opinions in social networks

Identificación automática de opiniones falsas en redes sociales

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Abstract

This paper presents the problem of detecting false opinions in social networks, also called "opinion spam", describing how lies can be automatically detected using different methods. It has been shown that deception is frequently present in everyday communication in social networks. Deception detection is a well-known challenging problem in any research area, basically because the human ability to detect deception is deficient. Particular studies on social psychology and communications show that the accuracy rates of people's abilities to detect deception are in the range of 55 to 58%, i.e., slightly better than chance. This paper addresses the specific problem of deception detection in communication. Emphasis is placed on those approaches that use affective resources such as categorical and psychometric information provided by natural language processing tools. Finally, we focus on the identification of opinion spam, whose detection is very important for reliable opinion mining. Results obtained using different machine learning methods are presented. The results obtained allow us to see the feasibility of the proposed methodology to carry out the detection of false opinions in social networks by obtaining accuracy values higher than 80%.

Ancient purépecha petroglyphs analysis using contextual shape descriptor

Análisis de petroglifos purépechas antiguos mediante un descriptor contextual de formas

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Abstract

This article introduces an innovative approach to analyzing Purépecha petroglyphs through interdisciplinary collaboration between computer vision and archaeology. The research addresses the practical needs of archaeologists and scholars who require critical support for searching and recovering collections of ancient Purépecha images. The paper begins by providing an overview of the interdisciplinary approach aimed at enhancing the documentation, analysis, and preservation of Purépecha pictographic data. Subsequently, it presents an objective evaluation of the contextual descriptor's performance in image retrieval tasks, utilizing a set of 14 images featuring Purépecha petroglyphs. In summary, the proposed approach shows promise by enhancing performance in retrieval tasks and can be validated from an epigraphic perspective, offering the potential for novel insights in archaeology and practical solutions for academia.

Cultural Heritage, Purépecha Empire, Image Recovery, Shape Descriptor, Archeology, Epigraphy

Design of a WiFi Sensor Network to Identify Transmission Zones of Respiratory Diseases through Air Quality Indicators

Diseño de red de sensores WiFi para identificar zonas de transmisión de enfermedades respiratorias mediante indicadores de calidad del aire

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Abstract

Airborne diseases can pose significant threats, particularly to infants and postoperative patients. While air extraction and droplet filtration systems are effective in containing these viruses, interconnected ventilation ducts can still facilitate virus transmission in areas with lower viral concentration. This study introduces a Wireless Sensor Network based on WiFi technology, designed to monitor crucial environmental variables such as CO₂, TVOC, temperature, and humidity, collectively influencing indoor air quality. Moreover, this network connects to an online server, collaborating with subscribers to store historical data. The stored information aids in identifying patterns and high-risk zones associated with the transmission of respiratory diseases. The outcomes demonstrate a comprehensive, adaptable, and scalable WiFi-based Indoor Air Quality sensor network. Employing the publish-subscribe pattern, the MQTT message transport protocol, and open-access platforms like Streamlit, Supabase, and HiveMQ, along with affordable boards and sensors, this solution offers an innovative, scalable, and cost-effective approach to identifying areas at risk of airborne disease transmission. The system's design prioritizes data precision and reliability, making it a valuable addition to indoor air quality monitoring systems.

WSN, Indoor Air Quality, MQTT

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