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Volumen IV

El Abstracts Collection ofrecerá los volúmenes de contribuciones seleccionadas de investigadores que contribuyan a la actividad de difusión científica de la Universidad Tecnológica del Suroeste de Guanajuato en sus áreas de investigación en Ciencias Agropecuarias, Ciencias Naturales y Exactas, Ciencias de Ingeniería y Tecnología, Educación, Ciencias Sociales y Administrativas, Experiencias en la Formación de Cuerpos Académicos y Redes. Además de tener una evaluación total, en las manos de los directores de la Universidad Tecnológica del Suroeste de Guanajuato se colabora con calidad y puntualidad en sus capítulos, cada contribución individual fue arbitrada a estándares internacionales (LATINDEX-DIALNET-ResearchGate-DULCINEA-CLASEHISPANA-Sudoc- SHERPA-UNIVERSIA), el Collection of abstracts propone así a la comunidad académica, los informes recientes sobre los nuevos progresos en las áreas más interesantes y prometedoras de investigación actuales.

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Prefacio

La Universidad Tecnológica del Suroeste de Guanajuato y sus capítulos de Ciencias Agropecuarias, Ciencias Naturales y Exactas, Ciencias de Ingeniería y Tecnología, Educación, Ciencias Sociales y Administrativas, Experiencias en la Formación de Cuerpos Académicos y Redes, CICA 2019. Así el CICA tiene como objetivo general Crear un foro para académicos e investigadores provenientes de diferentes países para presentar y discutir resultados y propuestas en relación a las áreas temáticas del congreso, promoviendo y fortaleciendo la divulgación de la investigación y desarrollo tecnológico de los grupos colegiados y de investigación académica y/o cuerpos académicos de las instituciones de educación superior, desde una perspectiva global. Este volumen IV-2019 contiene 558 participaciones arbitradas que se ocupan de estos asuntos en Ciencias Agropecuarias, Ciencias Naturales y Exactas, Ciencias de Ingeniería y Tecnología, Educación, Ciencias Sociales y Administrativas, Experiencias en la Formación de Cuerpos Académicos y Redes, elegidos de entre las contribuciones, reunimos algunos investigadores y estudiantes de posgrado, a partir de 32 estados de México. Quisiéramos agradecer a los revisores anónimos por sus informes y muchos otros que contribuyeron enormemente para la publicación en éstos procedimientos repasando los manuscritos que fueron sometidos. Finalmente, deseamos expresar nuestra gratitud a la Universidad Tecnológica del Suroeste de Guanajuato en el proceso de preparar esta edición que podrás consultar en <http://ecorfan.org/collections.php>

Contenido	Pág.
1 Fisica-Matematica y Ciencias de la Tierra	1-11
2 Biologia, Quimica y Ciencias de la Vida	12-23
3 Medicina y Ciencias de la Salud	24-57
4 Humanidades y Ciencias del Comportamiento	58-186
5 Ciencias Sociales	187-377
6 Biotecnologia y Ciencias Agricolas	378-415
7 Ingenieria	416-558

1 Física-Matemática y Ciencias de la Tierra

Efecto del tipo de base en la disolución del cuarzo con triisopropanolamina en minerales con plata ocluida en cuarzo

Effect of base type on the dissolution of quartz with triisopropanolamine in minerals with silver occluded in quartz

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Abstract

The processing of refractory minerals of gold and / or silver occluded in quartz in sizes less than 1 μm is not viable, due to the chemical inertness of the silica. The treatment of these minerals is usually carried out by reduction of particle size by fine grinding that allows the release of the occluded particles. As an alternative to processing these minerals, has proposed the partial dissolution of the silica with diols in basic medium; in these studies partial dissolution of the matrix has been observed in 25% with triisopropanolamine and 3% mol KOH. The present work shows the effect of the type of base (organic-amines) in the dissolution of the matrix, observing a greater dissolution with the basic character of these and with the chelating effect of the same ones. Et3N was the weak base that showed the highest dissolution of the matrix, observing a dissolution rate (0.67 mmolmin⁻¹) 2.5 times lower than that observed with KOH (1.66 mmolmin⁻¹), similarly the observed effective diffusion coefficient was of an order of magnitude lower than that observed with KOH.

Dissolution, Type Base and Quartz

Análisis mediante cromatografía de Pfeiffer en suelo mejorado con bocashi y microorganismos nativos

Analysis by Pfeiffer chromatography on soil improved with bocashi and native microorganisms

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Abstract

Ehrenfried Pfeiffer (1899-1961), created a technique with which one can observe the qualitative characteristics of soils, composts and biofertilizers. The research seeks to evaluate soil improvement by applying native microorganisms by Pfeiffer Chromatography as a way to remedy it. Representative samples of a soil worked with conventional agriculture and improved with a compost were taken, the first sample at the beginning of the test and the following three every week after applying a Bocashi-type organic fertilizer made from native microorganisms; the soil samples were analyzed separately by the Pfeiffer chromatography technique. The control sample revealed a compacted, mineralized soil, with a small amount of organic matter and without biological activity, while the other samples with the soil already improved revealed the presence of organic matter with minerals integrated in the soil, also showing the presence of Enzymatic factors and the good biological and chemical activity manifested by the harmony between their zones. It is possible to conclude that Pfeiffer chromatography represents a simple tool to know the evolution of a soil by improving it with organic matter and efficient microorganisms manifesting some qualitative characteristics that indicate its progress.

Organic fertilizer, Bocashi, Mountain microorganisms

Investigación de mercados para identificar viabilidad comercial de pastillas para uso bucal a base de arcilla blanca

Market research to identify commercial viability of buccal tablets based on white clay

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Abstract

About a billion tubes of toothpaste are discarded in landfills every year. It becomes a real environmental problem considering that the package is composed of 75% plastic and 25% aluminum. Aware of this, new green brands go on the market with the will to eradicate such waste. The idea is to validate the developing of a toothpaste that is a pill that is used for cleaning teeth that will be mainly clay combined with coconut oil. Making this toothpaste will result on a better dental health as well as taking care of the environment, helping to eliminate plastics. Using clay and coconut oil has prove to destroy of all types of microbes, viruses, bacteria, many of which harm our oral hygiene. Helping to solve the problem of caries that affects 60 to 90 percent of the population by improving their dental hygiene. Survey in a simple of 383 inhabitants was taken in order to Identify areas of commercial opportunity and the willingness of the consumer to purchase oral cleaning tablets. **Objetivel:** Identify areas of commercial opportunity and the willingness of the consumer to purchase oral cleaning tablets. **Methodology:** A quantitative study was carried out having a survey applied in the Great Guadalajara Area to a representative sample of 383 surveys of men and women over 18 years with a 95% confidence level and a margin of error of 5%. The survey was conducted by simple random subsampling by clusters and random home routes and in squares and shopping centers.

Dental Pills, Market research, Commercial viability

Biopelícula Plásticas de Quitosano/Sábila para la regeneración celular

Plasticized Chitosan / Aloe biofilms for cell regeneration

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Abstract

The objective of the present work was to evaluate the effect of the incorporation of plasticizing agents; Glycerin and PVA, as well as the incorporation of aloe extract on the regeneration and / or cellular recovery capacity of plasticized chitosan. The preparation of the biofilms consisted of mixing, low molecular weight chitosan (0.5, 1 and 1.25%), polyvinyl alcohol (1 and 1.5%) and glycerin (3.5, 5 and 7%). Aloe extract was incorporated in 1% together with glycerin. The drying of the films was carried out in an incubator at 28 ° C for 24 hours, using the method of slow evaporation or casting. Stress tests to determine their mechanical properties, DSC compatibility, water vapor permeability tests and through a cytotoxic activity test of biofilms using human gingival fibroblasts (HGF), the viability of the use of these biofilms in regeneration was determined mobile. A combination of chitosan / PVA / glycerin was found that exhibits good elastic properties. The DSC showed that there is a good incorporation of the components. The permeability is acceptable for the application and the cell viability tests indicate an increase thereof due to the presence of the aloe extract, as well as the plasticizers with respect to the chitosan without plasticizers.

Biofilms, Chitosan, Aloe

Modelos de simulación en la toma de decisiones en la operación minera

Models of simulation in the making of decisions in the mining operation

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Abstract

In open pit mining, the loading, unloading and hauling system can represent a high percentage of the operating cost. The objective of this document is to provide an overview of the different approaches in the application of simulation models as an alternative applied to open pit mining operations that can help in decision making to optimize resources. It talks about the different types of simulation models that can be applied in mining operations such as stochastic, deterministic and discrete events. The underlying idea of this text is to highlight that with the increase in competitiveness, mining companies are in need of using simulation techniques to reduce costs, time and risk reduction when making decisions since simulation allows create scenarios that approximate reality. In the end, the document concludes that simulation models are a tool to help in decision-making, for the optimization of resources, increased improvement and efficiency of the processes of loading, transport and unloading in open pit mines

Simulation, Models, Simulation Software

Análisis de la percepción de la calidad en el servicio en una institución de educación superior con el uso del modelo servqual

Analysis of the perception of quality in service in a higher education institution with the use of the modelservqual

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Abstract

The main objective is to evaluate the quality of the service; likewise determine what are the most important aspects and measure the quality of service from the point of view of the students. As expressed by Duque and Chaparro (2012), it is not recommended that the evaluation of the quality of the service only considers the point of view of executives and government agencies, since the perception of the most important client, the student, would be evaded. The method to follow is to determine the variables that will be studied and the instrument to collect information is established, determine the population to which the study is directed, apply the instrument to the sample, present the results obtained, draw conclusions comparing it with the theoretical framework and with other studies; and finally the recommendations of the findings are made. Among the main findings, it was possible to obtain the qualification of the service quality of the students in the period evaluated, the overall score reached is 5.18, interpreted as good service and representing 74%. It is relevant to take into account that the characteristic with lower qualification, in this case, the appearance of physical facilities, equipment, personnel and communication material.

Calidad, Servicio, ServQual

Análisis de humedad y comparativo de índice de durabilidad en pellet de los alimentos balanceados para aves

Humidity and comparative analysis of durability index in pellet of balanced foods for birds

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Abstract

The research was carried out to improve the humidity parameters and durability index in the balanced feed for poultry in flour and pellet, to guarantee the quality and avoid contamination in the mycotoxin finished product. Samples of flours and pellets were used for four months with the objective of evaluating and standardizing the pelletization process, to produce balanced food, which is intended for bird consumption in each of the breeding, posture and fattening phases, guaranteeing them a healthy development. In this investigation we worked with two pelletizing machines of model 700 and model 702 to keep a statistical control of humidity and durability index (IDP), to avoid product losses in the pelletizing process. The contribution of the present investigation was to reduce the economic impact of the feed processing plant, since reprocesses were significantly reduced.

Quality, Humidity and Durabilit

Implementación del algoritmo ID3 para la generación de un árbol de decisión con datos de salud alimenticia del Estado de Guerrero, México

Implementation of the ID3 algorithm for the generation of a decision tree with food health data from the State of Guerrero, Mexico

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Abstract

Mexico faces a major public health problem, related to the eating habits of the population. More than 50% of the world's obese people live in 10 countries, including Mexico (Ng et al., 2014). In 2014, Mexico had the highest obesity prevalence rate in Latin America, (PAHO, 2016a). The prevalence of obesity in adults in the state of Guerrero in 2012 was 71.5% (Barquera, 2012). The objective of this research was to generate a diagnosis of these conditions in both urban and rural locations in the seven regions of the state of Guerrero. The information was analyzed using an information system called SIOB, which is a technological tool developed to collect information from the population with a sample of 23,000 people, users of the public health sector of the state of Guerrero. The Weka tool of the University of Waikato (Eibe, et al., 2016) was used to generate a visualizable decision tree that shows the prevalence of these conditions in the state of Guerrero. It is considered that these visualization tools can help in the implementation of public policies that contribute to the prevention of these chronic degenerative diseases.

ID3, Decision Tree, Obesity

Aportaciones conceptuales sobre la curvatura en los estudios en ingeniería Conceptual

Contributions to the determination of the curvature in engineering courses

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Abstract

The differential geometry began with the study of the characteristics of the planar curves, then the behavior of the curves in space was studied, which led to the postulates of Frenet, and hence the differential geometry evolved greatly thanks to the contributions of Gauss. At the highly specialized undergraduate courses, most of the literature presents this topic on the basis of definitions, which can be understood with a little difficulty by both students and even some teachers. This work presents a detailed description of terms that are defined in the concept of the curvature. The importance of study in engineering courses with certainty and confidence this concept is of great value, because it will allow to perceive clearly abstract terms, such as radius of curvature, osculating circle, normal vector, for example, and dominating these terms will have a complete handling in the basic description of the movement of bodies. Some examples are developed.

Education, Osculating circle, Curvature radii

Demostraciones analíticas de valor esperado y varianza de las principales funciones de distribuciones de probabilidad continuas, con ejemplos de sus aplicaciones

Analytical demonstrations of expected value and variance of the main functions of continuous probability distributions, with examples of their applications

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Abstract

The present work proposes the design of mathematical problems, which allow the adequate understanding of mathematical concepts of probability for its correct interpretation and later application in the resolution of probabilistic problems. For the development of this work we rely on the theory of didactic situations of Brousseau (1997) and Sadovsky (2005). We believe that new materials and didactic models of this type have great educational potential because they encourage the analysis and understanding of various probability problems (Panizza, 2003). Accurate communication between teachers and students in the approach, interpretation, resolution, and testing of probability problems is of vital importance. The software used for this purpose is the MATHEMATICA program, a tool that facilitates the writing of formulas and calculations, as well as the construction of graphs, through a friendly interface, facilitating the self-taught work of the student and encouraging the development of the Analysis skills and problem solving. We believe that these materials will contribute to the teaching and learning processes of probability at the higher education level

Continuous Probability Distributions, Expected Value, Variance

Análisis y diseño del sistema de control de préstamos de equipos (SCPE) de laboratorios de la carrera de TIC de la UTVT

Analysis and design of the equipment loan control system (SCPE) of laboratories of the ICT career of the UTVT

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Abstract

The present work exposes the analysis and design of the Equipment Loan Control System (SCPE), where a system is developed in its analysis and design phases of control of equipment exits and inputs (loans), reducing time and showing reports to be able to make decisions about a subsequent acquisition of equipment or different administration. The functionality of the system is based on the procedure P-EDU-05 <http://sgi.utvtol.org.mx/> mainly on the points: 8.2 (update of the equipment inventory) 8.4 (Delivery of laboratory hours) 8.5 (Verification of the laboratory schedule) 8.7 Registration of PTC / PA (Full Time Professor / Subject Professor) in a later version by means of a fingerprint reader. In this delivery, procedures, processes and calculations will be analyzed; as well as define interfaces. In point 8.7, you will register compliance of the service at the end of the practice. It will also include a processing calculating the compliance rates according to the procedure. The laboratory / equipment registration interface will reflect what is required in the R-EDU-20-General requirements for laboratory / workshop practices. Finally, the RAD (Rapid Application Development) methodology will be used to develop the system due to the use of fourth generation techniques to reuse existing programs.

System, Control, Loan, Schedules

2 Biología, Química y Ciencias de la Vida

Evaluación, física, química y biológica de compostas tipo bocashi elaboradas con estiércol de bovino, ovino, cerdo y conejo más una vermicomposta

Physical, chemical and biological evaluation, type of bocashi compostas elaborated with bovine, sheep, pig and rabbit stretcher plus one vermicomposta

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Abstract

Some composts can produce phytotoxins that inhibit the development of plants and the absorption of nutrients by an excess of indoleacetic acid if the compost is not mature. In the present work, the objective is to evaluate the quality of the compost by means of direct tests of phytotoxicity and agronomic quality with different composts. To determine the quality as organic compost and vermicompost fertilizer were considered physical, chemical and biological variables according to existing manuals. The results obtained for these variables were: In the physical, chemical and biological variables, all the parameters are fulfilled according to the norm. Seed germination of vegetables increased with respect to the control in 14.93%, possibly due to the presence of some root development promoter found in the compost. With regard to survival, the witness was inferior by 3.08%. Although the amount of nutrients found in composts are not so high, they comply with the minimum requirements of the regulations to be used as a substrate in horticultural applications. Conclusion, the results of this study indicate that the compost elaborated with any type of residue can be used as a substrate in seedbeds of chili, onion or other vegetables to induce germination and accelerate the development of plants.

Organic production, Substrate, Phytotoxicity

Inclusión de harina, elaborada a partir de los frutos de *enterolobium cyclocarpum* y *brosimum alicastrum* como suplemento isocalórico e isoprotéico en la alimentación de ovinos

Inclusion of flour, made from the fruits of *enterolobium cyclocarpum* and *brosimum alicastrum* as an isocaloric and isoproteic supplement in sheep feed

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Abstract

Study was performed in Chacala, Cabo Corrientes, where the species in study are widely distributed in a natural form. Bromatologic analysis of fruit of *B. alicastrum* and *E. Cyclocarpum* were performed as an alternative to improve animal production, increasing protein consumption, energy and minerals on the livestock diet. Bromatologic analysis was made for crude protein (CP), etereum extract (EE) and nitrogen free extract (NFE) with Wendee method (AOAC, 1990); neutral detergent fiber (NDF), acid detergent fiber (ADF), cellulose, hemicellulose and lignin (Van Soest and Wine, 1967) with ANKOM equipment. Calcium and phosphorus for colorimetry, potasium with flamometer technique (Van Soest, 1979); magnesium, sulphur and copper with TMECC 04.06 / 4.13 method. Nutritional quality was analized on dry matter, ashes, fat and crude fiber. Significative difference was obtained between species on protein (22.90 vs 10.88), fiber (7.24 vs 13.18) and NFE, were the higgest value was for *B. alicastrum* (67.02%) compared with *E. cyclocarpum* (60.45%). Inclusion of fruit flour from *E. cyclocarpum* and *B. alicastrum* on ovine alimentary rations improvement consumption. Weight increase and alimentary convection were better with the 10% inclusion. Economic value of alimentary rations with inclusion of fruit flour of *E. cyclocarpum* and *B. alicastrum* was lower than witness diet on stabuled ovine, permitting maintain development with significative decrease of production costs.

Forage trees, Ruminants, Supplementation

Electrocoagulación en el agua de proceso de una industria de alimentos

Electrocoagulation in the process water of a food industry

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Abstract

The main objective was to develop a wastewater treatment system by means of the electrocoagulation method according to the parameters of Chemical Oxygen Demand (COD) and Total Suspended Solids (SST). The results obtained were that at a pH of 6 and 7 with a contact time of 30 minutes, the highest percentage of removal of SST (98%) and COD (90%) was obtained. Once the conductor was selected, tests were carried out at different pH (6, 7 and 8) with contact times of 15, 30 and 45 minutes each, at 12 V and 0.4 A. A Multifactorial ANOVA statistical test was performed to determine if there were significant differences between the treatments. Once the results were evaluated, a prototype of approximately 38 L was designed with parallel plates with results of removal of SST of 93% and COD of 66%. The approximate cost of treatment per cubic meter is \$ 35.

Electrocoagulation, COD, Prototype

Optimización de sulfato de zinc en proceso de beneficio

Zinc sulfate optimization in benefit process

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Abstract

Goals. Calculate the amount of Zinc Sulfate reagent that maximizes the lead benefit in the process of benefiting a plant in the southern region of the state of Chihuahua. Methodology. Tests were carried out with different amounts of zinc sulfate, on which the variance was calculated and the average benefit value of Lead and Zinc was determined. Then, the equations were obtained that describe the behavior of the benefit of the minerals and the maximum or minimum values with respect to the law were calculated. The optimized sulfate value was calculated and control charts were generated as follow-up to the process. Contribution .By optimizing and standardizing the amount of Zinc sulfate as a reagent in the benefit in a process where it was performed empirically, not only does it have greater control over the results of the law, but also the costs are optimized, considering that the Reagent use is an important input for the process.

Optimization, Sulfates, Benefit

Biodigestor con variables monitoreadas

Biodigestor with monitored variables

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Abstract

The project consists of the design and construction of a biodigester that allows the generation of methane gas for heating and cooking food in domestic stoves. The Biodigester will have as byproduct Biol, from leached organic matter, this byproduct can be used as fertilizer in gardens or domestic crops. The monitored variables of the Biodigester use a data acquisition card to obtain the level of Ph, biol, temperature, humidity and pressure during the methane generation process, as well as the quantity and quality of methane gas produced. This project has been developed in several stages, design, prototype scale tests, connection of sensors and tests that allow to define reference data and data during methane production. A design has been achieved that allows simultaneous production in three biodigestors, this proposal will allow through a specific protocol, the continuity in obtaining the gas can be maintained with the possibility of emptying, cleaning and replacing organic matter without stopping the methane production process.

Biodigestor, Monitoring, Methane

Efecto de la adición de inulina en las propiedades fisicoquímicas de queso tipo panela descremado

Effect of the addition of inulin on the physicochemical properties of skimmed panela cheese

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Abstract

The objective of this investigation was to analyze how inulin affects concentrations of 1%, 2%, 3%, 4%, the physicochemical composition of panela cheese. The panela cheese was made in the Dairy Workshop of the Food Technology Area of the Autonomous University of Aguascalientes (UAA). The physicochemical analyzes of pH, humidity, ashes, total solids and fat, specifically the Quality Control Laboratory of the Center of Agricultural Sciences of the same university, according to the methods of the Mexican Standards. For the statistical analysis the analysis of the variance (ANOVA) of a pathway was performed. Using Tukey multiple comparison analysis ($p < 0.05$). Using the statistical program Centurión XV Statistics. According to the results detected, inulin was modified, it changed the pH, humidity, ashes and total solids of skimmed panela cheese, from 1%.

Cheese, Inulin, Physicochemical composition

Elaboración y caracterización fisicoquímica de membranas bioplásticas a base de nopal (*Opuntia ficus-indica*)

Preparation and physicochemical characterization of bioplastic membranes based on nopal (*Opuntia ficus-indica*)

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Abstract

The objective of the research is the physicochemical characterization of bioplastic membranes based on Nopal (*Opuntia ficus-indica*) to determine their possible applications. The tests performed for the characterization were: permeability, solubility, resistance, thickness, drop test and chemical analysis with the infrared spectrophotometer. Today, new and better alternatives are sought in obtaining different polymers that benefit humanity and the environment. Recycling is an option but it is not a very effective alternative for all plastics, however, biopolymers are a solution from the origin of the problem since the vast majority of them their biodegradation time is much less than that of a common plastic. Biopolymers, which for the most part come from renewable resources so they become an interesting alternative for the plastics industry. The physicochemical properties of the Nopal-based membranes (*Opuntia ficus-indica*), are similar to synthetic plastic membranes, being a viable alternative to replace them, thus contributing to society, with a better quality of life being environmentally friendly.

Bioplastic, Characterization, Nopal

Uso de *canna glauca* para el tratamiento de aguas residuales domésticas en un humedal artificial de flujo superficial

Use of *cannaglauca* for domestic wastewater treatment in anartificial surface flow wetland

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Abstract

The design and construction of a prototype of an artificial surface flow wetland was carried out with the aim of purifying domestic waste water. Field data was taken the reactor was designed and built to assess the plant's (*Canna glauca*) efficiency in sewage treatment. The location, available surface, and the influent flow were considered for the design; as well as available surface and the flow of influence of the influent the hydraulic retention, the size of the rock bed, the volume of the storage tank, resistance (mechanical, presence of sulfates and cleaning and sanitization substance) and permeability were considered to ensure its service life. A prototype was built where water quality was characterized by a HI 9828-0® multiparametric probe, in the reactor tributary and effluent. Within the most relevant results is that the amount of oxygen, pH, EC, resistivity, STDs, salinity and ORP, are parameters that were favored with the presence of the aquatic plant for the purification of waste water

Wetland, WasteWater, Water Treatment

Determinación de la ruta crítica para la síntesis química de hidroxiapatita nanométrica

Determination of critical route for nanometric hydroxyapatite chemical synthesis

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Abstract

Currently, the health care area demands materials with appropriate mechanical and biocompatible properties, and for some special applications, high bioactivity is important since these materials are in contact with biological environments; also, it's important that they respond to the population's increment in life expectancy and the increase in chronic degenerative diseases. For example, advances in implantology have enabled researchers to know the reactions that occur between tissues and diverse implants. In that sense, bioceramics are a type of bioactive material, specifically designed for the manufacture of surgical implants, prostheses and artificial organs, as well as to fulfill a certain physiological function in the human body due to their good biocompatibility, osseointegration and the similarity they share with the bones mineral components, so their application expectations are many. Based on the above considerations, a critical synthesis route was designed to synthesize nanometric HA powders by chemical-combustion method. This will provide information about the precursors reagents as the combustion agent, and, thereby; the temperatures and reaction times that will result in obtaining a quality product that has the pre-established stoichiometric characteristics.

Biocompatible, Hydroxyapatite, Bioactive

Características físico-químicas y microbiológicas del compostaje de bagazo de agave tequilero a escala industrial

Physico-chemical and microbiological characteristics of large scale tequila agave bagasse composting

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Abstract

The aim of the present study was to evaluate some physicochemical characteristics of large scale composting process of tequila agave bagasse, and also quantify the population dynamic of bacteria, fungi and actinomycetes throughout 300 days. A large windrow of agave bagasse of approximately 195 m (~331 t) was set and regularly monitored. Thereafter a pile section was reubicated to continue the evaluation. The windrow was sampled every 15 days and the following parameters were measured: moisture content, temperature, pH, electric conductivity (EC), the organic matter (OM), C/N ratio and the population dynamic of bacteria, fungi and actinomycetes in colony forming units. From the very beginning of composting the temperature of the windrow reached the thermophilic phase (>45 °C) and continued up to 270 days. However, at the end of the study the temperature felt down till 42 °C due to the reduction on moisture content (<30%). The highest EC registered was 1.5 dS/m; the OM remained between 70-35% and the C/N ratio varied between 96.9 initial and 29.6 final. Actinomycetes were the most dominant group especially in the last weeks of composting, which infers the possibility of using this type of compost in soil bioremediation.

Compost, Biodegradation, Tequila solid residues

Efecto de los polisacáridos sulfurados marinos en los parámetros productivos y respuesta celular en pollo de engorda

Effect of marine sulfurized polysaccharides on productive parameters, and cellular response in broilers

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Abstract

Objectives.The objective of the work was to identify a natural alternative that allows to obtain more efficient productive parameters and that in turn the immune system of the birds is more resistant to pathogens. The administration of seaweed polysaccharides has been shown to promote greater resistance to individuals under stress conditions, suggesting an immunostimulatory effect.**Methodology** 582 male chickens of the Cobb genetic line were used, with one day of births which were distributed in 2 treatments with 3 repetitions of 97 birds: control treatment and treatment with polysaccharides. The polysaccharides used were of the Olmix © brand and were used at a dose of 45 g per 500 L of water on days 9, 11, 12, 19, 21, 22, 34, 36, and 37 of life. Productive parameters and cellular response were determined, which was performed by smears stained with the hayem-turk technique to later perform the count in the Neubauer chamber. Samples for leukocyte and lymphocyte count were performed on days 9, 12, 19, 22, 34 and 37.**Contribution.**The use of polysaccharides can favor the weight gain of the broiler.

Polysaccharides, Leukocytes, Lymphocytes

Sincronización de celos en vacas simmental utilizando GNRH y PGF2A en la concepción, Michoacán

Synchronization of jealousies in simowal cows using GNRH and PGF2A in the conception, Michoacán

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Abstract

The objective of this work is to reduce the time of presentation of jealousy and improve the indices of conception. The synchronization of estrus or estrus is a technique that is used to achieve the greatest number of pregnant females. GnRH stimulates the release of FSH and LH. FSH promotes follicular growth which increases the concentration of estrogens by the growth of the follicles. In this experiment, 6 cows of the Simmental breed were synchronized with a range of 0 to 7 births, natural riding was provided with a stallion of the same breed. The adoption of synchronization protocols has been increasing today due to the high market demand. A 66.6% favorable response to treatment was obtained. 33.3% presented estrus at 26 hours and the other 33.3% presented estrus at 30 hours after day 10. Understanding the reproductive physiology of the female and the male allows us to develop synchronization protocols, GnRH and PGF2 α , are the methods what better results are producing in our races,

Protocol, Synchronization, Zeal

3 Medicina y Ciencias de la Salud

Desarrollo de productos de usos personales y alimenticios utilizando frutos y plantas de la región como medida de prevención de enfermedades transmitidas por el mosquito *aedes aegypti*: Avances de proyecto del cuerpo académico UTSEM-CA-1

Development of personal care and food products using regional fruits and plants as a measure to prevent diseases transmitted by the mosquito *aedes aegypti*: Advances of the academic body project UTSEM-CA-1

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Abstract

The objective of this project is to develop various personal care and food products using natural extracts of regional plants, which reduce the impact caused by *Aedes aegypti*. As of December 2018, the advances that were made consist of the development of a repellent patch prototype, two cutaneous spray products, hand soap, and an incense. The plants used are *Ricinnus communis*, *Artemisia ludoviciana*, *Cymbopogum citratus*, *Cucurbita maxima*, *Coffea arabica* and *Syzygium aromaticum*. After conditioning, extracts were obtained using organic solvents. The extracts were formulated at different concentrations, and through in vitro laboratory testing, their effectiveness was tested, measuring repellency over a period of time. It was found that the mixture of the plant's essential oils in an appropriate formulation, is apt to repel the species *Aedes aegypti*, like synthetic commercial repellents. With this work, we are taking advantage of the plant's repellent properties, and giving valuable benefit to the population by contributing a solution to the region's current health problems.

Project, Repellent plants, *Aedes aegypti*

Memoria de trabajo y su relación con el rendimiento académico en estudiantes de medicina

Working memory and its relationship with academic performance in medicine students

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Abstract

Understanding what the Working Memory is, how it works and how it is related to learning is very important for education. Objectives: To determine the relationship between working memory and the academic performance of medical students. Methodology: A cross-observational study, of a descriptive correlational type, was carried out. The design is retrospective-retrolective with a non-probabilistic sample for convenience with prior signature of informed consent with a total of 270 students of the UJED School of Medicine. Contribution: In the results obtained, no significant correlation was found between working memory and academic performance, however, a high percentage (53.3%) of students who have attended at least one subject were observed and they have better grades than the group that has not studied subjects, for that reason a second analysis was carried out by means of comparative test with U Mann-Withney, finding a significant difference between the qualifications of the groups with a $p=.000$, not so far the memory components of working memory which were found within normal values according to the brief neuropsychological test in Spanish.

Working Memory, Academic Performance, Medicine Students

Barreras en la atención de la morbilidad materna en Yaxkukul, Yucatán, México

Barriers in maternal morbidity care in Yaxkukul, Yucatan, Mexico

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Abstract

Objectives. Identify the barriers that cause delays in the route of obstetric care in pregnant women of Yaxkukul, Yucatán, from January 2016 to May 2018. **Methodology.** Observational, descriptive, cross-sectional and retrospective study. Pregnant women who attended prenatal control at the rural health center of Yaxkukul were interviewed and reviewed their clinical record. Sociodemographic characteristics, prenatal control were studied and the critical route of obstetric care was described, under the model of the three delays. Percentages, measures of central tendency and dispersion were calculated; as well as square chi to look for association between delays and maternal morbidity. A 95% confidence level and a value of $p < 0.05$ were used. **Contribution.** The present study contributes to the prevention of maternal and perinatal mortality. Knowing the barriers that cause delays in care can identify deficiencies in the obstetric emergency protocol established in rural health units, to improve the quality of obstetric care.

Barriers, Delays in care, Pregnant women

Tiempo de inicio de complicación obstétrica en embarazadas de alto riesgo de una comunidad Maya de Yucatán, México

Start-up time for obstetric complications in high-risk pregnant women from a Mayan community in Yucatan, Mexico

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Abstract

Objectives. To assess the onset time to present obstetric complications in high-risk pregnant women from the Mayan community of Mayapan, Yucatan, Mexico. **Methodology.** Longitudinal, retrospective, observational, descriptive, survival analysis type study. Follow-up was carried out for 46 weeks of 100 high-risk pregnant women. The event was the beginning time of presentation of the complication of the pregnant woman. Kaplan-Meier method was used for follow-up analysis. The mean follow-up time and overall survival at the end of pregnancy were calculated. **Contribution.** Provide the population with better prenatal control, refer in a timely manner to patients classified as high risk and have better control of records of pregnant women with a gynecologic-obstetric history of risks, in order to reduce the incidence of complications in pregnancy and contribute to Maternal mortality reduction.

Pregnancy, High Risk, Mayan Community

Conocimientos sobre métodos de planificación familiar, aceptación y necesidad insatisfecha en embarazadas de una comunidad de Yucatán, México

Knowledge on family planning, acceptance and needs unsatisfied in pregnancy of a community of Yucatán, Mexico

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Abstract

Worldwide it is estimated that there is a slowdown in population growth and a decrease in the birth rate. According to the institutions, much of this change is due to the success of family planning programs. Family planning is recognized as one of the main interventions that saves the lives of mothers and children, especially in postpartum women who have a greater need to achieve longer intergenic intervals or to reduce unplanned pregnancies and their repercussions on maternal and child health. The objective of this work was to determine the level of knowledge and the acceptance of family planning methods, as well as the unmet need in pregnant women who attend prenatal control in a Health Unit of the state of Yucatan from May to July 2018. The study It was cross-sectional, it included 164 women who had prenatal control in the rural medical unit, were invited to participate and informed consent was requested. A low level of knowledge in family planning methods was found, the acceptance of family planning methods after the obstetric event was 18.3%, while the frequency of unmet need was 54.9%.

Family planning methods, Unmet need, Pregnancy

Índice de masa corporal, conductas alimentarias de riesgo y percepción de la imagen corporal en estudiantes de un colegio de bachilleres en Yucatán, México

Body mass index, food risk and perception of body image in students of a bachelor's school in Yucatán, Mexico

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Abstract

Adolescence is related to physical and psychological changes and is an important factor for the development of body image. At this stage, body awareness increases due to physical changes, society's importance to physical traits and the growing tendency to compare with cultural norms; in adolescents of both sexes there is the possibility of rapid increases in height and weight, but in women, these body changes are associated with a higher prevalence of overweight and obesity; At present, people's lifestyle has changed since bad eating habits, sedentary lifestyle and stress have dominated and physical activity has decreased. The objective of this work was to establish the relationship between the real BMI, risky eating behaviors and the perception of body image in students of a high school in the state of Yucatan. The study was cross-sectional; 212 students participated. Two thirds of the participants were perceived with a body that does not correspond to theirs. A relationship was found between real BMI and perceived BMI, as well as between BMI and the presence of risky eating behaviors.

Body Mass Index, Risky eating behaviors, Body image perception, Adolescents

Diagnóstico higiénico-sanitario e identificación de factores de riesgo en restaurantes

Hygienic-sanitary diagnosis and risk factors identification in restaurants

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Abstract

The purpose was to make a hygienic-sanitary diagnosis and risk factors identification in 81 fixed establishments of food restoration located in the metropolitan area of Guadalajara, Jalisco, Mexico. The establishments were grouped according to the North American Industry Classification System (NAICS). The sanitary verification act, based on NOM-251-SSA1-2009, was applied. The minimum was 85 % in order to consider the evaluation was approved. 26 places approved the evaluation, the three best qualified, belong to franchises, 55 establishments were failed. Statistically it represents the same as the service corresponds to any of the NAICS categories addressed in the study. The risk factors detected in order of importance are associated with the following programs: quality control in water for general use; staff training; transport; pest control; operations control; maintenance and cleaning; Facilities and areas; quality control of the water in contact with foods. The written and operational absence of prerequisite programs was evidenced, so the conditions and measures applied are not sufficient to ensure the quality and safety of the food, and therefore represent a potential disease risk for diners in local restaurants.

Food restoration services, Risk factors, Prerequisite programs

Crecimiento de ufc bacterianas en cementos fotopolimerizables para bandas de ortodoncia

Bacterial ufc growth in photopolimerizable cements for orthodontic bands

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Abstract

Introduction. Orthodontics is a dental discipline that involves the use of fixed appliances in the oral cavity for therapeutic purposes, this can cause secondary pathological disorders, such as periodontal dentobacterial plaque disease. The fixation bands are cemented with photocured resins, their permanence in the oral cavity generates a septic focus since microorganisms easily adhere by the anatomical arrangement of the system. **Objective.** To determine the growth of Bacterial Colony Forming Units that present resinous cements for Transbond® Plus 3M Unitek and CrossLink® TP Orthodontics orthodontic bands. **Methodology.** Quantitative, descriptive, experimental, comparative study. It shows 100 specimens made of light-curing cement for orthodontic bands, which were divided into two experimental groups. Group A: 50 cement specimens for Transbond® Plus 3M Unitek orthodontic bands; Group B: 50 cement specimens for CrossLink® TP Orthodontics orthodontic bands. **Contribution.** Based on the results of the statistical test T for independent samples, it is concluded that there was a statistically significant difference ($p = 0.041$) in terms of bacterial growth of CFU in the cement samples for orthodontic bands, being lower in CrossLink® (TP Orthodontics) compared to Transbond® Plus (3M Unitek).

Bacterial CFU, Cements, Orthodontics

Prevalencia de traumatismos dentales en deportistas del gimnasio instituto veracruzano del deporte

Prevalence of dental trauma in athletes of the veracruzano sports institute gym

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Abstract

Athletes are exposed to trauma that can sometimes involve the oral cavity from an injury, fracture or dental loss. Many times aware or not that it is an own risk that represents practicing a certain sport but its vocation is greater regardless of the consequences. Objective. To determine the prevalence of dental trauma in athletes between 16-30 years of the gymnasium Institute Veracruzano of sport. Methodology Observational, cross-sectional and prospective study in a sample of 43 athletes applying a survey of 15 questions to athletes from the Institute Veracruzano of sport gymnasium. Contribution. The dental injuries found in this research were low, however, athletes should be educated in the protection of accidents through the appropriate equipment including the mouth, implementing mandatory preventive measures not before raising awareness about oral health care. Currently, dental injuries are the second cause of attention in emergency services in dentistry after caries

Dental trauma, Athletes, Prevalence

Caracterización de tamaños de partículas suspendidas en un área conurbada de la ciudad de Guadalajara, Jalisco, México

Characterization of suspended particle sizes in a conurbated area of the city of Guadalajara, Jalisco, Mexico

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Abstract

Air pollution is a problem that large cities face inefficiently and its health impacts are evident and poorly evaluated in Mexico, its origin is emission of vehicles, industry and various combustion processes. In the metropolitan area of Guadalajara called El Salto, there are problems with suspended particles, and the objective of this study was to evaluate the number and size of said location by means of a videocontroller of particles at that location, in 25 sampling points at a measurement interval which was 0.3 μm to 10.0 μm in six sizes (0.3 μm - 0.5 μm - 1 μm - 2.5 μm - 5.0 μm - 10.0 μm), this being the first methodological approach in the area. The results show a very homogeneous distribution for each of the 6 measured particle sizes, the largest number corresponds in 90% to the particles of respirable fraction, of aerodynamic diameter 0.3 μm and 0.5 μm called ultra fine, which pass into the bloodstream, responding to the same distribution pattern at all sampling points. The particles of 0.3 μm and 0.5 μm have reference values in the precautionary range in 28%, the particles 2.5, 5.0 and 10, have reference values in the precautionary range in 44%, the elaborated maps show the distribution of the particles in the study area.

Pollution, MP10 particles, Environmental health

Identificación bacteriana en teléfonos celulares de estudiantes de medicina que acuden o no, a un Hospital General en Merida, Yucatán, México

Bacterial identification on cell phones of medical students attending or not, at a General Hospital in Merida, Yucatan, Mexico.

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Abstract

The cell phone is an important tool for communication, consultation and information exchange; Studies carried out in hospitals have shown that cell phones of medical personnel are contaminated by nosocomial pathogens. However, the bacterial species that the cell phones house and their potential risk have not been determined. We analyzed the cell phones of 30 first-year medical students who do not visit the hospital in their studies vs. 30 students who perform their clerkship practices in hospitals, to determine the differences in bacterial loads. Samples were taken by sterile swabs moistened with isotonic saline. McConkey and salt-mannitol agar were used as culture media. The biochemical tests used for identification of enterobacteria were citrate, MIO, LIA, urea and TSI. Degradation tests of mannitol, coagulase, catalase and oxidase were used for the identification of staphylococci. Likewise, smears and Gram staining of the isolated colonies were performed. *Staphylococcus epidermidis*, *Staphylococcus aureus*, *Escherichia coli* and *Pseudomona* sp. were mainly found. Differences in number and bacterial species were found in the cell phones of each study group, representing a reservoir of potentially pathogenic bacteria for humans.

Cell phones, Hospitals, Bacteria

Reporte estadístico de pacientes pediátricos atendidos en la clínica de la Universidad Tecnológica del Suroeste de Guanajuato

Pediatric patients' statistics report attended in the clinic of Universidad Tecnológica del Suroeste de Guanajuato

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Abstract

The psychomotor development is a process through which, children acquire abilities in different areas that allow them to have progressive independence and adaptation within their development environment. An adequate evaluation of the psychomotor development since neonatal period is fundamental to obtain an appropriate derivation of suspected illness cases and detection of anomalous signs that trigger a significant chronological delay in children. Objective. To know statistic numbers making evident the psychomotor develop areas majorly affected within pediatric patients. Methodology. Observational, descriptive, cross-sectional study. 51 patients were studied, in the 5 behaviors, evaluated with clinical history and Gesell. The study was realized to the January 2018 a January 2019. Contribution. Create conscience about the importance of psychomotor development evaluation in neonatal children and pediatric whether they show or not, any alteration in the different development areas.

Psychomotor development, Chronological delay, Pattern persistence

Papel del estrés oxidativo en el desarrollo del deterioro cognitivo y su progresión a enfermedad de alzheimer

Role of oxidative stress in the development of cognitive impairment and its progression to alzheimer's disease

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Abstract

This review aims to provide scientific evidence of the role of oxidative stress in the development of cognitive impairment and its progression to Alzheimer's disease. Oxidative stress originates when there is an uncontrolled production of free radicals that disrupts the balance between oxidants and antioxidants, favoring oxidants. It has been associated with oxidative stress with the pathogenesis of brain aging, cognitive impairment and some neurological diseases. The cells of the central nervous system produce a high amount of free radicals since their energy demand is high, this coupled with a low antioxidant capacity, favors the appearance of a pro-oxidant environment that contributes to neurodegeneration and neuronal death. Alzheimer's disease is the most frequent form of dementia, it is characterized by neurodegenerative changes that occur with cognitive impairment, progressive impairment of memory and thought, until preventing the performance of daily life activities. Neuropathologically, it is characterized by the presence of extracellular deposits of β -amyloid peptide in the form of neurofibrillar plaques and clews; lesions capable of generating damage and neuronal death that lead to cognitive failure through the generation of more free radicals.

Oxidative stress, Cognitive impairment and Alzheimer's disease

Diseño y manufactura de ortesis dinámica para mano mediante el modelado por deposición fundida (MDF)

Design and manufacture of dynamic orthotics for hand using molten deposition modeling (MDM)

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Abstract

Currently a large number of hand injuries occur in the Mexican population, mainly caused by accidents at work and in sports activities. To help the population have access to a brachiopalmar rehabilitation, In this work it was proposed to develop a rehabilitative prototype “dynamic hand orthosis” to address the main pathologies that affect our society (fractures, dislocations, sprains, tendonitis and sx of the carpal tunnel). The design was analyzed in a finite element for its validation, having a safety factor of 2.6 and a maximum tension of 12.84 MPa below the ABS elastic limit, Manufacturing was done using a 3D printer with the ABS filament. This orthosis has an extensor finger attachment composed of hammocks, one for each finger. Due to its universal design, it can be used for both hands only by exchanging the extension of the thumb.

Orthosis, Modeling, Molten deposition

Partículas ambientales en bronquio y tejido pulmonar humano

Environmental particles in bronchus and human lung tissue

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Abstract

Objetivos.Identify environmental particles in bronchus and human lung tissue through the SEM technique.**Metodología .**The samples were fixed by immersion in 2% glutaraldehyde for 2 hours, then a wash with 1x pH 7 phosphate buffer and light agitation (x3) (1x, 2x and x3) was performed.Finally, the samples were critically dried out with a Samdri 795 team from Tousimis. This was the process to which the samples were taken for EDS analysis with a Jeol JSM 6610LV equipment, operating at 10kV, with Oxford Xmax EDS detector and Oxford AZtec software. The observation in the scanning electron microscope was performed with secondary electron detector. For the assembly, a sample holder was used for scanning electron microscopy, on a double-sided carbon tape substrate. The samples were given a coating with conductive material (99.9% gold) by sputtering with the Denton Vacuum V equipment.**Contribución.**In lung, 21 elements were identified, in addition to observing the shape and size of the particles. These images were compared with some other environmental particles presented by diverse authors. The uses of these elements were consulted and it was identified that some of them are used in the automotive, electrical and medical industries, and they also have a great influence on food.

Pulmonary tissue, SEM, Heavy metals

Evaluación de los indicadores antropométricos, bioquímicos, estreñimiento, ansiedad y depresión en adultos mayores de un asilo del estado de Morelos

Evaluation of anthropometric, biochemical, constipation, anxiety and depression indicators in older adults of a nursing home in the state of Morelos

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Abstract

Introduction: The changes of aging, lead to anthropometric and biochemical changes, which together with changes in lifestyle habits make constipation one of the most common pathologies in older adults, in the same way this population has proven to be more Vulnerable to anxiety and depression. **General Objective:** To evaluate the anthropometric, biochemical, constipation, anxiety and depression parameters in older adults of an asylum in the state of Morelos. **Methodology:** Cross-sectional study. 24 older adults (men and women; age ≥ 65 years) were interviewed, institutionalized in the Casa Hogar “Las Palomas” in Cuernavaca Morelos. To assess the signs associated with constipation, a questionnaire was conducted based on ROME III criteria, the assessment of anxiety and depression status was used (HADS). Anthropometric measurements were taken (Weight, height, body circumferences (waist, hip, arm and calf) and a fasting blood sample to determine glucose, cholesterol and triglycerides. SPSS v20.0 was used in the statistical analysis. Prevalence (%), confidence intervals, means and standard deviations. **Results:** In our study population we observed significant differences in the anxiety score ($p = 0.004$) and depression ($p = 0.016$) according to gender. However, in the constipation score, no significant differences were obtained according to gender. **Conclusion:** Older adults are a vulnerable group that requires special attention to physical and mental health. Timely multidisciplinary interventions are required that favor the health and quality of life of older adults.

Constipation, Depression, Anxiety, Older adults

Relación entre rendimiento académico, actividad física y consumo de alcohol y tabaco en una población universitaria

Relationship between academic performance and tobacco, alcohol consumption and physical activity in a university population

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Abstract

The student's academic performance is an essential factor indicator. There are several factors that could influence on such performance, so the objective of this work was to analyze the relationship between the academic performance and different factors such as physical activity, alcohol and tobacco consumption in students of the University Center of Biological and Agricultural Sciences (CUCBA) of the Universidad de Guadalajara (UdeG). To this aim, 200 both genders students were asked to consent to apply an inquiry: The academic performance was classified into three levels: Excellent / Very Good (90-100), Good (80-89) and Regular / Bad (<80). The academic status was determined and grouped into four categories: graduates, not graduates, active and irregular. The results were analyzed by Mean Test, Standard deviation, Student's t-test and Chi-squared test. 41% of the enrolled subjects were women and 59% men. The results showed that smoking students had a lower academic performance ($p < 0.05$) than non-smokers, however, in the present study it was not found a significant relationship between alcohol consumption or physical activity and academic performance. It is intended to contribute with proposals tending to strengthen healthy lifestyles and to improve the educacional indicators of this university community.

Academic performance, Physical activity, Alcohol and tobacco consumption, University students

Evaluación de la ansiedad y su relación con el promedio académico en alumnos de la facultad de psicología y terapia de la comunicación humana UJED-Durango

Evaluation of anxiety and its relationship with the academic average in students of the faculty of psychology and therapy of human communication UJED-Durango

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Abstract

The university student is subject to psychosocial pressures that cause vulnerability in their school average to disorders such as anxiety. Objectiv: to identify the proportion of students of the Faculty of Psychology and Therapy of Human Communication UJED-Durango with anxiety and the correlation between anxiety and the school average. Methodology: exploratory, non-experimental, observational and cross-sectional research, with non-probabilistic sampling for convenience, with descriptive and correlational statistical analysis. Contribution: Chronbach's alpha of the analyzed data was 0.88, observing 86.36% of students with anxiety. The correlation between anxiety and school average was significant with $r = -0.32$ and $p = .015$. The high anxiety index found in the sample studied and the significant correlation between anxiety and school average suggest the need to pay attention to the anxiety of university students.

Anxiety, University Students, Hamilton Test

Evaluación cognitiva montreal y consumo de alcohol: Un diagnóstico descriptivo del deterioro cognitivo en estudiantes universitarios de Durango, México

Montreal cognitive assessment and alcohol consumption: A descriptive diagnosis of cognitive impairment in university students in Durango, México

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Abstract

Alcohol is a toxic substance associated with acute and chronic disorders affecting the Central Nervous System and significantly altering brain function. Objective: To determine the relationship between cognitive impairment and alcohol consumption in university students of the Juárez University of the State of Durango. Methodology: It is a cross-sectional, descriptive, comparative, non-probabilistic study, for convenience. A database was designed on the results obtained in a clinical interview on alcohol consumption and the application of the Montreal Cognitive Assessment (MoCA) test. Contribution: The evaluation of cognitive functions show similar results, the male sex presented a better score in Attention and the female one in Orientation. More involvement was identified in the Deferred Memory functions in both groups. In relation to alcohol consumption, the cognitive functions evaluated show lower levels. The female gender was more evident cognitive impairment in relation to alcohol consumption being statistically significant ($p < 0.025$). Alcohol consumption is a risky behavior that deserves to be recognized by the main actors about neurocognitive effects. Alcohol consumption prevention programs and cognitive diagnostic tools are appropriate strategies to reduce risk behaviors in mental health.

Alcohol Consumption, Cognitive Deterioration, University Students

Características antropométricas en manos y fuerza máxima de agarre de trabajadores en una región de México: Caso de estudio hombres

Anthropometric characteristics in hands and maximum grip strength of workers in a region of Mexico: Case study for men

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Abstract

The present article studies the anthropometric variables of the hand for a sample of 100 working adults whose ages were between 18 and 60 years, located in the State of Sonora, Mexico. In total, 26 anthropometric measures and the maximum grip strength in the dominant and non-dominant hand were considered. A descriptive statistical analysis was carried out for the measurements taken; In addition, a statistical analysis was performed to determine the correlation between the anthropometric characteristics and the maximum grip strength in the dominant hand. It was found that the age group with the strongest grip was 30-39 years with a value of 51.77 kg in the dominant hand.

Anthropometry in Hands, Gripping Force, Musculoskeletal Disorders

Efectos de la cirugía estereotáxica de abordaje al hipotálamo anterior (HA) sobre el ciclo estral: Papel del sistema dopaminérgico en la ovulación espontánea en la rata

Effects of stereotactic surgery on the approach to the anterior hypothalamus (HA) on the estrous cycle: Role of the dopaminergic system in spontaneous ovulation in the rat

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Abstract

We evaluated the function of dopaminergic receptors (DAR) of the anterior hypothalamus (AH) on the estral cycle (EC) regulation and spontaneous ovulation by a single microinjection (MI) with the dopaminergic antagonist haloperidol (HLP) in adult rats. One hundred thirty nine rats that exhibit fourth-day estral cycles (cyclic animals: CA) received a stereotaxic surgery (STXS) on the right, left or both AH sides and were distributed in three different groups with a MI of 1 μ L of: HLP (15 μ g) or dimethylsulfoxide (vehicle) or other false MI group. All the animals with STXS were sacrificed in next vaginal estrus (VE) exhibited and the ova shed (OS) counted. In sixteen AC, the OS were counted at VE and forming a control group. The STXS affected the animals EC: just 59/139 exhibited a short EC (SEC) with 4.6 ± 0.1 days compared with 80/139 that exhibited a long EC (LEC) of 13.6 ± 0.2 days. False or HLP MI diminished OS just in animals exhibiting a SEC. STXS affects neuroendocrine processes controlling EC length when cutting dorsal connections to AH. The DAR of the AH participate on ovarian mechanisms of follicular selection.

Anterior hypothalamus, Stereotaxic Surgery, Hypothalamic dopaminergic system

Tumor neuroendocrino primario en un canino

Primary neuroendocrine tumor in a canine

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Abstract

The objective know the cause of death of the pet. Pulmonary neoplasms can arise from all parts of the lung, with a histological pattern. Tumors derived from the epithelium of the large airways are located near the lyle of the lung. The majority of canine tumors are adenocarcinomas and progressions from a bronchiole-alveolar pattern to one of mucus-secreting glands or papillary growth. This case was presented, at the University of Guadalajara Animal Pathology Research Center, Canberman cadaver, female, 10 years old and weighing 19 kg, the clinical history indicates that the animal had 12 days of bronchopneumonia; At necropsy he presented Lungs: Severe diffuse emphysema, moderate congestion, discrete diffuse thickening of the pleura and moderate edema, characteristic of the tumor, is classified as anaplastic small cell carcinoma fusiform type. Some lymph nodes have invasion of tumor cells of the lung. Small cell lung tumors are currently classified as neuroendocrine or carcinoid tumors. Their contribution sensitize animal owners so that they attend them on time, and have a better quality of life.

Neoplasia, Tumor, Lun

Metales pesados presentes en hojas de *ficus benjamina* en el área metropolitana de Guadalajara, México

Heavy metals present in *ficus benjamina* leaves in the metropolitan area of Guadalajara, Mexico

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Abstract

Objetivos.General: The collection of dust samples deposited on *Ficus benjamina* leaves in the Guadalajara metropolitan area (GMA) will allow the identification of heavy metals and their spatial distribution.**Specific:** Identify the most polluted areas of the city and the elements present by means of particle dispersion schemes (maps) made with the data obtained by the atomic absorption technique.**Metodología:** For the extraction of heavy metals an acid digestion was performed. The samples were previously homogenized. The determination was made on an atomic absorption spectrophotometer model Varian AA 240 FS, with a monochromator of CZERNY-TURNER design, panel of 4 lamps and inert and adjustable nebulization chamber. The technique used was flame (flame) and calibration curves were used.**Contribución.**The concentrations of the seven metals analyzed Cu, Zn, Co, Ni, Cd, Pb and Cr were identified, the most abundant being Cu and Pb. The maps allowed to identify that there are some patterns of distribution of the contamination, such was the case of the Cd, Pb and Zn that are distributed very homogeneously on the Lázaro Cárdenas avenue until reaching the supply market area.

Atomic absorption, Heavy metals, GMA

Análisis filogenético de los antiportadores Na⁺/H⁺ (NuoL/MrpA)

Phylogenetic analysis of Na⁺/H⁺ (NuoL/MrpA) antiporters

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Abstract

Objectives. Sodium/proton (Na⁺/H⁺) antiporters NuoL/MrpA-like proteins are important in monovalent cations homeostasis, ATP synthesis, are involved in growth using low concentrations of acetate, and in management of protons during methane production. To learn more about the evolutive origin and biological relevance of this protein, in this work a phylogenetic analysis of the NuoL/MrpA superfamily of proteins was done. Methodology. Phylogeny reconstruction was done with 596 NuoL/MrpA proteins and 39 MrpD-NuoM/N proteins. The algorithms used were minimum evolution and maximum likelihood, using MEGA program. Additionally, a conserved domain analysis was done. Contribution. NuoL/MrpA superfamily and their homologous proteins, MrpD-NuoM/N, form two paralogous groups. The NuoL/MrpA superfamily consists of two families. Family NuoL consist of archaeal, bacterial and eukaryotic proteins of around 600 aa in size. Family MrpA are formed by proteins from bacteria and archaea, with a 600 to 850 aa in size. Using the phylogenetic analysis and conserved domain analysis, a superfamily NuoL/MrpA evolution model was proposed.

Phylogeny, Antiporters Na⁺/H⁺, NuoL/MrpA

Extracción de aceite esencial de -“*Ricinus communis L.*”- higuera como fuente alternativa de insecticidas por el método de destilación

Extraction of essential oil from - "*Ricinus communis L.*" - higuera as an alternative source of insecticides by the distillation method

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Abstract

At present, the toxic effect of synthetic insecticides influences great importance in the development of organic alternatives derived from natural oils. Fig oil (castor) is one of the most important products worldwide, due to the many applications that include uses in medicine, cosmetics, inks, soaps, disinfectants, lubricants, varnishes and enamels. The fig tree is historically native to Africa, however it is common in Latin American countries because it is said that I arrive to this continent from the conquest, it is currently in abundance in the state of Coahuila. It has been shown that fig oil contains compounds with insecticidal activity. Therefore, the toxicity of fig oil (*Ricinus communis*) was evaluated based on the NOM-098-SEMARNAT-2002 standard, Environmental protection-waste incineration, operation specifications and pollutant emission limits.

Extraction, Distillation, Insecticide

Determinación de la carga microbiológica en huevo tipo orgánico, industrial y de traspatio en la región centro-occidente del estado de Veracruz

Determination of the microbiological load in organic, industrial and transfer type eggs in the central-west region of the state of Veracruz

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Abstract

The objective of this work was to determine the microbiological load in backyard egg, organic and industrial type of the central-western region of the state of Veracruz. The presence of pathogenic microorganisms in the three production systems was evaluated and the microbiological quality of each of these systems was determined. Which is of the up most importance considering that in eggs with high microbiological load, microorganisms such as Salmonella spp, S. enteritidis, etc., may be present, which are considered causal agents of enteric infections in the population. In addition to the above, the aforementioned exploitation systems represent a source of economic income relevant to the families that inhabit this region. For microbiological analysis, different samples of shell and the internal part (white and yolk) were taken. The presence of Salmonella spp was evaluated by applying the procedure established in the Official Mexican Standard NOM-114-SSA1-1994. In addition, physical tests were performed to assess whether physical defects in eggs can be correlated with the presence of Salmonella spp or other bacteria. Contribution: Currently, there is little information on microbiological quality, in eggs from the different exploitation systems consumed in the central-western region of the state of Veracruz, particularly for the organic and backyard system.

Salmonella spp, Backyard egg, Organic type egg

Análisis de las frecuencias genotípicas y alélicas del polimorfismo 19 T>G del gen UGT1A6 en población mestiza mexicana del estado de Puebla

Genotypic and allelic frequencies analysis of the 19 T>G polymorphism of the UGT1A6 gene in Mexican mestizo population of the state of Puebla

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Abstract

UGT1A6 catalyzes the glucuronidation of several xenobiotics and drugs widely used. Changes in the glucuronidation rate are attributed to inter-personal and inter-ethnic variations, that can impact the expression or enzyme function. Frequencies of genetic polymorphisms of UGT1A6 have been reported in another countries; however, there are no date of frequencies in the Mexican population. The aim of this work was to determine the genotypic and allelic frequencies of UGT1A6 19T>G in a Mexican mestizo population of the state of Puebla and compare them with the frequencies observed in other populations. Peripheral blood DNA was obtained from 60 healthy adults and 19 T>G alleles were identified by the PCR-RFLP technique. Our results were compared with those observed in other ethnic groups, and we observed that our frequencies were lower than those reported in Chinese, Korean, Japanese, Hindu, and Greek populations. These results must be considered to make decisions when choosing the drugs administered to different ethnic groups.

UGT1A6, Polymorphisms, Glucuronidation

Actividad antiparasitaria de *ophiocomina nigra* en *entamoeba invadens*

Antiparasitic activity of *ophiocomina nigra* in *entamoeba invadens*

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Abstract

Objective. Analyze the antiparasitic activity of marine invertebrate *Ophiocomina nigra* in *Entamoeba invadens*. **Methodology.** In *O. nigra*, an analysis of the quantitative proximal chemical composition (moisture, ash, protein, lipids and nitrogen-free extract) was performed. In addition, the determination of the total protein pattern (SDS-PAGE 10%). On the other hand, the antiparasitic activity of *E. invadens* trophozoites was determined, which were grown in TYI medium at 28 ° C and exposed to the aqueous extract of *O. nigra* for 24 hours. Subsequently, metabolic activity (XTT assay) was determined and morphology was analyzed. Cytotoxicity tests were performed on human liver cells (Hep G2) exposed for 24 hours to *O. nigra* (XTT test) and the biomass was determined (violet crystal staining). **Contribution.** The antiparasitic activity of *O. nigra* in *E. invadens* and the cytotoxic effect in human liver cells was determined. There are few scientific studies of this marine invertebrate on its use in traditional medicine, so it is important to analyze its effects and therapeutic value.

Ophiocomina nigra, Entamoeba invadens, Trophozoites

Análisis de un instrumento para elaboración de programas terapéuticos en comunicación humana

Analysis of an instrument for the elaboration of therapeutic programs in human communication

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Abstract

At the FPYTCH Community Services Center, students use an instrument to develop and apply therapeutic programs in Human Communication. Objective: to analyze the instrument for the elaboration of therapeutic programs in Human Communication from the opinion of experts. Methodology: non-experimental research, by survey, cross-sectional and descriptive, applied to 20 teachers of the career in Therapy of Human Communication Through a self-administered questionnaire, with closed and dichotomous questions. Contribution: the reliability of the questionnaire through the Kuder Richardson formula showed a value of 0.81, 80% of the teachers felt that it is necessary to analyze the instrument for the elaboration of therapeutic programs in Human Communication proposing that a new instrument containing the areas be developed of competence of the Therapist in Human Communication

Therapeutic program, Expert opinion, Human Communication

Estudio cinemático de rodilla para la creación de un movilizador pasivo continuo

Kinematic knee study for the creation of a continuous passive mobilizer

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Abstract

The knee is one of the most complex, large and visible joints of the human body, since it provides stability and resistance during displacement, being the one that is most frequently injured. Modifications of the knee joint have specific functional limitations and disabilities, since together with the hip and ankle, the standing body and a primary functional unit of actions such as walking, climbing and sitting. Its anatomical position in the exponential body to blows caused injuries to muscles, ligaments, menisci and tendons; which are also conditioned by other processes such as aging, sedentary lifestyle, falls, obesity, use and loss. That is why, due to the incidence of injuries in this area, a biomechanical study is sought which includes the analysis, function and social importance of the knee joint for the creation of a continuous passive mobilizer that facilitates and accelerates recovery. in patients from the Xicotepec de Juárez region, in Puebla.

Knee, Joint, Mobilizer, Biomechanics

Análisis y diseño de un movilizador activo para rodilla y tobillo

Analysis and design of an active mobilizer for knee and ankle

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Abstract

Objectives: Analysis and Design of an active mobilizer for knee and ankle automated and controlled by a programmed routine. Methodology: It is analyzed how many links and joints exist in the mechanism, the degrees of freedom are determined with Gruebler criteria. For border restrictions we can determine the upper part of the femur as a recessed link. In addition to performing the analysis using the inverse geometric model. If we analyze it as a mechanism of two bars and links, the angles would be determined by the Denavit-Hartenberg criteria. (mechanisms of more than one bar in which part of the analysis of angles and dimensions). Contribution: Optimize a control system applied to a controller, that controller will provide us with slow and precise movements, that way we can tune them effectively in order to obtain efficient movements and be able to evaluate their movements.

Analysis, Design, Active mobilizer, Control system

Robots humanoides como apoyo en el proceso de rehabilitación física en la región de Amozoc

Humanoid robots to support physical rehabilitation process in Amozoc region

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Abstract

Recent advances in different fields of computing have increased the use of these technologies in daily activities. Healthcare is one of the most studied areas of applied science because it can provide tools to improve patient care and prevent diseases. This paper describes common posture problems in children's for the province of Amozoc in Mexico. The physical evaluation shows the affectations of children in kindergarten that can be treated using humanoid robots; this kind of robots can support the physical rehabilitation process by movement imitation and the description of proper postures. In this study, we detected common posture problems and showed which of them can be attended using social robots for the benefit of the population.

Humanoid robots, Physical rehabilitation, Posture problems

Diseño, manufactura y control de una prótesis mecatrónica de extremidad superior

Design, manufacture and control of a mechatronic upper limb prosthesis

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Abstract

For the man, the hands represent the main source of tactile information about his surroundings and are the ideal means for the physical manipulation of the same. Amputations in upper limbs result in a significant loss of functionality in affected people. Disability data in Mexico, according to the INEGI censuses in 2014, show a population of 780 thousand people suffering from some type of amputation, IMSS reported in 2012 more than 113 thousand upper limb amputees. A prosthesis is an artificial extension that replaces a missing part of the body. The objective of this work was to return, in a percentage, the functionality of upper limbs in amputee patients, through the design, manufacture and control of a low-cost mechatronic prosthesis. The above was achieved because the upper limb prosthesis was based on the computer-aided design where the mechanics and dynamics of movement were verified, then, with the design parameters, the three-dimensional prosthesis was obtained using additive manufacturing. A control unit generated joint movements thanks to the connection of servomotors that communicated with a processor medium and a battery. The development of this technology contributes to the integration of light and functional prostheses, with muscle signal control alternatives, proportional to strength and speed, returning characteristics of natural anatomical movement.

Computer-aided design, Additive manufacturing, Automatic control

Diseño de prótesis ABS de mano mediante análisis de esfuerzos

Structural numerical analysis of an ABS material prosthetic hand

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Abstract

The present work shows the development of the proposal for the manufacture of a hand prosthesis. For the most part, prosthetic applications are limited to just basic holding. Currently there are endless free designs for the preparation of prostheses to cover the functionality from the hand to the arm almost entirely. Due to the scope and variety of designs, it is essential to make some validations of functionality, biomechanical resistance, appearance, etc. In the present work, the purpose will be the validation of the biomechanical resistance of a proposed design to cover the functionalities of the hand. The FEM (Finite Element Method) will be used to support the efforts that occur in the prosthesis. In this work, the validation of a prosthesis of the level of forearm amputation in the distal third level will be covered. To support our work, we have some progress and experience working with the acquisition and filtering of bioelectrical signals of hand. The contribution that we are making is the continuity of previous works for the development of the prosthesis completely, and on the other hand the mechanical physical validation of the prosthesis to be developed.

Additive Manufacturing, Prosthesis, FEM

4 Humanidades y Ciencias del Comportamiento

Impacto del grado de satisfacción en las expectativas del estudiante universitario. El caso de la Universidad Autónoma de Chiapas (UNACH)

Impact of the degree of satisfaction on the expectations of the university student. The case of the Autonomous University of Chiapas (UNACH)

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Abstract

The general objective of the article is to determine the degree of satisfaction of the students of the Autonomous University of Chiapas, Mexico, through a cross-sectional study to assess the institutional services offered and their impact on their academic training. The specific objectives are: 1) Analyze the opinion of students regarding their curriculum and teachers, 2) Analyze the opinion of students regarding the knowledge of university regulations and 3) Describe the conditions of University infrastructure: physical and technological. The methodology used was the explanatory method of qualitative-quantitative and transverse cutting, for this it was necessary to design and apply a Likert-type survey, which was applied to 3,842 enrolled students of the 5th. to the 8th. semester of 22 Bachelor's degrees from the various UNACH headquarters. The contribution that this research has is: a) Provide academic elements to university authorities for decision making in their accreditation processes, b) Training of human resources through the participation of students in the development of research and c) Sensitize the university community through the publication of research results.

Quality of education, University Student, Accreditation

La mercadotecnia de las letras: Libros, librerías y consumidores

The marketing of letters: Books, bookstores and consumers

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Abstract

Marketing is a set of techniques that constitute a whole marketing process. The Mexican publishing industry is no exception. Although a marketing strategy tends to be associated with the launch of a cereal or the rental of apartments in a tourist destination, the books also build their business profile as products, although cultural, but they are still identified as elements of the material exchanges, inserts in the chain of production of consumer goods and are subject to the same laws of the markets. The research was of exploratory and non-experimental type and transectional design. The sample was 250 subjects with respect to the total population of the capital: confidence level of 95% and a range of 6.2, chosen at random and entering the library under study, where the survey technique was applied with fourteen questions closed and two open. This article seeks to identify, from the five fundamental market variables, which mechanisms determine the purchase / sale of these articles, with the aim of generating knowledge in business communication in the state capital regarding the publishing market.

Marketing, Publishing industry, Consumers of books

El desarrollo de la conducta asertiva a estudiantes de nivel superior de Xilitla, S.L.P.

The development of assertive behavior to higher level students of Xilitla, S.L.P.

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Abstract

Objective: Design a Course-Workshop to increase assertiveness in students of the Bachelor of Management and Business Development at the Institute of Higher Education Educadistanciaslp de Xilitla, S.L.P. **Methodology:** Descriptive research was applied to give a detailed explanation of the characteristics of the object being evaluated. With a qualitative and quantitative approach. In addition, theoretical, empirical (Observation, Questionnaire, expert criteria) and mathematical (Percent Analysis and Bar Graphs) methods (Historical - Logic, Analysis - synthesis) were used. **Contribution:** By integrating the Course-Workshop to increase assertiveness in students of the Bachelor of Business Management and Development, a precedent is created, by encouraging student participation in class and increasing knowledge at the same time, so that capable students graduate to debate without fear in the work context where they work. With the development of the Course-Workshop to increase assertiveness in students, the class will be more dynamic, will improve knowledge and development, while acquiring security to express opinions freely, preparing it for work performance at the end of the Degree, at the same time that the prestige of the Institution will grow by graduating highly trained personnel.

Behavior, Assertive behavior and Leadership

Confiabilidad y validez de un instrumento para medir la inteligencia emocional en estudiantes de posgrado

Reliability and validity of an instrument to measure emotional intelligence in graduate students

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Abstract

Objective: Calculate the reliability and validity of the Genos Emotional Intelligence instrument concise version, as a reliable self-assessment instrument model for applied research applications in postgraduate students of a public university in southeastern Mexico. **Methodology:** The research has a quantitative approach, with a non-experimental cross-sectional design, 332 master's and doctoral students participated. The reliability of the instrument was calculated through the Cronbach's alpha coefficient $\alpha = 0.93$. For the validity an exploratory factor analysis was performed with the maximum likelihood method with direct Oblimin rotation, the adequacy of the KMO sample was 0.927 and the Barlett sphericity test was significant ($p = .000$) that explained 53.89 % of the variance. The factorization of the instrument merged two of its dimensions and an instrument with the same number of items in six dimensions was obtained. **Contribution:** The results allowed confirming the reliability and validity of the Genos Emotional Intelligence instrument, which contributes to an instrument that adds to other existing tools to self-assess emotional intelligence.

Reliability, Emotional intelligence, Genos IE

Alternativas para el aprovechamiento del proceso investigativo en la enseñanza de la música

Alternatives to exploiting the research process in benefit of music teaching

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Abstract

Artistic education today involves a superior amount of effort compared to previous decades; with no intention of discrediting the quality and rigor exerted, in the past, student, group and teacher shared gradually ideas, resources, techniques and emotions inside and outside the classroom. Currently, the process is accelerating; the considerable amount of research on, about and for the sake of art, along with the technological impact and the existence of social networks that facilitate sharing, stimulates information inequalities, which assign new challenges to the teacher: to foster creativity and motivation towards studying, while offering the student suitable tools to assimilate the available set of information. This is possible when teaching and research are integrated, a recurring theme in forums and educational events, which motivates the objective of this work, which is to consider the potential of the research process in music teaching. An analysis of documents and the results of a non-structured group debate offered alternatives to exploit the potential of the research process in music teaching.

Research process, Alternatives, Music teaching

Revisión del trabajo de tesis

Thesis work review

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Abstract

Through the process of making a professional Thesis, the revision of the elements of substance and form by the Director of Thesis is very important. Beginning with the Thesis protocol is very important the title of the Thesis and having current literature. In the stage of Review the correction of the original work and the support that is supposed to have the candidate for making a good quality work, and that includes giving information to pass the grade exam. The Director of Thesis should always supervise the most important points in the writing process and collect information resources. The recommendations given by the exam jury are suggested to be integrated in the final Thesis work.

Revision, Thesis, Work of Thesis

La investigación en las instituciones de educación superior: Vinculación con el sector gobierno e industria (1981-2011)

Research in higher education institutions: Link with the government and industry sector (1981-2011)

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Abstract

The goal of this research is to analyze the link between government entities and the industrial sector through research (published articles) generated jointly with researchers who have belonged to the National System of Researchers (SNI) in area VII (Engineering) at least one year and are attached to an HEI in Mexico in public and private sector. This study used a series of data from the Science and Social Sciences Citation Index developed by the Institute of Scientific Information (ISI) (ISI, 2012) today Thomson Reuters Web of Knowledge and correspond to two decades of Mexican scientific research. Based on this information, a database of publications and citations of all scientific articles that have at least one author with an address in Mexico, published in the period from 1981 to 2011, was prepared. The results of this research show that of the 26758 articles published by researchers during the study period, only 8% of HEI research is generated jointly with government entities while the tiny amount of 1.2% is generated in collaboration with the business sector and 80% is generated between the same HEIs or with international institutions

Linking, Industry-Academy, Engineering, SIN

Impacto de la narrativa de cuentos en el área de lenguaje: Subprueba de semejanzas de la escala Wechsler para preescolares

Impact of the narrative of accounts in the language area: Wechsler scale semejanzas sub-test for preschools

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Abstract

Storytelling in preschool ages plays an important role in the development of expressive and comprehensive language. Objective: to determine the impact of storytelling in the subtest of similarities of the WWPSI-Spanish Wechsler Intelligence Scale in preschoolers. Methodology: mixed, non-experimental, observational, cross-sectional study, with descriptive statistical analysis and non-probabilistic sampling for convenience. The sample consisted of 21 preschool children between 5 and 6 years old. The total score of the evaluation is 22, in the first evaluation a maximum score of 15 and a minimum of 2 was obtained, an average of 8.80 and a standard deviation of 4.52. In the second evaluation, a maximum of 19 and a minimum of 7 were obtained, an average of 14.52 and a standard deviation of 4.42, demonstrating significant advances in skills for the semantic categories. Contribution: Stimulation through storytelling favors the development of the expressive and comprehensive language of children, so it is suggested that preschool programs include activities such as storytelling, as it is a fundamental tool for the improvement of cognitive skills and the integral development of children

Semantic category, Preschool, Storytelling

El liderazgo transformacional del cuerpo docente de la universidad tecnológica de Guaymas con el modelo bilingüe, internacional y sustentable

The transformational leadership of the teaching staff of the technological university of Guaymas with the bilingual, international and sustainable model

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Abstract

The present exploratory-descriptive research was carried out with the purpose of identifying the features of the transformational leadership (TL) demonstrated by the teaching staff of the Technological University of Guaymas, under a Bilingual, International and Sustainable Model (BIS) in the state of sound. It was intended to identify what knowledge, skills and attitudes are applied in their daily work, analyzing the impact on students, co-workers and the same institution. Two Likert-scale surveys were designed with four response options, the first instrument, with the objective of serving as a self-assessment, was applied to 20 teachers among Full-Time Teachers (PTC), Subject Teachers (PA) and Teachers of English Language Subject (PA-I); while the second instrument was applied to 200 students of the different educational programs of the university, to serve as a comparison against the self-assessments perceived by teachers. Using the data obtained from the surveys, a quantification of the traits of the LT of the teachers evaluated was made, as well as a comparison between the personal consideration of the teachers and the opinion of the students.

Transformational leadership, Teaching, BIS

Acciones para el desarrollo sustentable, estudiantes universitarios, su calidad de vida y un ambiente seguro

Actions for sustainable development, university students, its quality of life and a safe environment

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Abstract

The objective is to identify the predictive variables that contribute to the improvement of the quality of life and a safe environment through actions to promote Sustainable Development. The study is non-experimental with a quantitative approach. The population 86,076 students of public and private universities of the State of Coahuila, a sample of 305 cases for the present study. The instrument was a questionnaire made up of 291 items, of which 40, 39 independent variables were considered that refer to actions that contribute to sustainable development and a dependent variable related to the quality of life and the safe environment. A multiple regression analysis was carried out, which shows that university students consider actions such as caring for nature, social equity, saving water and strengthening the identity of communities that are predictors of a safe environment for quality of life. The contribution of the study is about the perspective of university students and the proposed actions to improve their quality of life, a safe environment and sustainable Development.

Sustainable Development, Quality of life, Safe environment

Motivación y valores; herramientas que posibilitan la trayectoria académica de los preparatorianos

Motivation and values; tools that enable the academic trajectory of preparatorians

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Abstract

This research was carried out under the qualitative standard of flexible design, being interpretive and diachronic, where it was executed under a semi-structured interview where young people aged 15 and 17 participated. The information processing was worked on the Atlas Ti program to obtain evidence on the research question. The most relevant research results focus on teacher motivation as a fundamental part of the students' lives, achieving their essence from them through tools that enable the teaching process. The primary objective lies in the analysis and reflection on the Project for the School Coexistence of the SEP that seeks to promote inclusive, democratic and peaceful coexistence in schools, based on actions that contribute to the academic work of teachers and students in the classroom, from the perspective "learn to learn and learn to live together".

Motivation, Values and Students

Evolución del concepto de discapacidad

Evolution of disability concept

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Abstract

This review aims to provide bibliographic information about the historical stages through which the concept of disability has gone through. Based on the investigations of the three most characteristic models, which throughout history have helped society as a frame of reference for the treatment of disability: the tragedy/charity model, characteristic of antiquity and the medieval era; the medical or rehabilitation model, typical of the first half of the 20th century; and the social model, which arises from the sixties of the last century and is currently trying to keep. This evolution has been presented as a consequence of the development that humanity has had, both in its ideas of perceiving people with disabilities, and in the interventions that have been substantially modified. Playing an important role traditions and beliefs, as well as the advancement of science in its different expressions

Tragedy model, Medical model and Social model

Actitudes lingüísticas sobre el uso de la lengua CH'ol en niños de tres comunidades indígenas de Tacotalpa, Tabasco

Linguistic attitudes about the use of the CH'ol language in children from three indigenous communities of Tacotalpa, Tabasco

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Abstract

This research was aimed at identifying those linguistic activities about the use of CH'ol language that children from communities of Cuviac, San Manuel and Puxcatan, Tacotalpa, Tabasco have. The methodology was qualitative, the field work was carried out based on the knowledge dialogue (Left, 2014). We worked with three children about eight and nine years old from the selected communities. Before this, 3 workshops were carried out - one in each community - to socialize with children in elementary schools. This allowed us the selection of informants to interview. Communities selection was based on three elements: 1) CH'ol language as the spoken one in the community, 2) location at the municipality of Tacotalpa and 3) that at least two communities had bilingual elementary schools. Children selection was based on: 1) those ones who prove competence about CH'ol vocabulary during the workshops and 2) availability to participate in the interview.

Linguistic attitudes, CH'ol language, Language use spaces

La educación inclusiva como un derecho humano

Inclusive education as a human right

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Abstract

The interest of many scholars in the field of education to contribute to the task of moving from an educational inclusion policy towards an inclusive education policy involves aspects that go beyond recognizing the issues being addressed. At first, it represents the identification and analysis of the contributions of experts who have problematized on the different contexts surrounding the issue of inclusion in education for several decades. Proposals, initiatives and actions derived from each of the different scenarios mentioned, both by national and international agencies over time, have laid the foundations for inclusive education to approach its consolidation as a fundamental human right. At the same time, the impact of the results of an inclusive education for the benefit of the quality of life of those who have identified themselves as socially violated subjects over time is analyzed.

Inclusion, Education, Human right

Estrategias de aprendizaje: Inteligencias múltiples y estrategias didácticas

Learning strategies: Multiple intelligences and didactic strategies

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Abstract

This article has as a main objective to: Identify how multiple intelligences and didactic strategies intervene in learning strategies. The data obtained is organized in a concentration matrix and is given statistical treatment to explore results where a 90 Alpha Cronbach is obtained. Besides, information is processed in the statistical analysis: Percentages and frequencies, comparative with T student test and integrational with factorial analysis. As main results it stands out that: Starting from the use, handling and development of multiple intelligences such as naturalistic, bodily-kinesthetic, logical mathematical along with didactic strategies such as team building, individual work, exchange of ideas, participation, visual aids, study of chaos, and to arouse curiosity impacts in students and motivates them to do analysis, comprehensive lecture and work collaboratively, all of this combined encourages students to be more autodidactic.

Multiple intelligences, Didactic strategies, Learning strategies

Felicidad, bienestar y satisfacer como desarrollo humano

Happiness, well-being and satisfaction as human development

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Abstract

Objectives Knowing how happiness is equivalent to well-being and satisfaction and therefore favors human development. **Methodology** Mixed approach, type of exploratory and correlational research, an expressed instrument for research was designated and validated, 300 respondents were applied. **Contribution:** Happiness is equivalent to well-being and satisfaction and increases the quality of life because human development is better. Social networks have changed the perception of happiness, including attitudes, feelings and values, friendships, work and conflict.

Happiness, Well-being, Human development

El conflicto epistémico de la pulsión

Drive's epistemic conflict

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Abstract

This article analyzed the epistemological validity of the term drive (*trieb*) in psychoanalysis by contrasting its supposed biological origin in Sigmund Freud's theory with recent genetic results. Culture, for Freud, appeared in a moment of human evolution when it became necessary for our ancestors to form alliances in order to face natural hazards. Therefore culture's main purpose is to protect us from nature and to regulate social relationships. Consequently it is implied that drives formed part of human's nature before culture existed and due to drive's sacrifice that culture demands it's possible to live in society. Given that drives, in Freud's theory, are the source of psychic suffering and the resources used to defend against it are cultural, the way in which these are considered have repercussions on the basis of clinical interventions and the aims of psychoanalytical treatment. At present, genetics questions the idea that human nature cannot be modified by culture. In other words, epigenetic studies, assisted reproduction, cloning, among others, seriously query the idea of an unchangeable human nature.

Psychoanalysis, Drive, Epistemology

Análisis de las horas de sueño y su repercusión en el desempeño académico de jóvenes de bachillerato

Analysis of sleep hours and their impact on the academic performance of high school students

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Abstract

The dream is a vital part of the biological development of all living beings, although, with the current rhythm of young people, social networks, television series, parties, etc., daily sleep hours decrease. The objective of this study is to know sleep disorders and their impact on academic performance in high school students; the subjects surveyed were 112. The quantitative methodology, descriptive cut. The average time that young people usually sleep is 12 pm (58 respondents), 28 young people sleep 8 hours, 69 sleep 6 hours and 15 of them only 4 hours a day. The majority of young people (63) have a regular average of 7 to 8.9, which may have several factors, but associating the surveys those who suffer some type of disorder or a few hours of sleep claim to have average of bad to regular. It is important to carry out intervention programs in the classroom and at the Institution to raise awareness about the importance of sleep both at the health level and at the academic level.

Dream, Performance, Mentoring

Implementación de un curso remedial para el fortalecimiento de la atención y la memoria en jóvenes con discapacidad auditiva. Inclusión en la educación superior

Implementation of a remedial course for the strengthening of attention and memory in young people with hearing impairment. Inclusion in higher education

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Abstract

Objective: know the effectiveness of a remedial course for the strengthening of cognitive functions in young people with hearing impairment. Methodology: it's a quasi-experimental study of before and after, of longitudinal section. The quantification of the natural scores of the evaluations of cognitive functions by means of the Neuropsychological Battery "NEUROPSI" Attention and Memory, performed in young people with hearing impairment before and after a remedial course prior to signing an informed consent is described. The first evaluation was carried out prior to the start of the course, while the second was carried out when the three young people finished the third semester of the Human Communication Therapy degree. The data were obtained by reviewing the three files, from which the variables attention and memory (coding and evocation) were taken. The results showed an increase in the scores in the second evaluation with respect to the first evaluation in most of attention and memory sub-areas (coding and evocation) evaluated. Contribution: identify the importance and relevance of courses and programs focused on the improvement of cognitive functions in young people with hearing impairment, which provide the tools that allow them a greater and more efficient incorporation into the Higher Education System.

Remedial course, Cognitive functions, Hearing impairment

Modelo metodológico para la educación ambiental a partir del museo de ciencias

Methodological model for environmental education from the science museum

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Abstract

The objective of the research is to know the benefits offered by the Science Museum in environmental education at the basic educational level and how to integrate through workshops into the formal curriculum. Methodology. In the present documentary review work, the benefits of learning through museums and how they potentiate the knowledge acquired in the child population in environmental education are exposed. A methodological model based on three main axes for environmental education is presented: Contextualization, Awareness and Action. Contribution. Formal education, therefore, must contemplate external learning spaces to reinforce and / or expand knowledge. In this sense, the dissemination of science takes an important role since it is through activities outside the academic program where what is learned in the classroom takes on meaning in everyday life and practical situations. The foregoing makes it necessary to have new educational strategies to understand and seek different solutions that counteract environmental deterioration of our time, using environmental education as a basic tool for people to become aware of the importance of preserving the environment in which they live. find and be able to generate changes in their behavior, values, and lifestyles.

Education, Outreach, Museums

El desarrollo y movilización de competencias reflexivas en la formación de docentes de la escuela normal oficial “Dora Madero”

The development and mobilization of reflexive skills in teacher training of the official normal school "Dora Madero"

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Abstract

The teaching-learning process implies a reflexive approach to the act of teaching. Reflection is an essential component of all processes inherent in teacher training. It is essential to encourage it to potentiate the development of cognitive and metacognitive skills. Current approaches imply that trainers transform their practice and teachers in training develop various skills to meet the challenges of implementing educational models. The study is descriptive, correlational and factorial, and is also based on action research. The problematic part of the various tensions about the development of metacognitive skills, (reflection of learning. Reflection in and about reflective action and practice. In teacher training, reflection processes have been strengthened, therefore, this study It was carried out to identify the factors that facilitate the development of these skills, the variables that are related, the impact of the processes in the development of competences and to know the actions that teachers perform in learning environments. It has gained a significant boom in higher education institutions because the importance of developing this important cognitive ability is being recognized.

Teacher training; Metacognitive skills; Reflective practice

Relación entre depresión y promedio escolar en estudiantes de la facultad de psicología y terapia de la comunicación humana, UJED, campus Durango

Relation between depression and school average in students of the faculty of psychology and therapy of human communication, UJED, Durango campus

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Abstract

Objective: to identify the relationship between depression and the school average in students of the Faculty of Psychology and Therapy of Human Communication, UJED. Depression was assessed by the Beck Test to 110 students. It is a quantitative, exploratory, non-experimental, observational and cross-sectional study, with descriptive and correlational statistical analysis, with non-probabilistic sampling for convenience. Chronbach's alpha of the analyzed data was 0.89. 50% of the students presented some level of depression, with a significant correlation between depression and the school average with $r: -.247$ and $p: .009$. Contribution: the results indicate that, in a very weak, but statistically significant way, the higher the school average, the lower the level of depression among students. The high frequency of the incidence of depression in the sample studied plus the significant correlation, suggest the need to implement depression care programs concurrent to the educational process.

Depression, Academic average, University students

Manifestaciones y capacidad de afrontamiento del estrés académico en estudiantes de la facultad de psicología y terapia de la comunicación humana (FPYTCH) del Estado de Durango

Manifestations and capacity to face academic stress in students of the faculty of psychology and therapy of human communication (FPYTCH) of the State of Durango

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Abstract

In higher education, students are susceptible to the manifestation of stress. Objectives: to determine the presence of academic stress in psychology students of the FPYTCH; Identify the main stressors in the participants of the psychology career of the FPYTCH. Methodology: This investigation was non-experimental, exploratory, observational, by survey, cross-sectional and descriptive, in a non-probabilistic sample obtained by accident and for convenience, after signing an informed consent. Procedure: 122 students participated in the semesters of 1st, 2nd, 3rd, 7th and 8th grade, to whom the academic stress questionnaire was applied. For statistical processing the spss software version 20.0 was used. Contribution: The Cronbach Alpha of the analyzed data was 0.94. Of the 29 variables analyzed, only two showed that there is almost always academic stress which are: 1) teacher evaluations and 2) the type of work requested by teachers. Therefore, it is considered that there is little presence of variables with academic stress, and therefore it can be considered that students have a good capacity to face the academic environment.

Academic stress, University students, Higher education

Estrategias didácticas en un entorno universitario como apoyo a la educación presencial

Didactic strategies in a university environment as support for presence education

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Abstract

This work presents research related to the learning strategies used in a university environment in face-to-face education, the strategies mentioned are the active master class, the case study, the debate, the game of roles and project-based learning. Methodology: A descriptive design was used, carrying out data collection through the "University Students Learning Strategy Assessment Questionnaire". Results: Students have enough learning strategies to achieve the objective of their university studies successfully. In addition, there is acceptance by students of the implementation of the various strategies in a face-to-face course, as it allows them to address the issues using the strategy that allows better learning. Conclusions: Given the process of applying the educational model in Higher Education, learning environments should be created that facilitate innovation and student participation in the teaching-learning process, considering both the component teaching as the human dimension. In in-person students, the results demonstrate better information storage skills.

Learning strategies, Students, Higher education, Face-to-face training

Pedagogía crítica, la visión para favorecer la autonomía en el alumno

Critical pedagogy, the visión to promote studen autonomy

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Abstract

The multiple difficulties that are experienced within the classroom are a reflection of the reality of students, teachers and the school community. There is much talk about the problems of the students, their behaviors, the poor consolidation of learning, lack of participation, their vulnerability to the context in which they live, however rarely does the teacher assume any of these as their own and seeks to solve them through their practice. The present is the follow-up of a research teacher whose purpose was the transformation of his practice to favor critical thinking in elementary students and teachers in training. For this, the socio-critical paradigm was used under an action research approach, the actions carried out were based on critical pedagogy. It was found that critical pedagogy improves the teaching practice, promoting the transformation of students' reality through the development of critical thinking, favoring autonomy in students.

Critical pedagogy, Action research, Autonomous student

Implementación de un dispositivo de datos leíbles por máquina para el apoyo de la adquisición de lenguaje en la infancia

Implementation of a machine-readable data electronic device in order to improve language acquisition during childhood

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Abstract

Language is a fundamental tool for human interaction. Through communication an individual may obtain and transmit information, emotions and wishes. However, language is an acquired skill that requires a development process, in which the critical phase of development occurs during childhood an individual may encounter social, cognitive and emotional problems during the aforementioned and later stages of life if this skill has not fully matured. This impact may be reduced or eliminated through therapy, with the aid of tools such as Augmentative and Alternative Communication (AAC) systems, along with techniques such as music therapy and articulation therapy. These techniques are employed to aid the patient fully develop their linguistic abilities. A platform which incorporates the aforementioned therapeutic elements with current technological advances is proposed in this research paper, which combines them with a label system readable by machine. The results of experimental therapeutic sessions are be addressed in this research paper.

Technology, Language Therapy, AAC

Efecto de los ambientes de aprendizaje en estudiantes de manejo de la salud y bienestar animal de la licenciatura de medicina veterinaria en la UdeG

Effect of learning environments on animal health and welfare management students of the degree in veterinary medicine at the UdeG

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Abstract

Teachers look for suitable models that provide university students with the conditions and essential elements that stimulate the development of skills and competences for a lifetime. The concept of learning environments is not only to talk about infrastructure, materials or support resources, which in some way are important, but that in itself, the essence of this will depend on the initiative, creativity, capacity and interaction of the person who be at the forefront of the teaching-learning process that is the facilitator. The objective was to know the environment through which the student learns better as part of the appropriation of knowledge and knowledge construction. A group of student (n=40), of the course of Management of Animal Health and Welfare of the Veterinary Degree, was evaluated through a descriptive design through virtual environments (T1), within the classroom (2) and real environments (T3). The best environment being T3, followed by T1. The purpose of learning environments is to provide resources and develop conditions that contribute and facilitate the acquisition of knowledge. On the other hand, the learning processes well used contribute to the acquisition of learning while providing attitudes and values in the student.

Learning environment, Virtual learning, Real learning

Habilidades y actitudes para fortalecer el vínculo pedagógico docente-alumno

Skills and attitudes to strengthen the teacher-student pedagogical link

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Abstract

The present study deals with the correlations of attributes of teachers and students of teacher training. The objective is to establish the correlations that occur between teacher skills and attitudes with those of teacher training students. The design is non-experimental transversal, with a population of 273 subjects where all the students of the campus were considered. The instrument is a questionnaire that measures the self-assessment of skills and attitudes of young people. Statistical treatments were performed descriptive analysis with measures of central tendency and Pearson correlation analysis. With the results the conclusions and discussion of the study are elaborated. The main results show, among other things, that students prefer a teacher who has their own attributes and allows them to facilitate the pedagogical relationship for learning. The contribution of this research refers to the qualities that teachers require to strengthen the teacher-student pedagogical link.

Attitudes, Skills, Pedagogical skills

Bienestar material y autodeterminación en la calidad de vida en estudiantes universitarios

Material well-being and self-determination in the quality of life in university students

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Abstract

The objective of this research is to identify the relationship between material well-being and self-determination in university students in their quality of life. Methodology. It is carried out as a non-experimental, cross-sectional, descriptive, correlational study, processed by SPSS statistical package. Contribution. Identification of the material conditions of university students and their level of self-determination in their quality of life, elements that impact on the maintenance in the study until obtaining the degree through receiving economic support within the social policy to vulnerable groups, and that if school dropout occurs. Where it was found that students perceive themselves with low level of material well-being, but with a high level of self-determination that can be shown in the activities they carry out in their responsibilities as university students, having less dependence on parents, with decision-making and direction of his life with some independence.

Quality of life, Material well-being, Self determination

Elementos psicopedagógicos en niños de preescolar y factores de protección

Psycho-pedagogical elements in preschool children and protection factors

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Abstract

The objective of the present investigation is to evaluate cognitive, motor and emotional aspects of preschool children in order to identify risk factors within the development in the second childhood. The problem of various factors directly influences the school culture, in this way, the study was based on mentioned evaluations, with students who presented behavioral problems, in order to find indicators that explain the type of behavior performed by the minor that causes disturbance in the school context in the teaching process. For this, the methodology used was of a non-experimental qualitative / transversal type, through a non-probabilistic sampling of the type subject. The contribution obtained within the investigation is observed with quantifiable linear frequency data (92%), the direct influence of the inappropriate behavior of minors related to domestic violence, using the school context as a means of affective and effective protection, not obtaining significant data in cognitive areas.

Psychopedagogy, School protection factor, Family violence

Neurociencia y eneagrama: Reconfigurando los equipos de trabajo

Neuroscience and enneagram: Reconfiguring work teams

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Abstract

Competitiveness is outside modernity in all sectors of society. The execution of tasks has become too complex due to the problems brought by the integration of globalization as a synonym for competition. Undoubtedly, the way to respond to the complexity of the current environment is through the integration of work teams that can be efficient; And the only way to guarantee success is by supplementing the few personality traits developed with the well-worked skills of other team members. Therefore, this research developed a quasi-experimental study in 62 people; to demonstrate that work teams formed by eneatypes or personality traits, obtained by the enneagram map test, are more efficient than traditional equipment. The main contributions to the knowledge gap of this research are: demystification of the enneagram; demonstrating through a quantitative study that the participants obtain better results when working in teams formed with enneagram; participants have a positive perception about enneagram; and using the tools of neuroscience it is proved with physiological data that the theoretical precepts of enneagram are correct.

Work teams, Human capital, Enneagram, neuroscience

Aprendizajes clave y su impacto en el ámbito socioemocional del estudiante de nivel secundaria

Key learning and its impact on the socioemotional area of the secondary level student

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Abstract

The progressive advancement of societies as a result of globalization establishes a competitive scenario in which the individual must seek continuous improvement and compliance with professionalization standards. Therefore, the objective of this research is to know the repercussions of the application of the new educational model in secondary education institutions on educational quality. The sample consisted of 50 secondary school teachers, aged between 23 and 45 years. An instrument was applied with 4 signalitic variables and 36 variables of the study phenomenon, considered with a scale of decimal ratio; which were processed in the statistical programs SPSS and Statistica. The main results show that the evaluation of teaching performance is significant to highlight the application of didactic procedures that ensure student learning. In addition, as long as human development and socio-emotional education are promoted, satisfactory results will be obtained in the application of the new educational model. Therefore, it is proposed to carry out continuous improvement forums where students, teachers, executives, parents and social agents that derive in the creation of public policies participate.

Educational Quality, Educational Model, Teaching

Comparación de los efectos en tratamientos de autismo a partir de modelos conductuales y psicoanalíticos

Comparison of the effects in autism treatments from behavioral and psychoanalytic models

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Abstract

In this paper we reviewed the autism treatments efficiency results based on behavioral and psychoanalytic models reported within the last six years. Since both models are based on different conceptions of treatment direction in autism cases, the results were compared between them to determinate their general differences. Psychoanalytic models have multiple autism meanings, some of these theories consider it as part of psychoses while others think about it as a different and autonomous clinical structure. Nonetheless, generally these models are based on symbolic conditions and family history to focus treatment on affective social interactions and alterity acknowledge. Meanwhile, behavioral models are based on environmental, genetic and social conditions to decrease the presence of self-injurious behavior through social rewards during therapy and to impact the family context thanks to socioemotional development. Coincidentally psychoanalytic and behavioral models ensure in their interventions to modify the presence of angst in patients and in their relatives.

Autism, Psychoanalysis, Behavioral model

Los adolescentes y los problemas emocionales en su aprendizaje

Teens and emotional problems in their learning

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Abstract

When teenagers are going through this stage they often have emotional problems, which, if they are taken care of on time and with the appropriate support of parents, can easily be overcome and not trigger problems in other areas of life such as academic performance. The object of study is to know the relationship between emotional and behavioral problems and the support they receive from their parents with learning. The final test was applied to 80 subjects of second grade of secondary school. An instrument was used with four nominal variables and 60 simple variables integrated in 3 sections of 20 variables per axis, which were: emotional problems, family support and learning. The data were processed in the statistical programs, and the statistical levels of frequencies and percentages, factorial integrational, relational level were obtained. Main results: when there is support, help and cooperation from parents to their children, they have a better academic performance and accept themselves, so they do not present emotional problems and when parents are involved in the integral development of their children, these do not present emotional problems and dedication to their studies is facilitated. The main conclusions were that the student who accepts himself as a person, if he receives the necessary support from his parents, attains the necessary knowledge and has a good academic performance.

Emotional problems, Family support and Learning

Correlación entre practicar deporte y el rendimiento académico en jóvenes de nivel medio superior

Correlation between practicing sport and academic performance in young people of upper secondary level

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Abstract

The integral formation of the university students is of great transcendence for the society, what they can count on with the best necessary tools will allow them to confront with success his professional life. The objective of the present study is to know the relation of this one with the academic performance. The type of research is quantitative. The study was carried out on 95 people, of which 65 are young students at the baccalaureate level and the rest are part of a youth basketball team. The results show that 80% of young people practice some sport, depending on the hours per week that they practice sports, 41.17% practice from 1 to 2 hours, 11.76% from 2 to 3 hours and 47.05% train 3 or more per week. On the relationship between sport and academic performance, 78.46% affirm that there is. If they consider that sport has improved their academic performance, 54% believe that this is the case. Finally, we evaluated the average of those who do not practice sports (8.7) and those who do (8.8), although the difference is not obvious, this investigation must be complemented to corroborate the information and be able to approve or discard the hypothesis raised.

Sport, Performance, He

Propuesta de seguimiento a actividades prácticas en un curso presencial a nivel superior

Proposal for follow-up to practical activities in a higher-level presential course

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Abstract

At present, it is required that graduates of higher level have a strong knowledge of statistics, which allows them to face the daily needs of management and interpretation of information. The above is not only a need of the state of Puebla or our country, on the contrary, countries such as Spain, the United States or England, also show an interest in the significant learning of statistics, which can be observed in the different planning didactic proposals for teaching, with the aim of students achieve a "statistical sense", as proposed by various authors, which suggest that to achieve this, the following points should be taken into account: develop statistical thinking, use real data, encourage active learning in the classroom, promote conceptual understanding more than mechanization and streamline the evaluation process, in such a way that it becomes a tool for continuous improvement.

Statistics, Projects, Monitoring, Processes, Evaluation

Aulas virtuales para la formación académica universitaria

Virtual classrooms for university academic training

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Abstract

At present we are in a constant change that affects us in a technological, economic, social, political and environmental way. Where virtual education is undoubtedly the one that most adapts to these changes. Every day, Content Management Systems are generated that favor the development of virtual classrooms as support and learning tools in university academic training, which help to minimize geographical barriers in education and bring knowledge closer to people. A content manager or CMS (Content Management System) is a management system that allows you to create, manage and publish content in a web environment, a clear example is Moodle. The implementation of virtual classrooms favors the training and qualification of university students through the incorporation of learning strategies focused on developing theoretical and practical competences and attitudes that allow them to perform effectively in the workplace, as well as strengthening the face to face and semi-formal educational modalities. face-to-face.

Online education, Virtual classrooms, Educative technology

Estudio descriptivo de la capacidad de emprendimiento de los alumnos del Instituto Tecnológico de Sonora

Descriptive study of the entrepreneurship capacity of the students of the Instituto Tecnológico de Sonora

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Abstract

The Instituto Tecnológico de Sonora (ITSON) is a university concerned about the integral development of its students, developing the capacity of entrepreneurship through its dimensions. The objective of this research was to identify the entrepreneurship capacity of the students through a descriptive study and difference of means, which allows the knowledge of the levels of perception in their dimensions. The participants were students enrolled in entrepreneurship and the instrument was applied to a sample of 40 students. The type of research was descriptive with the difference of means of each gender. The instrument was adapted from Mavila, Tinoco & Campos (2009) with a Likert scale that goes from 5 to 1 where 5 is never and 1 always. Cronbach's alpha was 0.908. Regarding the findings, in the dimensions it was observed that the highest perception with an average of 1.5000 corresponds to self-realization and the lowest one with 1.9958 to social relation, both in the acceptable range. Regarding the difference of means over gender, it was observed that there is no significant difference. It is concluded that the ITSON students perceive that they have a capacity for entrepreneurship.

Capacity of entrepreneurship, Entrepreneurship, Dimensions of entrepreneurship

Inserción laboral de egresados de ingeniería agroindustrial bajo la óptica de la teoría del capital humano

Labor insertion of graduates of agroindustrial engineering from the perspective of the theory of human capital

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Abstract

The Agroindustrial Engineering graduates from Centro Universitario de Los Altos come from an environment with economic deficiencies and unfavorable family basis in terms of the low academic level their parents have. The Human Capital Theory establishes among its main precepts that each individual is directly and irreplaceably responsible for their school and work future. With the results I present in these lines, it is verified that the only architects of their labor success are the graduates themselves, and how they've used the knowledge they acquired during their academic training. Through the application of a qualitative method, the information I present comes from interviews with the entire group of graduates from the 2008-2012 generation. Corresponding to what academics call a Study Case and the results presented here cannot be extended to other generations of graduates from the same or different majors. It is desirable to compare the characteristics with studies of similar origin but not to transpose the conclusions.

Graduates, Work, University education, Social origin, Human capital

Alfabetización tecnológica en estudiantes de nivel superior

Technological literacy in higher level students

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Abstract

The general objective of this project was to identify the level of technological literacy students of IT and Systems Engineering. Regarding the methodology, it was applied an instrument called "Questionnaire for the study of Digital Competence of University Students (CDAES) (Gutiérrez, J.; Cabero, J. & Estrada, L. (2017)). Also, the analysis simple was chosen among university students enrolled in IT programs. It was observed the level of Technological literacy in students of third quarter in the IT and Systems Engineering program in a 23.8 % the result was well and 76.2% was excellent.

Technological Literacy, CDAES, Competences

Liderazgo actual: Una percepción de estudiantes de educación superior

Current leadership: A perception of higher education students

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Abstract

Objective of the study to identify students' perception of the degree in administration about leadership in the face of current challenges, the values and qualities required by today's leader, as well as the areas where ethical dilemmas are, for the development of competences that affect the solution of problems of their profession. Non-experimental, transectional, descriptive, quantitative approach research. One section of the instrument had a scale of 5 response categories, the second with 3: very important, regularly important and unimportant; third with three: many, some and none. The results before the current problems obtained the highest means in: the current leadership needs ethical and moral conduct with 4.41, society has not become aware of its great problems with 4.23; people are disappointed by the unwillingness of the authorities with 4.21. On the perception of the values and qualities of the leader: be honest 1.13, be clear about the objectives you want to achieve 1.14 and ability to face challenges 1.16. The areas where ethical problems are found: 1.40 in education, economic 1.48, and 1.51 in leadership. The study contributes to future research and the state of the art.

Leadership, Leader, Ethics

Desarrollo de competencias profesionales mediante la ejecución de proyectos académicos

Development of professional skills through the execution of academic projects

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Abstract

In this work, the importance of developing academic projects for which students develop various professional competencies and enhance their learning capacity to bring theory into practice through the advice of a group of teachers with different professional profiles so that the projects directed are evidenced that be multidisciplinary. Examples of projects developed by different national and foreign educational institutions, of various educational levels and curricula are shown; and the types of instrumental, interpersonal and systemic competencies enhanced by the execution of academic projects were analyzed. The impact of these projects on the development and application of professional competences to promote the participation of students, teachers, managers and educational authorities with this type of projects and even to be able to carry out forums in which the projects of various institutions were presented were studied. to exchange ideas and enrich knowledge, in addition to strengthening bonding. Finally, the findings and conclusions derived from the study are presented

Professional competencies, Academic projects, Educational institutions

El uso de las TIC en los sistemas educativos formales. Propuesta de marco metodológico para su caracterización y análisis

The use of ICT in formal education systems. Proposed methodological framework for its characterization and analysis

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Abstract

Undoubtedly, the rise of technology of the information and communication (ITCs) was what revolutionized the current epoch, giving a radical turn to the way in which we communicate, learn, and work—a situation that led to considering information the most valuable resource toward progress and education the médium through which to produce it and distribute it. This led governments to generate high expectations regarding the use of technologies in education, believing that they offered the possibility of innovating teaching processes and improve learning processes, it being a motive for a UNESCO world declaration. However, recent studies demonstrate that the incorporation and use of ITCs in classrooms have not been easy for various reasons, especially the financial cost they represent, the challenge of digital literacy for teachers and students, and, most importantly, the use that they make of ITCs. In this regard, in this work, a methodological framework is proposed, understood as a set of actions geared toward describing and analyzing an object of research orientadas, in this case, the use of technologies in formal education. For this purpose, a meticulous survey is performed to choose a paradigm, a qualitative-humanistic perspective, a method, an orientation, the scope of the study, and techniques for data gathering and análisis, as well as to determine the population and sample.

Education, ITCs, Use, Characterization, Analysis, Methodological framework

Elaboración de un instrumento para medir el capital intelectual en una institución de educación media superior, en el estado de Tabasco

Development of an instrument to measure intellectual capital in an institution of higher secondary education, in the state of Tabasco

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Abstract

The study of intellectual capital is of the utmost importance for current organizations. Therefore, in the present research work the integral study will be carried out in the academic area of an institution of higher secondary education, in the state of Tabasco, for the development of a measuring instrument. It is proposed to design an instrument, which is considered a hybrid as it is formed by intangible information that is interpreted by the researcher and translated through a Likert scale to a quantitative data that allows to locate the study factor in a clear way to determine its degree of influence in the generation of intellectual capital. In addition, these factors are taken from experts in the study context whose experience allows them to give their opinion. This information is included in a double entry table that allows to find the key factors of incidence in the subject of study. Once the factors have been identified, a development proposal that allows the integral improvement of the institution of higher secondary education in the academic area will be analyzed and made, in order to contribute to Intellectual Capital.

Intellectual Capital, Instrument, Measurem

La evaluación docente. Una herramienta en la mejora del proceso enseñanza-aprendizaje en las instituciones de educación superior

The teacher evaluation. A tool for improving the teaching-learning process in higher education institutions

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Abstract

Given the current importance of the role of teacher evaluation in higher education institutions, there is a need to know the current perception that students have of their teachers and use it as a reference tool for decision-making that positively impacts practices of the teaching-learning process, so this research allows to know the strengths and areas of opportunity of teachers of the basic accounting subjects of the Public Accountant degree offered by the Facultad de Contaduría y Administración of the Universidad Autónoma de San Luis Potosí and be used at first as feedback so that teachers make their actions conscious in front of the group and on the other hand serve the institution as an instrument in the design of actions that improve the performance of teachers in their work and thus achieve a Qualitative training of professionals in the accounting area. Finally, this research sets a precedent for both the UASLP and other institutions of higher education to analyze and improve the educational practices of the degrees they offer.

Teacher evaluation, Teaching-learning process, Qualitative training

Cultura emprendedora en estudiantes universitarios

Entrepreneurial culture in university students

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Abstract

The objective of this research work was to determine the factors of entrepreneurial culture in university students. The present study was designed with a quantitative approach of descriptive, non-experimental and cross-sectional scope, approached from a review of the literature and based on a theoretical and referential framework. This research work was carried out in the period February-June 2019, whose subjects of study were students of the Veracruzana University of the School of Accounting and Administration and the Technological University of Southeast Veracruz. Among the main findings, it was found that university students do not undertake due to lack of financial resources, they also consider that it is necessary to strengthen academic activities within higher education institutions that help them develop entrepreneurship and innovation skills. The main factors that determine the entrepreneurial culture are creativity, teamwork, initiative, fear of risk.

Entrepreneurial culture, University students, Creativity

Inclusión educativa del adulto mayor en la UAEM

Educational inclusion in the elderly in the UAEM

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Abstract

Objective. Analyze the needs they present and the support required for the educational inclusion process of the elderly in higher education in the UAEM. **Methodology.** An analysis of previous research was carried out in terms of conditions, needs and supports to be considered to achieve educational inclusion in the population of older students, as well as knowing the process and monitoring that is provided within the UAEM to meet this objective. The supports granted within the institution are fundamental, as well as considering the factors of the older adult student such as: cognitive, neurobiological with or without the presence of chronic degenerative disease among others, in addition to the psychological one where the socio-affective part is very important. **Contribution.** The analyzed results will strengthen the educational inclusion in the student population with these characteristics at a higher level and offer new support strategies.

Senior Adult, Educational Inclusion, Cognitive Impairment

Diseño de un sistema de análisis de datos para trayectorias educativas UTVT

Design of a data analysis system for UTVT educational paths

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Abstract

This paper presents the first prototype of the web system designed for data preprocessing with Data Mining (DM), which includes the collection of data from external and heterogeneous sources, preparing imported data, through a selection and cleaning process, transformation with variable identifiers and parameterized to discrete values, being pre-processed to useful data, generating a minable view, prerequisite to modeling with DM and Artificial Neural Networks (ANNs). The development of the system is based on the agile methodology, the Model View Controller and technological tools: pure PHP, Laravel, Composer, Ajax, JQuery, Json, Bootstrap, HTML5, CSS3 and MySQL; publishing the first version on a website and continuing its application in pre-processing in a sample of students of Information and Communication Technologies of the Technological University of Valle de Toluca. Generating as a result of the first stage of research, a tool and a technological contribution, which supports the analysis of educational trajectories and timely monitoring of students at risk of dropping out or failing; in which it is intended at a later stage, to incorporate a DM and RNA model.

Analysis of data, Educational trajectories, Web system

Mujeres con competencias STEM en el área de metal mecánica

Women with STEM skills in the Mechanical Metal

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Abstract

The opening to the higher education of women has not been an easy task since the existence of the universities, they were left out of this benefit, in 1887 the professional examination of the first Doctor of the Faculty of Medicine, even today there are careers where their presence is reduced as is the case of Mechatronics Engineering and Electromechanical Engineering at the Tecnológico Nacional de México, campus Jiménez, the skills in Science, Technology, Engineering and Mathematics are a key factor for the insertion of women in these degrees, presents the progress of narrative research that has favored their choice of profession within the project “Participation of women in the insertion of predominantly men's degree”, the analysis of 14 women of the TecNM campus Jiménez, shows us how the STEM competencies are present in their decisions to opt for their future job.

Women, Math, Higher education

La importancia de la gestión directiva en la escuela

The importance of directive management in primary school

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Abstract

The work presented here addresses the importance of leadership and management by the principal in the school in relation to the education that the new century needs; it is essentially focused on rescuing the significance of the leadership role in the leadership and management of the school. For the research have been set general and specific objectives that seek basically to know and rescue the importance of the role played by the director of the institution, on the one hand, and on the other, to know the different theories about leadership and management that informing directors know for the study. For these purposes, an exploratory type study was carried out with a two-variable hypothesis; the importance of management and leadership, for verification, a survey (as validation) was applied to 8 directors of the Municipality of Tecomán, Colima. The final part of the document details the results, findings and conclusions, among which the fact that the degree of updating of the director is decisive to define his leadership style, highlighting the importance of his proper management of resources of all kinds within the school and for each of the activities.

Management, Direction, Leadership

Cubo didáctico como complemento a terapias de desconcentración intelectual

Didactic cube as a complement to intellectual deconcentration therapies

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Abstract

Title. Didactic Cube as a complement to intellectual deconcentration therapies. Children's therapies to increase concentration are methods that help to improve the performance of patients suffering from ADHD (Attention Deficit Hyperactivity Disorder), where different teaching tools can be used to support family members and therapists to carry out activities recommended to improve attention in children mainly. There are several materials that therapists can support to focus on the realization of a program that develops the ability to concentrate in preschool children. Objectives, Methodology. Contribute to the equipment of the Center for Rehabilitation and Special Education of San Luis Potosí (CREE), supporting therapies for children mainly with problems of attention deficit and slow learning, through didactic means that stimulate their training and intellectual development. Firstly, the needs of patients with attention deficit diagnosed for rehabilitation are identified, then the needs of the CREE are identified with respect to a didactic toy that subserve and complements the rehabilitation and stimulation in therapies focused on attention deficit and finally a cube is made, with the purpose that it is a didactic toy, which can support people with some intellectual disability in therapies. Contribution. The results focus on the consecutive use of a didactic cube to be able to perform the corresponding measurements in order to evaluate the effectiveness of its use in therapies with children who are deficient in the level of care and / or concentration

Didactic Cube, Therapies, Attention déficit

Diagnóstico de la política y prácticas que condicionan el acceso y permanencia de los planteles de bachilleres de Chiapas al sistema nacional de bachillerato

Diagnosis of the policy and practices that condition the access and permanence of high schools in Chiapas to the national high school system

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Abstract

This article analyzes the diagnosis of the implementation of the regulations of Higher Secondary Education for access and permanence to the National Baccalaureate System (SNB) in the schools of the Baccalaureate School of Chiapas (COBACH). To this end, the context in which the Integral Reform of Higher Secondary Education was implemented in the COBACH campuses was also characterized, as well as the strengths and areas of opportunity of the policies and management implemented by the COBACH Central Administration to promote the SBN. For the investigation, the descriptive method was used, which starts from the systemic analysis of the past to explain contemporary events; while the educational public policy and structure of the SNB was studied with the formal-legal method. Empirical methods and techniques were also used for documentary analysis, as well as techniques and instruments for quantitative and qualitative data collection. The research sought to provide academic elements to the authorities and staff of COBACH, which allow decision making in their accreditation processes, as well as the training of human resources in the process of their training.

Public educational policies, National Baccalaureate System, Educational quality

ABP para el desarrollo de competencias en media superior

ABP for the development of skills in higher education

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Abstract

Every teacher interested in their students learning, looks for a way to guide them in a relevant way and investigates the way to do it, so the general objective of this research was to analyze the impact of Project Based Learning in the development of Competencies in students of the high school level of the Universidad Autonoma de Coahuila. The research question: How from working with Project Based Learning, is significant learning motivated to develop competencies in students of the High School Level? The data collection for the qualitative and exploratory analysis of the information, was through non-participant observations, interviews and document review. The case study was used and data were triangulated to validate the analysis. The results suggest that Project Based Learning is beneficial and meaningful for the motivated development of Competencies. The evidence refers to this type of alternative actions, promoting values such as solidarity, companionship and responsibility; On the other hand, empathy and commitment are reflected in the achievement of quality products. It is concluded that, with this type of work designed, intrinsic motivation is generated in the students so that they realize new and solid learning.

Project Based Learning, Skills, Learning Quality

La ingeniería didáctica en la enseñanza de la noción del número en educación primaria

Didactic engineering in the teaching of the notion of the number in primary education

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Abstract

This paper is an article that emerges from a more general educational research work. It corresponds to the paradigm of qualitative research and action research type. It is developed in the context of primary education with first graders. Its main objective is to know the implications of the knowledge of the mathematical and didactic content in the teaching of the notion of the number, to have the necessary tools to apply an appropriate methodology for its construction. The methodology corresponds to didactic engineering. It considers a previous inquiry about research related to the topic being addressed. They are analyzed from the theoretical and methodological aspect based on central ideas of important authors for this subject of study, which in turn contrasts with the results obtained. The final results and conclusions highlight that the teacher's preparation in the conceptual and didactic implications is a fundamental basis for the construction of the number: conceptually, the terms and principles related to the cognitive operations of classification and seriation; didactically, corresponds to the formulation of problem situations, oriented to an interaction of moments and didactic relationships. All this, carried out according to the moments of didactic engineering.

Number concept, Didactic engineering, Mathematics teaching

Percepción de los estudiantes sobre el quehacer docente

Perception of the students about the teaching task

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Abstract

Current changes lead to a new social, family, economic, political and educational reality, the educational one is the result of multifactorial elements that have changed the dynamics of classroom work, the discipline, the school environment and ways of learning. So the teacher should be able to use teaching strategies able to develop skills in students to respond to the diversity and heterogeneity of today's society. The goal of this study was to identify the teaching strategies used by high school teachers that promote significant learning chords to learn to learn, know-how, know how to be and how to live, and describe the characteristics of a good teacher. A quantitative cross-sectional research was applied to 126 high school students; 41.7% were male and 57.5 % were women. The sample selection was by chance. The results show that the strategies that are the most used by the teachers are: positive attitudes, persuasion, commitment, exposition and collaborative work. The features that stand out in a good teacher are: ability to teach, intelligent, hardworking, strict, honest and responsible.

Strategies, Meaningful Learning, School Education

Conocimiento como medio para la interacción de alumnos de primer grado de educación primaria con las fracciones

Knowledge as a means for the interaction of primary school students with fractions

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Abstract

The objective of this paper is to identify the subdomains of Mathematic Teacher Specialized Knowledge (MTSK) in the teaching practice in a mathematics class-session, using a qualitative perspective with observation, transcription and their respective analysis, to contribute to professional improvement of elementary school teachers. At the same time, gathering evidence from a Didactic Situation on the impact generated by an approach of first grade students with the field of fractions study, since it is a content not incorporated in the official curriculum for the first cycle of elementary school. The results of the study present the concrete possibility of potentializing specific contents of fractions in the first grades of elementary education, a transcendent aspect in the visualization of this type of content in these first grades of education.

Mathematic Teacher Specialized Knowledge, Theory of Teaching Situations, Fractions

Estudio comparativo de opinión de adolescentes sobre educación sexual en instituciones públicas y privadas

Comparative study of adolescent opinion on sex education in public and private institutions

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Abstract

In Mexico, adolescents receive sexual education from basic education, however, not all adolescents understand the knowledge they need to know to make decisions in relation to their sexual life, so the rate of unwanted pregnancies and sexually transmitted infections (STIs)) continues to rise. Given this scenario, Social Workers, like other professionals, must assume the commitment to implement sexual education actions for the prevention of pregnancy at an early age, sexual and reproductive health and the promotion of sexual rights, so that the interest of carrying out a comparative study on the opinion of adolescents from two public and two private educational institutions in the City of Poza Rica, Veracruz, about their sexual education. The study presents results obtained through the application of an instrument consisting of 29 questions focused on knowing the opinion of adolescents about their sexual education, contraceptive methods and teenage pregnancy. The objective of the research is to know the perspective of the students of two private and two public educational institutions on sexual education and teenage pregnancy, to establish proposals on a comprehensive Sexual Education.

Sex education, Teens, Social Work

Satisfacción del clima organizacional del bachillerato en profesores de educación física

Satisfaction of the organizational climate of high school in physical education teachers

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Abstract

Human resources is a key point for organizations, the correlation of job satisfaction and organizational climate are important indicators. There are numerous studies that evaluate student satisfaction by referring to physical education; However, few studies focus on the satisfaction of the physical climate of the physical education teacher, which is a factor that impacts educational quality. For this reason, the objective of this study is to evaluate the satisfaction of the organizational climate of physical education teachers in the upper middle level. A descriptive-correlational study, of transversal type, is presented. The "Questionnaire for the analysis of the perception of the satisfaction of the working environment in organizations" was used for data collection. The study participants were 43 professors who teach the subject of physical culture and health of the upper middle level of the UANL. Among the most significant results, there is a high satisfaction (70%) determined by the physical conditions of the job; in relation to the sports equipment available for carrying out activities, the satisfaction was of acceptable level (55%) but not high as expected; When making a correlation with the organizational climate, we observe that the indicators of teamwork, communication and distribution of workloads are at a medium level (46%), influenced by the low participation of workers in cultural and recreational activities. In conclusion, sports managers must have as an important factor the satisfaction of the organizational climate. Our results agree that managers must promote synergy among workers of all levels that encourages greater satisfaction of the organizational climate.

Satisfaction, Organizational Climate, Teachers, Physical Education

Educación financiera como modelo de inclusión financiera para empoderamiento de grupos vulnerables

Financial education as a model of financial inclusion for empowerment of vulnerable groups

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Abstract

The purpose of this research is to evaluate financial education as a mechanism for inclusion in the financial sector through a pilot test that allows the development of a measuring instrument to assess the competence of financial education in the population, the results obtained through the test pilot showed that there is no gender difference in terms of financial education or lack thereof, allowed to know that the financial education is very basic since only 50.2% manages the first floor banking and of these 33 % do not know if the efficient use of these services is efficient. Results were also found showing that only 50% manage an investment or savings fund for the future but of these, 35% confused the payroll and savings system. This test mainly allows the development of an evaluation instrument in financial education and also contributes to an analysis of educational programs and to evaluate how to implement financial education in educational programs at the basic school level.

Financial Inclusion, Financial Education, Empowerment

Alexa Skills como herramientas de apoyo en una clase de inglés para el desarrollo de las habilidades de speaking y listening

Alexa Skills as support tools in an English class for the development of speaking and listening skills

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Abstract

The project has as main objective to use Alexa skills in order to generate more personalized experiences (intents) within a classroom in the English Language teaching creating voice commands. The programmed skills are meant to develop two out of four main abilities a student must acquire when learning English as a second language, Speaking and Listening. The first step in the development methodology was to select the topics the students find more difficult to learn, after that with the help of English teachers different conversation models were generated. In the third step the skills were programmed based on the conversations previously generated. Finally the skills were tested in a classroom by intermediate level students. This project has proved to make English class more interactive, it has also allowed students to develop speaking and listening skills in a more natural way.

Skills, Intents, Listening

Cadenas de markov aplicadas al aprendizaje a nivel preescolar

Markov chains applied to preschool learning

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Abstract

The objective of this work is to present the use of video games for mobile devices applied to learning process of children at preschool level using Markov chains. In this work, study goals stated by the Mexican Ministry of Education were reviewed at the preschool level and some educators were interviewed to determine main key goals. On the other hand, the use of mobile technologies by infants is currently common in urban areas and medium to low use in rural areas. From the above, it was proposed to develop some applications that strengthen the learning of official content at the preschool level. However, an always difficult task is to determine and evaluate the level of learning in the video game a Markov chain was proposed. The main contribution of this work is the use of artificial intelligence techniques to evaluate the learning of official contents using mobile devices.

Markov Chains, Learning, Mobile Applications

Calidad de vida laboral percibido según el nivel de estudios del personal administrativo y académico de las preparatorias del municipio de Etchojoa, Sonora

Quality of work life perceived according to the level of studies of the administrative and academic staff of the preparatories of the municipality of Etchojoa, Sonora

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Abstract

The objective of the study was to determine the level of quality of work life perceived by the administrative and academic staff according to their level of studies of the high schools of the municipality of Etchojoa, Sonora. Methodology: the research was quantitative, since it was carried out through the application of an instrument with numerical measurement scale to measure the variables of quality of work life and the level of studies between three high schools in a municipality, where It has a scale from 1 to 10; The subject of study in this way is part of a type of non-probabilistic sampling with 73 participants, where 39.7% of the staff have a bachelor's degree, continuing with a 32.9% with postgraduate, 17.8% with high school and only 9.6% have their level of studies until secondary. Contribution: the CVL, according to the level of studies offered by the campus is 7.5714; and the CVL that each person generates individually, is 8.5714. Likewise, a comparative analysis was carried out using the t-test for equality of means, with a 95% reliability, which showed that there are significant differences between the level of quality of life of the staff and the level of studies.

Quality of work, Municipality and personal life

Imaginarios y desafíos actuales en la educación media superior en Querétaro, México

Imaginaries and current challenges in high school education in Querétaro, Mexico

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Abstract

Actually, teacher's practice is full of great challenges, especially if we talk about teaching at high school level. The context of both, student and teachers are basic elements to take into account during the process. The teacher must face a great diversity of students' imaginaries and practices regarding their education, their study habits and their actions inside and outside of the classroom. In addition to this, an extremely important element is technology; which facilitates the process and, at the same time, makes it too difficult. The objective of this article was to discuss how we could generate significant processes in the field of education in this context.

High school education, Imaginaries, Technology

Educación musical: Estrategia para el desarrollo cognitivo del preescolar

Music education: Cognitive development strategy for preschoolers

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Abstract

The Mexican Pre-school Education Program (PEP) includes music aspects which are in the same artistic appreciation and expression realm, along with theatre, dancing and visual arts. Musical content is basic for preschool grades 1-3. Music education is not included in the curriculum as a part of an integral preschooler formation, but rather it's given special attention to the cognitive aspects focused on science and language. The objective of this research is to know the relation between music education elements and preschooler's cognitive development. Methodology. The research design is quantitative, cross-sectional and correlational. A survey was applied to 306 preschool teachers, working in the public and private school system in Saltillo, Coahuila, Mexico. The results were gathered into a database and processed in a statistic sheet, reading correlation results between simple variables. Contribution. The results demonstrated that, there is certain relationship between music theory elements and thinking skills development, such as classification, seriation, and number conservation, as well as the reflective abstraction. Also, Dalcroze, Kodaly, Orff and Gordon's music pedagogical principles, used to teach music, which benefit over the thinking abilities, such as learning through the senses. Also, it was found a relationship between playing a musical instrument, singing songs that involve word addition or subtraction, with reversibility and knowledge construction thinking.

Music education, Strategy, Preschooler cognitive development

Modelo didáctico de un proceso de producción

Didactic model of a production process

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Abstract

A didactic model was designed to simulate real conditions of a production process, in order to generate learning related to the career of Industrial Processes, Manufacturing Area. The model considers a work station and a prototype or product to be manufactured, where the students design a production line, in this work station, they make consecutive "runs" of the process, in order to help them for applying relevant Lean manufacturing tools, until achieving "A continuous flow" of production; thus also must guarantee quality results, and product functionality. The background for this proposal, are "best practices" in world-class companies, particularly in the automotive industry, where simulators are used to generate technical and methodological competences in their personnel. For the first level of the model, a simple prototype is used, built with 'legos' and the proposal for the medium term, is to evolve it to one of greater potential, which even serves to offer training to the productive sector. Piloting was carried out with the participation of a group of students, having confirmed the usefulness of the model by recreating knowledge of the subject of work methods, obtaining significant results and learning, which are contained in this article.

Didatic Model, Lean manufacturing, Simulation

Propuesta de la ISO 21001 en el entorno educativo de Aguascalientes, México

Proposal of ISO 21001 in the educational environment of Aguascalientes, Mexico

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Abstract

The ISO 21001: 2018 standard (ISO, International Organization for Standardization) seen as a Regulatory Management System (MS), created for the education sector at its training levels (Basic, Higher and Higher Media) in which they provide, share or transfer, knowledge, skills and skills for students through practical, elementary, technical and / or research training and whose recipients of the products and services of these organizations are students, as well as interested parties and clients (Parents, administration, representatives of society, industry and others educational organizations with which collaboration agreements are established) to which these entities undertake to meet and satisfy, based on their own objectives, based on 11 principles, the 7 already known of ISO 9001: 2015 and 4 more based on “Social Responsibility”, “Equity and Responsibility”, “Ethical Conduct” and “Security and data protection”; All this will contribute to the creation of a continuous, controlled and stratified improvement in Educational organizations (MSEO).

MSEO, ISO 21001:2018, Responsibility

Propuesta de modelo documental de gestión de mejora con enfoque sistémico

Proposal of a documentary model of improvement management with a systemic approach

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Abstract

The current globalized world requires organizations to apply strategies that allow them to live competitively, which makes it necessary to continuously improve products and processes in order to be productive; providing added value and thus stay in the market. The article is generated from a documentary research on models of continuous improvement triggers of productivity, with the purpose of serving as a reference to propose a document model of improvement management with a systemic approach feasible to apply in a public higher education organization that allow to increase the established organizational productivity indicators; reflected in the achievement of objectives and goals set to integrate, collaborative work, effective communication among all stakeholders (customers, suppliers, society, staff, competition, users, etc.). Follow-up, through the use of information technology, providing recognition to staff achievement; possibility of managing the improvement from the operative part. Evaluate the level of maturity for improvement.

Models of maturity, Continuous improvement, Productivity, Organizational, Systemic

Apoyo educativo y de pares en las disciplinas en ciencia, tecnología, informática y matemáticas

Educational and peer support in the disciplines of science, technology, information technology and mathematics

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Abstract

Objectives: There are few studies, which identify the support received by high school students in the decision making process for careers in science, technology, engineering and mathematics. The objective of the present study is to know the narratives of the students according to their interactions within their social and school environment, understanding the individual interest of the student in terms of mastery, tastes, participation, curiosity and attachment to the areas. **Methodology:** A focus group session was held with students of the mathematics career. From three trigger questions that assessed a total of 10 dimensions in the group, which allowed adjusting and enriching the theoretical structure through the synthetic analytical method to discover relationships and general characteristics. **Contribution:** The areas of interaction between friends within social roles and tutoring by teachers in the school context, are activities that strengthened decision making for people who participated in the focus group. Specific dimensions are defined for the intervention for the benefit of social inclusion in disadvantaged communities within the disciplines C.T.I.M. should be taken into account, especially by specialists in these areas.

Educational support, Interest, Career choice

Calidad educativa con enfoque transversal, contribución a la educación integral del ingeniero

Educational quality with a transversal approach, contribution to the integral education of the engineer

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Abstract

Mexico faces major social problems such as poverty, corruption, inequality of access to health and education, pollution, inclusion of minorities, unemployment among others; this has generated a great deterioration in the behavior of people in the current globalized world, also characterized by social, political, cultural, scientific, and technological changes. In this context, Higher Education is decisive for the economic development of a country and an indispensable factor in the growth of the human being and society; has a great responsibility to contribute to develop in the student the necessary skills to develop continuous learning; not only in his intellectual technical training, but in the development of attitudes that motivate him to learn; that favors his integral education by means of the application of competitions in which his knowledge, abilities, attitudes and values are immersed; attending to their affective, motor, interpersonal relations and social insertion and acting capacities. The objective of this work is to contribute to the improvement of educational quality, assuming the Engineer's training through its integral development with a transversal focus; that prepares the student to face the challenges of this changing society. The method used for this work is the systems approach and gives continuity to the document "Linking as a means to improve professional performance and achieve the integral human development of the engineer"

Quality, Transversality, Integral training

Factores para la satisfacción del estudiante de pregrado a través de la mercadotecnia educativa para generar lealtad en las instituciones de educación superior privada de la zona metropolitana de Guadalajara

Satisfaction factors of the undergraduate student through educational marketing to generate loyalty in the private higher education institutions of the Guadalajara metropolitan area

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Abstract

The article seeks to determine the mechanism to build loyalty by students towards their institution, through an appropriate marketing management applied to the educational field. If private educational institutions in Mexico achieve a satisfied enrollment, in a way, they will guarantee their survival as an organization. Knowing that elements of student satisfaction directly influence the experience they have within the institution, can be used in their favor through the use of educational marketing tools and thus increase both the welfare of students and the institution. With a cross-sectional study and a non-probabilistic sampling for the convenience of 60 students of a Private Higher Education Institution in the Metropolitan Area of Guadalajara, where the results were obtained that allowed the instrument to be validated with dimensions or factors necessary in the explanation of the variables of the study, by means of descriptive statistics and statistical tests of reliability, tests of normality and correlations between elements by factor. It was discovered that the most important thing for student satisfaction is intrinsically linked to academic aspects.

Satisfaction, Educational marketing, Universities, Loyalty

Perfil del alumno de la Universidad Tecnológica del Norte de Aguascalientes

Student profile of the Universidad Tecnológica del Norte de Aguascalientes

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Abstract

For the attention and follow-up of the student it is important to have information that allows carrying out actions with opportunity in their educational trajectory, with a view to the permanence and conclusion of their professional training. In turn, that the follow-up task by the tutor is oriented based on information from the student regarding their academic, socioeconomic and personal conditions that set the guideline for the tutorial function. Derived from the above, the objective is to characterize the student of the Technological University of the North of Aguascalientes, identifying their conditions of vulnerability that derive in a profile of the student, through the initial questionnaire of the newly admitted student of the September-December 2018 period of the TSU level. The student's diagnostic instrument, structured in three aspects, allows to identify conditions of vulnerability of academic, socioeconomic and / or psychological type, conditions that trigger an important part of the tutorial function. Having a profile represents an input for the preparation of the Tutorial Action Plan by the tutors and affects the lines of action in the Institutional Tutoring Program.

Tutoring, Profile, Vulnerability

Relación entre el promedio escolar y las diferentes bandas de frecuencia del electroencefalograma de estudiantes de medicina de la UJED campus Durango

Relationship between the school average and the different frequency bands of the electroencefalogram of medical students of the UJED campus Durango

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Abstract

Objectives: To identify the relationship of the different frequency bands of brain activity recorded in each electrode of the quantitative electroencefalogram (QEEG) and the school average in students of the medical career of the Faculty of Medicine and Nutrition of the Juarez University of the State of Durango. **Methodology:** Analytical, cross-cutting, retrolective, descriptive and correlational research between the school average and the different frequency bands of the electroencefalogram obtained from 285 medical student records of the UJED Campus Durango selected in a non-probabilistic sampling and at the convenience of signature of informed consent. **Contribution:** The Chronbach Alpha from the analyzed data was .958. Significant correlation was identified between the school average and the theta band of brain activity in the electrodes FP1 ($r=-.13$ $p=.02$), FP2 ($r=-.16$ $p=.004$), O1 ($r=-.12$ $p=.03$), F7 ($r=-.14$ $p=.01$), T3 ($r=-.11$ $p=-.04$) and T4 ($r=-.11$ $p=-.04$) defining that at lower Theta activity exists better school average or that the higher the has the lower school average, which is seen as an opportunity for intervention. In the other electrodes recording Theta activity and the other frequency bands of brain activity they did not have significant correlation.

Quantitative Electroencefalogram, School Average, Medical Students

Valoración de la utilidad de la materia de probabilidad y estadística en la carrera de IGE en el ITSOEH

Assessment of the utility of probability and statistical matters in the IGE career in the ITSOEH

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Abstract

The Engineer in Business Management faces the reality at work in the company or SME, since when entering the labor market he finds himself making decisions, since finally they cannot be left adrift, intuition or simply through the experience or empiricism. On the contrary, tools such as probability and descriptive statistics are required, since they allow the development of graphic and numerical elements that show the quality history of a product or service, to mention an example. That is why the objective of this article is to know the factors that prevent the IGE student in the ITSOEH from understanding the usefulness of the subject for their professional performance, so a survey was created that denotes the problem and disseminates the problem, so that later the results allow students to know so that they can reflect deeply on their success in their future work. To carry out this research, the quantitative research methodology was used, which was carried out by means of a closed survey determining a representative sample of the IGE career for its subsequent analysis highlighting the importance of the subject.

Culture, Impact, Data

Método Delphi: Validar un instrumento para la medición de características de un libro de texto de probabilidad y estadística

Delphi Method: Validate an instrument for measuring characteristics of a probability and statistics textbook

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Abstract

The design and validity obtained from a data collection instrument are necessary to guarantee the reliability of the information within an investigation. This work describes several tools for measuring textbook contents, their particularities, and benefits indicated by different authors, the permanence of the book as a teaching resource within the classroom, in the life of the teacher and the student. As well as explaining how the subject of Probability and Statistics is taught in engineering careers at a higher level of education. The application of the Delphi Method allows developing a tool to measure the content of Probability and Statistics textbooks, employing ten proposed items. The usefulness of the methodology is demonstrated by ensuring the reliability of the tool, obtaining quantitative and qualitative information. The method is developed in stages for better understanding, and expert judgement is used, despite sometimes being ignored. Finally, an alternative validation in instrument design is proposed analytically and reliably.

Probability and Statistics, Delphi Method, Test validity

La gestión de la calidad mediante métodos científicos

Quality management through scientific methods

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Abstract

There are several tools for managing the quality of processes and services, which have as their common purpose to have an impact on customer satisfaction. In this sense, the appropriate procedure is to first identify quality critics (CTQs), a In order to focus the efforts on what is most important and apply QFD., secondarily in order to brainstorm, formulate a Forrester diagram simulating the repercussion that the variables cause in the loop or critic of greater importance obtained in the QFD to begin with scientific research and use statistical and control models that fit the root of the problem encountered.

QFD, Forrester, Design of experiments, CHI square, TRIZ, Balanced ScoreCard

Telesecundaria: Entre la teoría y la práctica

Telesecundaria: Between theory and practice

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Abstract

This study arises from the need to know the main conflicts of teaching practices in regular educators as teachers in training of the Telesecundaria modality within the state of Colima, to allow the development of a project that contributes to the improvement of these and contributes to the achievement of student learning. It is ethnographic, the key informants corresponded to eighth semester students of the Bachelor's degree in High School with a specialty in Telesecundaria of the normal state, as well as active teachers of the different school zones, to systematize the techniques proposed by Martínez Migueles were used. It was found that the challenges they face in their practice is to identify the point of balance between the theory and practice of the model that involves telesecundaria, the adaptation of the curriculum and television programs to the real needs of the students, effective leadership on the part of directors and supervisors who are aware of the reality of the classrooms as well as the characteristics of each school community. Finally, the need to revalue the education and practice of the telesecundaria teacher.

Teaching practice, Telesecundaria revaluation, Direct leadership

Proyecto emprendedor “Encadenándose al desarrollo sustentable”: Estrategia de aprendizaje

Project Entrepreneur “Chaining to the development sustainable”: Strategy of learning

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Abstract

The sustainable development is the aspiration get to a best level of life integral, harmonic witch the contexts, considering the present generation and the subsequent. Before it, the need of plan a strategy of learning that let it mobilize the concepts of development sustainable in the projects entrepreneurs of the students' academics. For the above, the objective is recognizing the perception of the students of the college career in business administration in the four quarter of the generation 2017-2019 of the University Technological of Huejotzingo of the state of Puebla of Mexico, over the strategy before mentioned. The design methodological is qualitative because identify it the codes personnel emerge for the participations in the intervention educative. It was doing for twenty students university using a focus of investigation-action. The first contribution is a methodological educative that let it active the pillar “learn to transform oneself and the society” thus a practice scholastic where the mobilize the work in a team, critical thinking, with alternatives sustainable in an ambient innovation frugal and an education inclusive.

Sustainable development, Strategy of learning, Innovation

Género, interés y elección de carreras en ciencia, tecnología, ingeniería y matemáticas: Revisión de literatura

Gender, interest and career choice in science, technology, engineering and mathematics: Literature review

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Abstract

The shortage of human resources specialized in science, technology, engineering and technology (CTIM) throughout the world is a latent problem, coupled with the phenomenon of underrepresentation of women in these fields. Therefore, the purpose of this literature review is to analyze in the existing studies the factors that influence the interest in the choice of CTIM careers and their interrelation with gender. For this, a search was conducted in the databases of SCOPUS, Thompson, Elsevier and Redalyc, empirical articles of quantitative studies were included. It is found that the most studied variables are the influence of the family, the teachers, and the experiences of the subjects during middle and high school, self-efficacy, student peers and the expectations of the labor field. Gender stereotypes and roles have been poorly addressed, one of the limitations in this line of research is the insufficiency of longitudinal studies.

Gender, Interest and Career choice

Sistema de monitoreo y control de proyectos integradores en el ámbito académico

Monitoring and control system of integrating projects in the academic field

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Abstract

This paper presents the development of a computer system, whose objective is to automate the work of monitoring project deliverables, in the school, in which students and professors of different subjects are mainly involved. In the system each teacher can detail the deliverables of their subject, the delivery date and assign a grade. In the case of the responsible teacher, who acts as an administrator, you can obtain a report in Excel, by group, of all the deliverables, so that you can detect timely delays and, act accordingly. The structure of the system allows to register each project, with the competence to demonstrate and the performance criteria that are declared in a Curriculum. Additionally, the initial page shows the deliverables whose delivery date is close to expiration. The development of the system was developed under the Scrum methodology, and Laravel was used as a development environment and is currently online.

Computer system, Project management, Monitoring

Estructura de planeación orientada a fortalecer el trabajo de los cuerpos académicos de una facultad de ingeniería

Planning structure aimed at strengthening the work of the academic bodies of an engineering faculty

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Abstract

The commitment that the Higher Education Institution in Mexico has with the country is important, since its contribution in the formation of quality professionals is a transcendent factor that impacts society. Considering the foregoing, this research work reflects on the importance of strengthening collegial work for the benefit of engineering Educational Programs, in order to favor engineering education through the work developed by academic experts in related educational areas. Due to the need to promote the research development of the teaching staff, the strengthening of the teacher's profile is promoted through strategies that motivate him to develop other activities that favor his professional development and have a positive impact on the students. The strategic basis of the proposal presented here is to promote, in a systemic manner, an administrative planning structure that integrates the factors that are important for strengthening the collaborative work of teachers, which makes it possible to visualize the development trajectory that members of a collegiate body may have. This planning was designed on the basis of a documentary analysis, it is implemented through the systemic-structural method, it is analyzed using descriptive statistics and it is improved through analysis of the results obtained. The systematization of these strategies of academic-administrative management favor in the evolution of these work teams, increasing in 57% the amount of Consolidated Academic Bodies and in 64% of Academic Bodies in Consolidation, which contributes in the strengthening of the Academic Capacity of the Faculty of Engineering, and positively impacting in integral formation of the future engineers.

Academic Bodies, Academic Bodies Planning, Academic Ability

El compromiso organizacional de trabajadores de la educación superior en el sureste de México

The organizational commitment of higher education workers in southeastern Mexico

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Abstract

This article presents a descriptive, non-experimental and transversal research under a quantitative approach, with the objective of identifying the level of Organizational Commitment (CO) that the education workers of a Higher Education Institution (IES) in the southeast of Mexico have, as well as the level of CO that register in each of its dimensions to detect those that require to be attended by the educational authorities. The data collection was carried out through a survey in which 140 employees participated, using the instrument proposed by Meyer, Allen, & Smith (1993), which generally presented a very good level of internal consistency ($\alpha = 0.83$), determined through the Cronbach alpha coefficient. The data were analyzed through descriptive statistics, using the quartile analysis. The results show that workers have a level of CO that in general terms is low with a medium tendency, with the affective commitment being the one that is most present in the population. However, the normative commitment and the continuity commitment obtained the lowest levels, which requires strengthening through more stimulating remuneration and promotion systems for higher level education workers.

Affective commitment, Continuance commitment, Normative commitment

Acciones para el desarrollo sustentable y la calidad de vida, perspectiva de estudiantes universitarios

Actions for sustainable development and quality of life, perspective of university students

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Abstract

The objective is to establish predictive actions for sustainable development for the improvement of quality of life conditions. The study is non-experimental with a quantitative approach. The population 86,076 students of public and private universities of the State of Coahuila, a sample of 305 cases for the present study. The instrument was a questionnaire made up of 291 items, of which 40, 39 independent variables were considered that refer to actions that contribute to sustainable development and a dependent variable related to human development and quality of life. A multiple regression analysis was carried out which shows that university students consider actions such as respect for animals, corporate social responsibility, consume organic vegetables and the establishment of industrial companies in urban areas are predictors of improvement in conditions of the quality of life. The contribution of the study is about the perspective of university students and the proposed actions to improve their quality of life and sustainable development.

Sustainable Development, Quality of life, Human Development

Competencias transferibles en la formación profesional en estudiantes a distancia

Transferable skills in vocational training in distance students

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Abstract

Objective: To identify most valuable transferable skills and the existing correlation between sex and transferable competencies. Methodology: Exploratory, cross-sectional research, through a survey consisting of 27 variables, with a descriptive and correlational analysis to a non-probabilistic sample, for the convenience of 240 participants. Contribution: The transferable skills survey had a Cronbach Alpha of 0.89. The competences mostly used by the population studied were: knowledge (133), attitude (107), capacity (102) and management (168). Spearman's correlation between sex and transferable competences was used, observing in which men with a very low level of correlation were identified, but statistically significant: planning ($r = -.15$ $p = .01$), ability to transmit knowledge ($r = .13$ $p = .03$), gain knowledge of other areas ($r = -.18$ $p = .005$), face challenges ($r = -.29$ $p = .000$), teamwork ($r = .14$ $p = .02$) and with a similar level of correlation and significance, women obtained the following results: skills ($r = .212$ $p = .001$), attitude ($r = .13$ $p = .033$), organization ($r = .25$ $p = .000$) and ICT ($r = .17$ $p = .007$). Identifying which transferable competences most often employ both men and women allows to know the transferable competencies that they use less and can be an opportunity for better school performance in distance education.

Distance education, Transferable skills, Sex

Las ingenierías en el centro universitario de los lagos – U DE G: La realidad en números

Engineering at the centro universitario de los lagos – U DE G: Reality in numbers

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Abstract

A long time has passed since the Aztecs demonstrated Mexican talent in different areas of engineering, so much so that today the field has diversified exponentially, the University of Guadalajara was no exception and in the particular case of the University Center of Los Lagos (CULAGOS), the offer has expanded, from traditional options such as Industrial Engineering to Biochemical Engineering or Industrial Administration Engineering. However, the novelty does not exempt reality and the problem even without effective solution, is the low terminal efficiency. The number of students admitted cycle after cycle is not reflected in the number of discharges. In the present work, the data of entrance to the different Engineering offered by the CULAGOS were analyzed, from its creation in the year 2004 to the present, the minimum and maximum scores obtained in the Academic Aptitude Test and its relation were taken into account with the number of graduates, as a possible cause for low terminal efficiency. The results obtained after tabulation and statistical analysis show a correlation between the entrance scores and the terminal efficiency.

Engineering, Admission, Graduate

Diagnóstico de conocimientos previos sobre la parábola en estudiantes universitarios

Diagnosis of previous knowledge about the parabola in university students

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Abstract

The purpose of this work was to diagnose previous knowledge of the parabola in freshmen at a university through the conceptual framework of Duval's semiotic representations, in order to develop a didactic proposal that improves their learning. For this purpose, an instrument was designed to assess whether a student understands the main characteristics of the parabola in its various representations, as well as the ability to perform conversions between verbal, algebraic and graphic registers. It was applied to a sample of 55 engineering freshmen before receiving instruction on the topic. It was found that the most difficult treatment activities were the graphic and algebraic records, while in the Conversion activities the lowest performance was observed from the graphic to the algebraic and from the verbal to the graphic. On the other hand, the Treatment activities in the verbal register, and the conversions from the graphic to the verbal, from the algebraic to the graphic and from the verbal to the algebraic were found to be strengths. Therefore, students' prior knowledge of the parabola was diagnosed which will contribute to support a didactic proposal aimed at improving the learning of this topic.

Diagnosis, Parabola, Semiotic Representation

Formación en competencias informacionales y digitales para el fortalecimiento a los procesos de titulación en los posgrados del Centro Universitario del Norte

Training in informational and digital competencies to strengthen the degree processes in postgraduate courses at the University Center of the North

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Abstract

This research report is intended to give evidence of the work done by the members of the UDG-CA-919 innovation, technology and education, given the concern of the low degree rates in postgraduate courses offered at the University Center of the North (CUNorte) of the University of Guadalajara, through the design, development and implementation of the Diploma in Informational and Digital Competencies. The dynamic that was carried out for the realization of this study was the description and analysis of three stages of work: definition of the program, design and development of the diploma (hosted on the Moodle learning platform). The contribution of this report reflects the results of the design of a program that provides adequate informational and digital competencies to foment the construction of research projects for students and graduates of CUNorte postgraduates through the integration of an instructional design (ADDIE model), teaching strategies and use of technological tools through the design of the diploma that provides significant skills and learning; and its development for its implementation.

Informational competencies, Digital competencies, Instructional design

Personalidad resiliente y su relación con el desempeño en el aula de la educación media superior

Resilient personality and its relationship with the performance in the classroom of upper secondary education

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Abstract

Identifying the relationship that exists between the teaching personality, their performance in the classroom and the scope of the social-emotional skills that marks the RIEMS achieve potential the quality of the educational system in upper secondary education considering the implementation of the socio-emotional teaching competencies within their profile. This research work is entitled Resilient personality and its relation to classroom performance in upper secondary education. In order to typify the aforementioned phenomena, the three axes mentioned will be measured through an instrument, which contains 116 variables, of which 109 are quantitative. It is worth mentioning that to complete the final application, he had to go through two phases of piloting, consolidating normality with an alpha of .89. Some of the results of this work is the relationship between the teacher resilient personality and performance in the classroom according to a correlation analysis that informs that teachers who have emotional stability, impact on students for the reach of the students. social and emotional competences, through the ability to face adversity in a constructive way, strengthening social-emotional skills, becoming healthy and happy people with personal and social implications, for the reach of social and emotional competences, indispensable skills in the learning process.

Resilient personality, Social-emotional skills and classroom performance

Los estilos de aprendizaje como herramientas que favorecen el contexto académico en los estudiantes de nivel superior

Learning styles as tools that favor the academic context in higher-level students

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Abstract

The objective of this article is to establish a comparison of the results in the learning achievements as an academic context in a four-month period established in relation to the learning styles in the higher level students. The type of research that was applied in the present investigation, according to the scope of the study, is descriptive correlational; descriptive as it intends to specify the learning styles and academic performance of 96 students of Information and Communication Technology and accounting. It is correlational, because it aims to respond if there are associations between the variables under study, in this case, between learning styles and academic context. The Honey-Alonso learning styles questionnaire was used. The contribution of the present work is to determine that the learning styles in the students, is a tool that facilitates the development of favorable teaching-learning contexts, in order to make this information known to the teaching staff, before carrying out the process of planning of the Learning Unit to impart. Learning styles should be considered when planning teaching activities in order to favor the academic context.

Learning styles, Academic context, Teaching

Uso de un ambiente virtual de aprendizaje en la ingeniería en sistemas computacionales del tecnológico de ciudad valles como herramienta de apoyo a las clases presenciales

Use of a virtual learning environment in computer systems engineering at the tecnológico de ciudad valles as a support tool for face-to-face classes

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Abstract

The article is the result of an educational research project of the National Technological Institute of Mexico that involves Virtual Learning Environments (AVA). The objective is to determine the impact of using a VPA as a tool in the teaching-learning process of the face-to-face classes of the Ciudad Valles Technology. The methodology is mixed, qualitative and quantitative. The quantitative number determines the number of teachers used by AVA, the number of students in a Blending Learning (B-Learning) course, the number of courses designed in Moodle. In the qualitative, the impact of B-Learning on students is analyzed; determining the degree of motivation and performance that is generated when using AVA and the ability to use information technology to generate their learning strategies. A composite and structural analysis of the AVA used in the institute is presented, the research hypothesis is disclosed: the use of an AVA as a b-learning strategy, improves the level of performance of student competencies compared to students who follow classroom learning strategies. The manner in which the research is conducted, the frame of reference is described and relevant results and conclusions are shown.

AVA, B-learning, Moodle

El alumno CLIL: Resultados del impacto de una página web en la adquisición de una segunda lengua

The CLIL student: Results of the impact of a webpage on Second Language Acquisition

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Abstract

The implementation of Information and Communication Technologies (ICT) in the educational area has generated a revolution in the existing teaching processes and methods, and nowadays more virtual platforms help to mediate the teaching-learning process (Rodríguez, 2010). These tools enable quickly and efficiently some processes such as communication, a calculation or program through automation. This document addresses the results of the research conducted to measure the impact of using a free page developed for English language learning at Universidad Tecnológica Fidel Velázquez. The study was descriptive: two groups were used to contrast the behavior when using the page developed by the Academic Body of Foreign Languages. A statistical record was kept and surveys were applied to know users opinion when employing it. The purpose of the page is to provide the internal and external community with specific content in English to strengthen vocabulary and recognize the usefulness of a second language in their area of professional performance.

Bilingualism, CLIL, School effectiveness

Software educativo como herramienta de apoyo para niños autistas

Educational software as a support tool for autistic children

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Abstract

We live in the digital age or computer age that offers new devices (computers, smart phones, and electronic tablets) and Electronic Applications (APPs) with enormous potential for the educational treatment of children with Autism Spectrum Disorder (hereinafter ASD) defined by the DSM IV psychiatry manual as “a neurobiological developmental disorder that already manifests itself during the first three years of life and that will last throughout the entire life cycle.” (US ASSOCIATION OF PSYCHIATRY, 2002).After the analysis of the few centers of attention in the south of Veracruz for children with ASD and the ease offered by ICTs to create PPPs, the “ELY” software emerges that is divided into three important sections: Mental Activities, Social Activities and Social interaction activities. These sections contain activities that reinforce absent cognitive and social skills in children with ASD. In addition, with this tool the tutors did not require constant economic investment in teaching materials such as cardboard cards, colored pencils, geometric figures, among others. Participants who used the software in their treatment improved their recognition of emotions such as happiness, sadness and anger, also progressed by recognizing patterns and colors. This proves that Information and Communication Technologies (ICTs) in this research supported the specific teaching-learning processes of children with ASD, promoting communication, socialization and imagination, which are essential factors for relating to people who surround.

Software, Education, Drivers

Impacto del uso de software libre en la formación de los ingenieros en sistemas computacionales como alternativa frente al software propietario para el desarrollo de las competencias específicas

Impact of use of open software on the training of engineers in computer systems as an alternative to the owner software for the development of specific competitions

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Abstract

This review shows the results obtained from the first stage of the TIC's Educational Research project that aims to "Implement the use of free software in students of Computer Systems Engineering as an alternative to proprietary software for the development of specific competencies". In this first stage, it was considered the first specific objective to determine the degree of use of free software in students of the Systems Engineering degree. For the development of the research was considered a mixed methodology, based on previous data analysis, and the application, analysis and interpretation of survey for determining the degree of use, in students. In addition, the observation and participation to the students with which the Free Software Laboratory in Tecvalles will be collaborated and those who benefit from its actions was considered. Finally, this seeks to contribute to the generation of a culture of using free software as a learning strategy in application subjects to improve specific competencies, proposing the use of digital repositories to share code implement free software training days to encourage their use.

Specific Competencies, Free Software, TIC's

Desarrollo de una herramienta de software sistema administración de órdenes e inventario (SAO-DiTOTINOS) para restauran ditotinos

Development of a software tool System administration of orders and inventory (SAO-DiTOTINOS) to restore ditotinos

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Abstract

The present describes the results of the first two phases of the investigation that were proposed in order to provide a solution to the DiTotinos restaurant located in the municipality of Moroleón in the state of Guanajuato. The main problem to be treated is the way in which the activity of reporting products available in the warehouse was carried out, as well as following up on the face-to-face and / or telephone orders, which were registered manually, which is why the development of the software tool System Administration of Orders and Inventory DiTOTINOS (SAO-DiTOTINOS) was suggested. This software will have the function of controlling the entries and exits of the products of the inventory and administer the orders, for which the following methodology was applied: phase I, Development of software tools (using sequential linear development methodology), phase II, Implement the software tool. With this, the direct beneficiary is the restaurant company DiTotinos, mainly the order and inventory area.

Software, Inventory, Orders

Ingeniería de software aplicada al método global de análisis estructural para el aprendizaje del español, Tének e inglés en educación básica

Software engineering applied to the global method of structural analysis for spanish, Tenek and English learning in basic education

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Abstract

The global method of structural analysis is characterized in that from the first moment the information units with a complete meaning are presented to the child. The global method is to apply to the teaching of reading and writing the same process that is followed in children to teach them to speak. The child has a visual memory, recognizes words, sentences and phrases, with this, establishes relationships between words and discovers the identical elements in the image of two different words. The written word is the drawing of an image that evokes each idea. The prototype model of software engineering when applying the analysis technique, determines the functional requirements of the global method and transforms it into a software product for teaching Spanish, Tenek and English in first grade primary school children. the region of Ciudad Valles, San Luis Potosí. The prototype methodology has the following stages: communication, rapid plan, modeling, design, prototype construction and development. The use of technology combined with the global teaching method will achieve in children the meaningful and constructive learning of their mother tongue (tének), the Spanish language and a foreign language.

Software, Multilingual, Structural method

Modelo del software multimedia Teotihuacán en el tiempo basado en el diseño instruccional: E-actividades

Teotihuacán multimedia software model on the time based on instructional desing: E-activities

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Abstract

The development of the multimedia model for the project: Teotihuacán on the time 2009-2019, aims to raise awareness of the damage suffered by the remains. Three factors that drastically affect this cultural heritage are being studied: mass tourism, climate change and tourist attractions within the archeological zone. The methodology for the implementation of the project is the software engineering prototype model that consists of five stages, the current status is stage three: design and construction. An instrument was applied to the inhabitants of the Teotihuacán Valley to probe the feasibility of implementing this multimedia in one of the museums of the archaeological zone, among the most outstanding results it was obtained that they have scarcely lived a multimedia experience within the facilities, for Therefore, the surveyed users consider that this development should raise awareness among both tourism and the population about the damage to the archaeological zone. Finally, the study revealed that software for this purpose is important. Subsequently, the instructional design e-activities specified in each of its phases was developed, such as access and motivation, online socialization, information exchange, knowledge construction and development.

Teotihuacán, Multimedia, E-activities

Realidad aumentada como recurso educativo en materias administrativas de alumnos de diseño industrial

Augmented reality as an educational resource in administrative matters for industrial design students

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Abstract

Augmented reality is booming in several areas, education is no exception, one of the subjects that is sometimes somewhat complicated for students of industrial design is Market and Consumption, which is why it was proposed as an objective to develop a mobile application with augmented reality that in a first phase includes the theoretical aspects of the subject, then present videos and animations, presenting information reinforcement and integration of exercises of some concepts incorporating various resources. Three stages were identified: 1) general aspects, the participants of the study were established, the materials to be developed, the instruments that would be applied to determine the quality of the application were selected, 2) the Unity software was selected for its development, for both IOS and Android platforms; 3) a rubric on the quality of mobile educational applications was applied to 9 teachers and 64 students randomly chosen from the degree in industrial design, some of the results were 94.7% and 99.6% of acceptance of the application by teachers and students respectively.

Augmented reality, Educational resource, Industrial designer

Sistema de información web para la toma de decisiones en la evaluación de la calidad de productos agroindustriales

Web information system for decision making in the quality evaluation for agro industry products

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Abstract

The raw cane sugar industry in Huasteca Potosina, Mexico represents a growing market nationwide and globally. Mexico exports to the US, Europe and Japan with below rate such as a country like India, Colombia or Brazil. The little technification of this sector in the region is considered as a factor of the delays in the agro industry development. The Technological Institute of Ciudad Valles currently conducts researches for the evaluation of two of the quality characteristics of the raw cane sugar: color and texture; exploiting the computer sciences through image processing. This project defines the development of an information system through the iWeb methodology and data mining techniques to provide the information that characterizes the raw cane sugar as a quality product. With the systematization of processes for quality control, it is possible to provide direct information that supports decision-making and favors the growth of the industry towards global markets. Incorporating characteristics of information portability, ability to have reliable data on product evaluation and statistical representation of defects; becoming a support tool for the improvement of the raw cane sugar industry.

Agro industry, Quality, Decision making

Aplicación práctica de internet de las cosas: Seguridad de casa habitación

Practical application of internet of things: Home security

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Abstract

In the first months of 2019, in some regions of Mexico there has been an increase in home theft, as is the case of the municipality of Tehuacán in Puebla. It is then that an alternative is generated that implements the Internet of Things with the aim of reducing the rate of home theft, a system is generated that controls the opening of doors and the activation of alarms in case of undue opening, with it It seeks to benefit the people of Tehuacán and the country. The security system with internet of things allows the user to manage and control access to the doors of the home, the system works thanks to an application that is installed on a smartphone, which in turn will have a connection with the devices that will be installed in the doors, in this way only the user with the application and a key can open the doors safely, otherwise an alarm is triggered that alerts the owner of the house wherever he is and can call emergency numbers to avoid being a victim of a crime.

Internet of Things, Home Theft, Security

Comparación de Software (Plugins) de WORDPRESS para la puesta y marcha de tienda virtual ideal para la micro empresa con modelo de negocio E-Bussines

Comparison of WORDPRESS Software (Plugins) for the start-up of an ideal virtual store for the micro-enterprise with an E-Bussines business model

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Abstract

Wordpress is currently a content management system (CMS) that allows you to create functional virtual stores (e-commerce) by applying the different types of software (plug-ins) that exist in the market that allow you to increase the capabilities and functionalities of an electronic business model , the purpose of the present investigation was to evaluate the scope, configuration and functionality of the products compatible with the CMS, comparing in real time through an exploratory investigation the plug-ins: E-Commerce, Simple Paypal Shopping Cart, Woocommerce, Jigoshop and Ecwid Shopping Cart, in the operation of the product catalog of the micro company AVIIS avícola SA of CV, the result obtained is the identification of the technical characteristics of each software for the adaptation of an electronic business model based on business intelligence (e-bussines) in its various aspects, the results facilitate the evaluation of micro enterprises relevant technology technique to incorporate into your store model, for the design of marketing strategies that allow you to maintain or increase the position of the company in the market.

Plugins, E-bussines, Wordpress

La incorporación de los estudiantes de contaduría de pregrado de una universidad pública al sector productivo con sustento en sus competencias profesionales

The incorporation of undergraduate academy students from a public university to the productive sector with substance in its professional competences

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Abstract

The university vision envisages the training of students with professional skills for their timely inclusion through recruitment mechanisms in the productive sector, establishing their policies of entry, training and egress. For this purpose this longitudinal descriptive research is carried out at a Public University with two cohorts, 2018 and 2019, there are 192 undergraduate students of the Bachelor's Degree in Accounting, 93 of 2018 and 99 of 2019, respectively, who are in the last semester, to determine whether the process of adopting competences is satisfactory to interfere with the productive processes of organizations. Using a valid and reliable instrument it is determined that the predominant female population predominates with 53.8% for 2018 and 56.6% for 2019, in addition that in maximum Likert scale the result shows that by 2018 the average is 4.5484 meaning that they feel competent for in curbing their incorporation into work by decreasing slightly by 2019 to 4,5357; contrasts significantly with the perception they have for inclusion in the workplace since by 2018 the average is 4,5161, decreasing by 2019 to 4.2222. Although there is a confidence picture, it will have to monitor the next results by the declining trend that is observed.

Public university, Professional skills, Productive sector

Factores determinantes del perfil emprendedor social de jóvenes universitarios

Determinants of the social entrepreneurial profile of young university students

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Abstract

Social entrepreneurship focuses on solving problems of a collective nature through new ideas that allow the improvement of the environment. This research aims to advance in the understanding of the crucial factors that profile the social entrepreneur, which represents new opportunities to identify, strengthen and design strategies from the University aimed at the creation of enterprises with social value. This research is quantitative, non-experimental and descriptive. A survey was applied to an incidental sample of 515 university students and the data was processed based on a Principal Components Analysis (ACP), which presents the factors that have the greatest influence on the two selected components. The coefficients found indicate that the first component is related to the factors: creativity and innovation; self-confidence or internal control; adaptability and tolerance to failure; while the second component receives a greater contribution in the factors: perseverance and commitment; adaptability and tolerance to failure; and finally self-confidence and internal control.

Social entrepreneurship, Crucial factors, University students

Percepción de productores, empresarios y académicos del ramo agropecuario acerca de la situación actual del campo Mexicano (Análisis del periodo 1982 – 2018)

Perception of producers, entrepreneurs and academics of the agricultural industry about the current situation of the Mexican countryside (Analysis of the period 1982 - 2018)

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Abstract

This study was conducted with the objective of determining the perception about the Mexican countryside, farmers, entrepreneurs and academics analyze the period 1982 to 2018. 30 producers, 20 businessmen and 10 academics, were selected in each region. Each of the groups were surveyed in their own workplaces, about their personal perception of the current situation of the Mexican countryside, 36 years after its implementation (1982). The collected data were analyzed by Chi-square test (χ^2), 95% confidence, using descriptive statistics also by analysis group. The results show significant differences between the groups considered, according to its particular perception on the impact of globalization. Producers mostly considered that it did not serve and led to more poverty and problems in the field, while employers to a greater extent compared with this perception, since for them, globalization improved the productivity and the quality of life. Among academics there were discrepancies equal in terms of the positive or negative impact. It is no doubt that globalization is a complex phenomenon that had contrasting results, characterized by enormous economic inequality caused.

Current perception, Mexican countryside, Period 1982 – 2018

Vodcasting: Recurso digital para la tutoría académica en la modalidad de enseñanza presencial de los estudiantes en las asignaturas de formación tecnológica, redes y programación

Vodcasting: Digital resource for academic tutoring in the methodology of face-to-face teaching of students in the subjects of technological training, networks and programming

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Abstract

The objective of this work is to present the research that was carried out with the students and faculty of the Academic Divisions of Networks and Telecommunications and Computer Systems, where the didactic resources and learning strategies were identified, which are used for academic advising with students in the subject of programming and networks. The investigation that was applied was of quantitative type, a questionnaire in Google drive with closed response questions was used as an information gathering instrument and the sample that was taken was about the students enrolled in the second and third semester. Where it was identified that 90.6% of students and 100% of teachers would like the incorporation of videos as a strategy for understanding a specific topic. Derived from the result obtained, Vodcast was designed as a didactic resource that strengthens the learning and professional skills of the University Higher Technician (TSU).

Vodcast, Digital resource, Academic tutoring

Propuesta de habilidades directivas y preparación académica para directivos en universidades públicas

Proposal of management skills and academic preparation for directors in public universities

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Abstract

The main objective is to make an excellent selection of participants to director in public universities, identify the profile of higher education and base it on competencies before participating in an autonomous election, with the purpose of detecting its effectiveness and efficiency, verify if it has knowledge of the institution, strengths and opportunities, Knowledge of the Educational Model, academic preparation, Administrative Preparation, Skills, Creativity, Decision-making, Leadership, Honesty, Ethics and personal development. Detecting problems that affect students and teachers is significant in order to find the solution to these problems and also to improve the competitiveness and quality of public universities. Exploratory and descriptive research was carried out based on a mixed, qualitative research scheme with documented foundations of the type, Descriptive and Quantitative elaboration of an Instrument applying a sample of 92 surveys, with a confidence level of 95% and a margin of error 5% , interviews, real variables, statistical management, hypothesis testing, contributing to the development of new strategies and methods applied in other countries.

Competitiveness, Selection and Management Skills

La visión e interiorización del ocio y el tiempo libre en estudiantes de postgrado

The vision and interiorization of leisure and free time of post-degree students

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Abstract

Leisure and free time are a part of human beings' life, and perhaps neither how nor why is thought of. In leisure, activities are individual and obligation free; free time activities, although can be chosen whether to do them or not, are linked to social pressures and included in the legislation and as universal human rights: Recreation, amusement and rest. The objective of the article is to analyze the way in which the post-degree students visualize and incorporate the leisure and free time in their everyday life. The used method is quantitative, explorational-descriptive, and transversal. The article contributes demonstrating the subjective wealth that impregnates the leisure forms and free time activities into the way each of the individuals do things, think, say, and spend time in their educational, social, and work related relationships and interrelationships. The questionnaire was answered by 70 post-degree students —53 women and 17 men— most of them working. Some female students spend 15% of their week in free time activities and 27.5% to leisure; in both activities men said to spend 27% of their week. Only 16 women and six men consider free time as a fundamental human right.

Leisure, Free time, Gender

Análisis de educación financiera en niños de quinto grado de primaria en escuelas urbanas de la ciudad de Navojoa, Sonora

Analysis of financial education in children of fifth grade of elementary in urban schools of the city of Navojoa, Sonora

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Abstract

The present research shows a diagnosis whose objective was to know the level of financial education that the fifth grade children of the city of Navojoa, Sonora, have to make a didactic proposal. The research was exploratory, descriptive and transversal, using the case study. A questionnaire was applied to 1,862 fifth grade children in urban schools in Navojoa city, Sonora. The questionnaire included seven variables with 35 questions using the Multiple Response Model. The results indicated, according to the scale used, that respondents possess acceptable knowledge in financial education. ANOVA confirmed significant differences in some variables taking into consideration aspects such as the type of school, school grade, sex, age and parental education level.

Economy, Financial Education, Diagnosis

La creatividad: ¿Estilo de aprendizaje o estrategia didáctica?

Creativity: Learning style or teaching strategy? Creativity: Learning style or teaching strategy?

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Abstract

The present research on Creativity: Learning Style or Didactic Strategy? It aims to identify the impact of Learning Styles and Didactic Strategies on Creativity. Teachers should resort to practices that make them obtain good results, projecting a quality training, this leads to being an active person, with social activities that make the student have a good and increasingly better participation in the process of teaching-learning, where it is capable of transmitting a discipline to overcome difficulties. (Márquez, 2005). Some items of the learning styles of the ILP-R questionnaire (SCHMECK) were used, from which the most relevant ones were selected since they could enrich the present study. The instrument that was applied presented a cronbach alpha of .85, the results were analyzed with the STATISTIC statistical package. The type of research is quantitative, the instrument was carried out in four sections, where the general data is found, and 3 research axes: Learning Styles, Didactic Strategy and Creativity. As main results it was found that Learning Styles and Didactic Strategies are considered to have an impact for the student to generate Creativity.

Creativity, Learning Style, Didactic Strategy

Estrategias de gestión ambiental en las instituciones de educación superior. El caso del Centro Universitario de los Valles

Environmental management strategies in Institutions of higher education. The case of the University Center of the Valleys

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Abstract

The environmental management of water is part of the objectives of sustainable development and its importance lies in being an essential element for life. Being the Institutions of Higher Education (HEIs) a work with a relevant role and its work impacts in two aspects: in the operative action and in the way of acting of the individuals that make it up. The objective of this article is to analyze the strategies that the HEIs mobilize to consolidate as a sustainable campus and that may be applicable to other institutions, taking the taking the University Center of the Valleys of the University of Guadalajara as a case study. The methodology was based on an international framework that takes into account several axes where HEIs intervene, for this the "Survey for the Diagnosis of the Institutionalization of the Environmental Commitment of Colombian Universities" was used, the information was supplemented and validated through consultation of institutional websites, platforms, reports, gazettes and interviews (Münch and Ángeles, 2015). The research aims to generate strategies for the proper use and management of water resources in HEIs impacting their substantive axes, to ensure responsible consumption and promote environmental culture in the university community.

Strategies, Environmental water management, IES

Principios sustentables y parámetros legislativos en una mina subterránea en México. Caso de estudio

Sustainable principles and legislative parameters in an underground mine in Mexico. Case study

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Abstract

The United Nations Organization is in favor of Sustainable Development through Objectives, of which four are studied for their relationship with the environment; for its part, the Legislative Framework of Mexico, provides to the agencies of the Ministry of Economy, power over the environmental parameters that must be met for companies operating in the mining-metallurgical sector. With a case study methodology, which is part of an integrated multiple case study (Yin, 2013), the environmental practices of an analysis unit (underground metal ore mine in Mexico) were investigated, obtaining information on instruments designed and, describing with a qualitative approach, the participation of the four sustainable principles selected, which obey the Sustainable Development Goals: (1) Industry, innovation and infrastructure, (2) Sustainable cities and communities, (3) Production and consumption responsible and, (4) Life and terrestrial ecosystems Therefore, the objective is: Articulate compliance with the principles of sustainability with the legislative parameters of an underground metal ore mine, to contribute to a comprehensive proposal of best practices for the Environmental Management of the mining-metallurgical sector of Mexico.

Sustainability, Environmental Management, Mining and Metallurgical Process

Acciones ambientales: Responsabilidad social en MiPyMes

Environmental actions: Social responsibility in MiPyMes

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Abstract

The attention to the environment is of global urgency and is a commitment of all sectors. The objective of this research is to identify the performance of the business sector regarding the care of the environment. Posing the following research question, what are the social actions carried out by companies with respect to their environment? A non-experimental study was carried out, corresponding to 88 MiPyMes of Cd. Obregón, Sonora. Applying questionnaire consisting of 18 questions, some of them with multiple choice, measured on a Likert scale from 1 to 5, divided into three Sections: I. Data of the person in charge of the business, II. General aspects of the company and, III. Environmental actions in the company. The results obtained show that although certain activities are already being carried out, there is still a lot of work to be done, in actions such as: use of ecological and / or recyclable packaging; adoption of measures regarding the design of ecological products and / or services; Consideration of programs for the use of alternative energies, and voluntary access to environmental regulations. The results obtained will allow designing programs, where entrepreneurs acquire knowledge, which will help them develop environmental strategies through social responsibility actions, generating added value to the same organization.

Sustainability, Social responsibility, Environment

Análisis y evaluación del sector público, privado y de la sociedad, para medir la sustentabilidad en centros eco-turísticos de Nanacamilpa de Mariano Arista, Tlaxcala. Estudio de caso: Santuario de las luciérnagas

Evaluation of the public, private and society sectors, to measure sustainability in eco-tourism centers in Nanacamilpa de mariano Arista, Tlaxcala. Case study: Fireflies' Sanctuary

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Abstract

Sustainability in different places with touristic potential must be an essential and required characteristic for them. The main objective in this document was to design analysis and evaluation sustainable tourism strategies, considering the perspective from different interested groups in the “Fireflies’ sanctuary” in Nanacamilpa de Mariano Arista, Tlaxcala, Mexico to have viable strategies to avoid flora and fauna erosion and degradation, without affecting economic and social growth in the population. In order to develop the present investigation, the multi-stakeholder thinking was used, identifying the main interest groups affected by sustainable tourism: the public and private sector and the civil society. A 4 areas assessment was obtained in order to value all the actors and to evaluate the sanctuary sustainability.

Sustainability, Tourism, Stakeholders, Fireflies, Strategies

Calidad del agua de distribución en un Centro Universitario rural sin procesos de desinfección de la Universidad de Guadalajara, México

Water quality distribution in a rural university center without disinfection processes of the University of Guadalajara, Mexico

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Abstract

The University Center of Biological and Agricultural Sciences (CUCBA) of the University of Guadalajara receives approximately 5700 students, and 1500 of the academic, administrative and visiting staff. The CUCBA is research oriented, therefore, a large amount of chemical waste and microbial load is generated by health services. There are two sources of water supply that provide quality drinking water to the student population and two water treatment plants that process the wastewater produced. The objective of this study was to evaluate the physical chemical and bacteriological quality of the water from the sources of supply, storage tanks, distribution network and principals points of use as an area of food and drinkers, as well as the wastewater emitted in triplicate. The water quality index was calculated, and regular values of the water quality of the 10 sampled points were found, and it is noted that, the sampling points with the lowest quality index were the water that leaves the plants of Water treatment, therefore, is not being accomplished with proper water purification.

Water quality, Heavy metals, Total and faecal coliforms

La contabilidad ambiental en la agenda 2030 para el desarrollo sostenible: México

2030 Agenda for sustainable development and environmental accounting: México

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Abstract

Today, international attention is focused on sustainability and respect for the environment; there is an irretrievable wear and tear on nature, reflecting the excessive and inappropriate use of natural resources. Mexico committed itself in 2015 to the UN to take action to meet the 2030 Agenda for Sustainable Development goals. It seeks to determine the importance of environmental accounting in Mexico for the fulfillment of some of these objectives and what its current situation is. A bibliographic search was done on information from recognized data sources; rigorously, selecting the most relevant research in the accounting field, as well as a revision of the Financial Reporting Standards and ISOS that regulate the ecological issue. Concluding that environmental accounting plays an important role in two of the objectives of the 2030 agenda; ecological accounts and sustainable work is a little-seen issue in Mexico that is evolving, so it is important to encourage a citizen's awareness of the measures necessary to prevent and compensate for the damage, it is not an obligation that only falls on the government is a matter for all Mexicans.

Sustainability, Agenda 2030, Environmental accounting

Caracterización Físico-Química de aceite esencial de orégano en 6 comunidades del Municipio de Rodeo, Dgo

Physical Characterization-Chemistry of Essential Oil of oregano in 6 communities of the Municipality of Rodeo, Dgo

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Abstract

The municipality of Rodeo is one of the largest oregano producers in the state of Durango, reporting an average of 100 tons per year, which are used as a condiment and there is no use in its entirety. The objective of the present work was Physicochemical Characterization of Essential Oil of Oregano (AEO) in 6 communities of the municipality of Rodeo Durango, the methodology was carried out by dragging with water vapor, where quality and quantity of oil were controlled, using the leaves of The oregano plant, the density, was determined by means of a pycnometer and the index of refraction by means of a refractometer (Master Refractometer). The results obtained for the index of refraction of the oils of the 6 localities circle between 1.47-1.50 which indicates an acceptable purity in the (AEO). The density of oils circle between 0.91-0.92. The chemical components were read by gas chromatography and a Flame Ionization Detector (FID), where a higher percentage of concentration on the carvacrol compound was reported, which circulated between 60-70% while the compound Thymol was between 30-40%. A statistical analysis was performed to determine if there was a significant difference between the concentration of the analytes based on the height of the sample obtaining a significance >5, which indicates a difference between the data.

Oregano, Oil, Pycnometer, Extraction and distillation

Buenas prácticas de producción agrícola para la conservación del medio ambiente y “mitigación del cambio climático” en la región de la Ciénega del Estado de Jalisco

Good practices in agricultural production for environmental conservation and “climate change mitigation” in the Ciénega region of the Jalisco state

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Abstract

The environmental crisis suffered by the planet is caused by multiple factors, such as the natural and anthropogenic. In agropecuary sector, some activities are developing that directly affect the natural resources. Motivated by that situation, this work was carried out with the objective of identifying and promoting the use of good practices in agricultural production for environmental conservation and “climate change mitigation” in the Ciénega region of the State of Jalisco. The work was carried out in an “Experimental Ranch” of the University of Guadalajara, located in the town of San José Casas Caidas in the Municipality of La Barca, Jalisco. The work included 23 agricultural producers from the municipalities of Ocotlán, La Barca and Jamay, from the Jalisco state. A participatory workshop was held as a methodological strategy, where different actors of the farming activity participated. As part of the results, the following problems were identified: lack of water, pests and diseases, hailstorms, presence of weeds, inefficient commercialization, as well as lack of financing. They propose to implement of soil conservation strategies such as; incorporation of crop residues, crop rotation, soil leveling, application of composts, among others.

Participatory workshop, Good practices, Soil conservation

Calidad de mezclas de harina de trigo y harina de avena para tortilla de harina

Quality of wheat flour and oat flour mixes for flour tortilla

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Abstract

Wheat grain is the cereal of great importance in the world for its baking characteristics. Oatmeal is a cereal rich in protein value, omega-6 unsaturated fats, insoluble and soluble fiber. The objective of this research was to characterize formulations of wheat flour with oat flour depending on their aptitude for tortillas. The Wheat used is of the UrbinaS2007 variety, treatments of a control were formulated with 100% of Wheat Flour (TE) and three formulations with 5% of Oat Flour(T1), 10% of Oat Flour(T2) and 15% of Oat Flour(T3). A simple Anova was applied with a comparison of tukey mean at P= 0.95. Significant difference was determined in the Sedimentation of TE(Sed)=42.5 mL at T3(TDS)=35.9 mL; alveographic parameters Tenacity of TE(P)=42 mm to T3(P)=66 mmH₂O, Extensibility of TE(L)=63 mm to T3(L)=16 mm, Force of mass TE(W)=70 10E-4J to T3(W) = 48 10E-4J; Mixigraphic of Mixing Time TE(MT)=2.9 min at T3(TA)=2.1 min; Tortilla, Moisture Absorption TE(HA)=44.5% at T3(HA)=46.5%, Protein (TE)Prot=10.4% a (T3)Prot=10.9%. The T3 treatment has desirable characteristics for a wheat flour tortilla.

Soft Wheat, Oat Flour & Extensibility

Desarrollo de una harina para panificación a base de cáscara de plátano (*Musa paradisiaca*) y harina de garbanzo (*Cicer arietinum*)

Development of a flour for baking based on banana peel (*Musa paradisiaca*) and chickpea flour (*Cicer arietinum*)

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Resumen

El aumento progresivo del número de personas que no pueden consumir harina de trigo, lleva a la industria panadera a pensar en el uso diferentes ingredientes. Aunado a esto, se encuentra la creciente preocupación por el uso sustentable de ingredientes para la preparación de alimentos. El objetivo del presente trabajo es la formulación de una harina a base de cáscara de plátano y harina de garbanzo. Una vez obtenida la harina de la cáscara de plátano mediante secado, molido y tamizado de la misma, se elaboró un panque variando la mezcla de las ambas harinas (15/85; 20/80; 25/75, 30/70 y 35/75 % de harina de plátano/harina de garbanzo), cuantificando la firmeza del pan, la altura final, peso, humedad, proteínas, además de una evaluación sensorial. Se concluye que la mezcla con mayor contenido de cáscara de plátano posee mejores características de sabor, olor, y textura que las demás preparaciones. Además esta harina también posee un mayor contenido de fibra y proteínas en comparación con la preparación a base de harina de trigo. Este tipo de productos ayudan a incrementar la sustentabilidad en la preparación de alimentos así como a la mejora de la salud por los nutrientes que contiene.

Harina, Cáscara de plátano, Sustentabilidad

Fitorremediación con *Eichhornia crassipes* y *Cyperus papyrus* en la presa del llano en el municipio de Villa del Carbón, Estado de México

Phytoremediation with *Eichhornia crassipes* and *Cyperus papyrus* in the llano dam in the municipality of villa del carbón, State of Mexico

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Abstract

The Llano dam is a body of surface water that has been used as a source of water for irrigation and tourist activities such as rowing and fishing tournaments; This dam is located in the municipality of Villa del Carbón in the State of Mexico and there is a history of contamination by enterobacteria and phosphorus (Razo J. et al; 2016). Due to the mentioned importance of this body of water, the objective of this work was to carry out phytoremediation through the use of islands based on recyclable material (PET) and with the plant species *Eichhornia crassipes* and *Cyperus papyrus*. The phytoremediation evaluation was performed over a period of three months considering 3 arm, center and curtain sampling zones. The presence of enterobacteria was evaluated as indicators of microbiological contamination and in terms of physicochemical parameters, temperature, dissolved oxygen, pH, hardness, sulfates, nitrates and phosphates were evaluated. The microbiological results showed absence of enterobacteria in the central area of the body in the last sampling, it should be noted that the behavior of the physicochemical parameters is very variable, the values of nitrates and phosphates are related to the presence of enterobacteria, when modified it has an effect on the microorganisms mentioned above. It is important to note that the lack of environmental education in both site administrators and visitors affected the efficiency of the islands as they were moved to the banks of the dam reducing the contact of the phytoremediation islands with water.

Phytoremediation, Plain prey, Enterobacteria

Fenología y Nodrizaje de *Sotoa confusa* (Garay) Salazar (Orchidaceae) en el sur del altiplano potosino zacatecano

Phenology and nurse plant of *Sotoa confusa* (Garay) Salazar (Orchidaceae) in the southern potosino zacatecano highlands

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Abstract

Sotoa confusa is a little conspicuous terrestrial orchid that is distributed in arid and semi-arid land of Mexico and south of USA, its life history is poorly known, so phenology and interaction of this species with shrubs was studied; its bloom occurs in March and fructifies in April (the driest period of the year), latter, from July to September it develops leaves, which disappear in October, so this orchid remains eight months without leaves. By other hand, *S. confusa* does not grow in areas with bare soil, so it shows preference to grow under the canopy of plants such as *Dodonaea viscosa*, *Opuntia imbricata*, *O. robusta*, *O. leucotricha* and *Pittocaulon praecox*; however, it shows a negative association with *Jatropha dioica*. The survival strategy of this plant in arid environments is to grow under the canopy of other plants that provide a favorable microclimate and develop leaves only during rainy seasons.

Nurse plant, Orchids, Semiarid lands

Evaluación de los factores contextuales de Puerto Vallarta para la definición de perfiles de egreso en instituciones educativas de nivel superior

Evaluation of the contextual factors of Puerto Vallarta to define graduate profiles in higher education institutions

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Abstract

This paper analyzes several factors that constitute the economical and institutional context of the municipal environment of Puerto Vallarta in Jalisco state, focused on detect the needs of professional profiles in higher education institutions. These factors can be considered as a main intervention axis to constitute the regional context, which is crucial to define the desirable professional profiles in higher education graduates. To elaborate the present study various indicators were analyzed, mainly those who are generated by state government offices and some other public dependencies with regional intervention, all of them aligned to evaluate contextual factors thru the identification of a transversal association of the data. We wish to identify the pertinency of the professional profile in the higher education graduates based on the results of the present analysis, furthermore the main tendencies in higher education that can be promoted in local educational offer to generate an appropriate response to actual and future needs thru an objective evaluation of the context that considers the international educational tendencies.

Higher education, Higher education graduate profiles, Regional context

La contaduría pública y la sostenibilidad: Una visión académica

Public accounting and sustainability: An academic approach

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Abstract

Environmental education emerges as a crucial need in today's circumstances, in academic contexts such as universities, it implies introducing environmental contents and criteria in the corpus of knowledge, skills, attitudes and values outlined in the curricula, which could allow the students to perform professionally in environmental schemes and circumstances. The objective of this essay is to analyze: 1) The insertion of the issue of Sustainable Development in Public Accounting, and 2) To identify the different possible approaches to Sustainable Development in the curricula. The environmental framework represents an innovation in the curricula development, since it highlights not only the human being as an individual and the society as important participants in this issue, but also the global environment in a double role, both as a partaker and a mediating element for a new society, Chacón, 2004 quoted by (Córdor, 2018). Starting from the fact that universities have included the environmental framework in their programs and as part of their quality standards, we analyze how sustainability is insert in the Public Accounting Degree since the curriculum was restructured in 2015 (DACEA-UJAT. LCP. 206). An exploratory analysis is undertaken, to compare UJAT with other universities in Mexico by identifying indicators that represent the insertion of this framework with a transversal design among institutions and their curricula. The main goal is to strengthen the outline and contents of the subject Accounting for Sustainability.

Sustainable development, Curricula, Public Accounting

Traumatismo craneoencefálico severo. Secuelas ocasionadas en el ser humano

Severe head injury sequelae caused in humans

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Abstract

This research points out how valuable the brain in humans is, it indicates from the definition of the word brain, of the nervous system, composition of the skull, parts of the brain, responsibilities of the brain, actions to keep the brain in good shape, the power that he has the brain and the senses that he indicates himself. There is a case study of an accident that caused a severe craniocerebral trauma teacher and the sequelae that will already be part of her teacher's daily life and the knowledge that these sequelae may continue to appear during the 3 years of the accident. It also presents the progress that has been achieved over 10 months of recovery, this with the aim of creating awareness in people and understanding how important the brain is to continue living in this magnificent world.

Brain, Severe Craniocerebral Trauma, Teacher

Actividad integradora de un punto de venta y la difusión de productos con realidad aumentada

Integrative activity of a point of sale and the product dissemination with augmented reality

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Abstract

An Integrative Activity uses the skills and knowledge provided in various subjects to solve practical problems, with an individual and/ or group approach. Specifically in this article we work on a Point of Sale system and the Diffusion of Products with Augmented Reality, developed over three semesters and involving courses of Software Engineering, Computer Human Interaction, Design of Virtual Environments and Computing for Mobile Devices. The activity applies knowledge of software development models, usability, 3D modeling, augmented reality and development of web applications for mobile devices. At the end of this activity, the student has managed to develop complete software, from planning until testing phases.

3D Design, Web Development, Mobile Devices, Augmented Reality

Implementación del enfoque lean ergonomics para la mejora de desempeño de procesos

Implementation of the lean ergonomics approach to process performance improvement

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Abstract

Actually market is subject to constant change which forces organizations to innovate with new strategies that provide greater productivity to maintain a competitive advantage, one of the flexible tools used are Lean systems. However, in most of the improvements registered in these systems, the non-ergonomic elements have not been considered as waste, which have high costs for companies. This document presents an approach to integrating Lean systems with Ergonomics, the main tools used were Value Stream Mapping, SIPOC, Kaizen, REBA Method and NIOSH. As a result, a risk identification was obtained in 86% of the 26 activities of three processes analyzed, mainly by postures, manual lifting of loads and repetitiveness, with the improvements developed, the 25 controlled risks were reduced high to medium or low and obtained an average reduction of 32% in the cycle time of operations, making each process more efficient.

Lean Manufacturing, Ergonomics, Improvement of processes

El impacto de la inseguridad y la violencia en las ventas de las Micro y Pequeñas empresas de la ciudad de Valle de Santiago, Guanajuato

The impact of insecurity and violence on the sales of Micro and Small Businesses in the city of Valle de Santiago, Guanajuato

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Abstract

Nationwide, 63.0% of companies consider insecurity and crime as a major problem that affects them. (INEGI, 2018). On 2018 in Guanajuato, 93.3% of companies considered it unsafe, with an increase of 38.3% over 2016 (INEGI, 2018). Their municipalities are no exception, in the case of Valle de Santiago, we seek to analyze the relationship between insecurity and violence with respect to annual sales of micro and small enterprises, the research is conducted through a cross-descriptive design, with a quantitative approach, through the questionnaire as an instrument, obtaining a sample of 550 companies. As a result of the research it was obtained that 90.7% of the directors of the micro and small companies express to be worried by the insecurity and violence that occurs in the municipality and therefore an impact is observed in the annual sales according to the calculation of the R square, obtaining 0.765. Given the importance that micro and small enterprises have for the economic development of the municipality, the issue of insecurity and violence must be considered a priority due to its growing incidence, not only at the local level.

Insecurity, Violence, Sales

Promoting extensive reading in a blended learning modality: Students' perceptions

Promover la lectura extensiva en una modalidad de aprendizaje mixto: Percepciones de los estudiantes

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Abstract

Reading in foreign language is a difficult ability to foster and a boring task for some students. That is why teachers should look for attractive ways to promote it. The objective of this research is to characterize students' perceptions towards the use of a blended learning modality to promote extensive reading, as well as to know if they consider having meaningful reading comprehension when working with it at the Bachelor of Teaching English at the Benemerita Universidad Autonoma de Puebla. To analyze this phenomenon, a cross-sectional quantitative study was accomplished with a Likert-scale questionnaire and the TOEFL examination test as instruments. The results characterize the subjects' perceptions as identifying the blended learning modality like a suitable learning resource to promote extensive reading as well as another technology-based instructional delivery environment with special attributes that empower meaning reading-learning experiences since their tutor was available inside and outside the classroom to help them in their extensive reading process. Besides, they did extensive reading in shorter periods for specific purposes like pleasure, information, and general understanding. Finally, they found that working in this modality promotes cognitive processing if the tasks are pedagogically designed.

Extensive reading, Blended learning modality, Meaningful learning

Facebook as a tool to learn English vocabulary

Facebook como herramienta para aprender vocabulario en inglés

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Abstract

Nowadays, the integration of social networking sites (SNS) into the education field, like Facebook, has changed the way people communicate with each other and created new learning approaches. Therefore, the importance of implementing pedagogical strategies for English language learning (ELL) to create new learning classrooms either physical or virtual should be privileged this time. The objectives of this research article are to know if the Facebook tool helps students to learn vocabulary in English, and identify what learning strategies they use to learn vocabulary meanwhile interacting with this tool. Thus, the research questions are:

1. Does Facebook allow students to learn vocabulary in English?
2. What learning strategies do students use to learn vocabulary when interacting on facebook?

Concerning methodology, the research was accomplished by using a quantitative method with a cross-sectional design and a Likert scale questionnaire.

The results showed that Facebook is useful to learn not only vocabulary but also English language since students used the vocabulary in authentic, natural, and meaningful contexts. Besides, it provides important data to identify different strategies used to learn vocabulary because this social network became part of their learning process.

Facebook, Vocabulary, Learning strategies, English as a Foreign Language

Un estudio acerca de las actitudes y experiencias de maestros y alumnos en un curso de inmersión en una universidad tecnológica en Veracruz, México

A study of student and teacher attitudes and experiences towards an immersion course in a technological university in Veracruz, Mexico

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Abstract

Mexico is experiencing a growing need of qualified professionals able to work and receive training in international companies. For this reason, education authorities in Mexico have created technological universities and, in recent years, a new model for them called BIS model (Bilingual, International and Sustainable). It is a bilingual model which starts with an immersion course followed by a bilingual program whose objective is to graduate technicians and engineers with a high level of English language proficiency. This research intended to study the attitudes and experiences of students and teachers who participated in an immersion course in a BIS model university in Veracruz, Mexico to identify the attitudes of both students and teachers towards the course to help designing future courses to avoid potential language learning problems related to attitudinal and motivational factors. In order to do this, quantitative and qualitative paradigms were used through the application of questionnaires and semi-structured interviews to sixty-five students and teachers as well as class observations. The results showed that while students and teachers generally had a positive attitude towards the program, there are a number of factors that affected their performance such as the students' profile, their motivations to study the language, their motivations to study a bilingual program and the course planning.

Teaching, Attitudes, Immersion

Desarrollo de habilidades digitales e impacto en el aprendizaje de excel avanzado a través del uso de plataforma virtual edmodo

Development of digital skills and impact on advanced excel learning through the use of edmodo virtual platform

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Abstract

The teaching - learning process that can be implemented in a Higher Education institution for a student to assimilate the knowledge and skills necessary for the use and mastery of a software as commonly used as the Excel spreadsheet, should consider the use of techniques , strategies and particular methodologies if it is to develop skills for the management of this software at medium and advanced level. This research presents the results obtained having used as a strategic tool the virtual platform Edmodo within the course of Computer Science II for the Accounting Education Program, so that the student acquires on one hand the necessary knowledge for the management of the mentioned software, the development of digital skills, the motivation to learn, the promotion of responsibility and proactivity for the study, as well as the acquisition of different habits to those that can develop without an information technology like this.

Excel, Edmodo, Digital Skill

5 Ciencias Sociales

Las razones financieras como herramienta para la mejora en la gestión de las PYMES en Comalcalco, Tabasco

The financial reasons as a tool for the improvement in the management of SMEs in Comalcalco, Tabasco

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Abstract

The present research work identified that one of the main problems affecting small and medium enterprises is the lack of necessary financing, which is one of factors that inhibit their development and growth. On the other hand, the intention for the development of the study began with the quantitative and qualitative evaluation of the factors that affect the potential growth of SMEs in Comalcalco Tabasco. The research that was proposed was developed under a quantitative approach based on the observation, analysis, description and a careful measurement determined under a deductive logical framework of longitudinal cut in the environment of the formal sciences of social research. This research was carried out in a particular organization, considering numerical measurements, ranging from the general to the specific to establish patterns of financial behavior that allowed for the identification of strategies and techniques to access funding and thus reach the administrative consolidation that allows them to be more competitive in times of globalization.

Strategies, Small and medium enterprises, Globalization

Estudio y propuesta de cómo crear valor entre empresa, sociedad y gobierno en la generación y gestión de residuos sólidos en América Latina, a través del modelo de economía circular

Study and proposal of how to create value between business, society and government in the generation and management of solid waste in Latin America, through the circular economy model

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Abstract

This article presents a study of the generation and management of solid waste in Latin America and aims to show how to create economic value for companies and benefits for society and government, by moving from a linear economic model to a Circular economic model to re-conceive the generation and management of solid waste at the same time, the development of solid waste processing clusters in Latin America. The study begins by identifying the problems currently generated by inefficient solid waste management in Latin America, then quantifying the affectation of these problems for society, and finally, the identification of key factors to re-conceive a system of recovery of solid waste and its processing with the aim of returning its economic value or insert them back into the value chain, through the study of cases in developed countries that have adopted a circular economy model in the management of their waste solid.

Circular economy, Selective collection, Shared value

Propuesta de optimización financiera en el proceso de tratamiento químico en torres de enfriamiento de la C.T. Francisco Pérez Ríos

Proposal for financial optimization in the chemical treatment process in cooling towers of the C.T. Francisco Pérez Ríos

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Abstract

Technical and financial analysis are essential in every industrial process for decision-making in the optimization of results. However, they need to increase their efficiency, as well as greater use of security and reliability resources and enforcement in cost control systems, are guidelines that increase day by day, compared to this; electricity production is of great importance in terms of progress in Mexico, because both commercial businesses, industrial enterprises and households depend heavily on their proper management. This theoretical work is developed from a technical-financial methodology, carried out within the national electricity system of the Federal Electricity Commission, in this case analyzes the Francisco Pérez Ríos thermoelectric plant, which at present has five electric power generating units, located in Tula de Allende, Hidalgo, the contribution of this research is to seek the benefit in saving chemical treatment in the cooling towers from the information generated from the area Financial.

Thermoelectric, Optimization, Costs

Impacto del programa educativo: Comercio internacional y aduanas en el desarrollo de las Pymes en los municipios de Comalcalco y Paraíso del Estado de Tabasco

Impact of the educational program: International trade and customs in the development of SMEs in the municipalities of Comalcalco and Paraíso in the State of Tabasco

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Abstract

The majority of SMEs in the municipalities of Comalcalco and Paraíso, in the State of Tabasco, are largely unaware of the various activities that take place in the context of the activities that correspond to the specific area of International Trade and the alternative topics that it brings as a consequence, as well as the lack of personnel highly knowledgeable of the changes in negotiation that are propitiated at every moment in the global markets, for that reason it is important to analyze, evaluate and determine the impact that the University has had in the Chontalpa region. Polytechnic of the Gulf of Mexico offers the Degree in International Trade and Customs, and know if it has provided the human resource with professional characteristics for the development of such tasks. The object of study is limited to the State of Tabasco, specifically in the municipalities of Comalcalco and Paraíso. It is very important to mention that in the face of all the changes that arise in foreign trade, companies need to be inserted in the global levels of competitiveness and development, which allow them to have a presence in national and international markets to make strategic investment alliances and cooperation.

Commerce, SMEs, Graduates

Inclusión financiera: Factor clave en la esperanza de vida de las Mipymes en países de Latinoamérica

Financial inclusion: Key factor in the life expectancy of MSMEs in Latin American countries

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Abstract

MSMEs are of vital importance in the economic and social development of the nations of Latin America, comprise 99% of the formal Latin American companies, are the main generators of employment with 61% and contribute with 25% of the GDP of that region. Unfortunately, the average life expectancy is less than 10 years because these businesses face various problems, highlighting access to financing. The objective of this research is to determine the impact of financial inclusion on the life expectancy of MSMEs in Mexico, Colombia and Chile. An exhaustive analysis of both variables is carried out with data from reports, surveys and specialized studies. Some results indicate that the main source of financing for these companies is not the financial institutions, on the contrary, they are the resources that their owners invest and the main obstacle to not accessing external financing is the high interest rates. This research contributes to show the current conditions of MSMEs in order to design public policies that strengthen financial inclusion to improve their permanence and competitiveness in the market.

Financial inclusion, Life expectancy, MSMEs

El impacto del cambio organizacional en las empresas metalmecánicas de San Juan de Río, las cuales cuentan con sistema de gestión de calidad preferentemente certificado

The impact of organizational change in the metalworking companies of San Juan de Río, which have a quality management system preferably certified

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Abstract

Today, the implementation and maintenance of systems, including those of quality management, help companies to develop at appropriate levels, so that they can integrate into global markets and be able to compete effectively. In relation to this, quality systems based on international standards, such as those of ISO "International Standard Organization" have been the most widespread, adopted and accepted in service companies, manufacturing and other sectors. However, this does not guarantee success, quality management systems strategies have generated some doubts such as their effectiveness (Gryna, F. et al., 2007), where processes play an important role. With this intention made operational, the aspects of processes, systems and organizational change, both technical and administrative, allow to measure the degree of adequacy between the processes and their impact on the positive change that contributes to competitiveness. This quantitative investigation of a sample of micromechanical micro enterprises of the municipality of San Juan del Río, which have certified quality management systems, have proven the proposals that investigate the correlation between quality management and organizational change as support elements in competitiveness.

Quality Management system, Organization change, Metalwork organizations

Modernización de la administración pública federal: México 2012-2016. El análisis de la propuesta para la modernización

Modernization of the federal public administration: Mexico 2012-2016. The analysis of the proposal for modernization

GALVÁN-ZAVALA, Karina, REA-CHÁVEZ, Luis Gerardo, LAGUNA-CÓRDOBA, Perla Cristina, JIMÉNEZ-RICO, Artemio

La productividad como factor en la mejora de la calidad en las unidades médicas del IMSS Tabasco

Productivity as a factor in the improvement of the quality in the medical units of the IMSS Tabasco

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Abstract

This paper describes the process of analyzing the productivity of the family medical units of the municipality of the center in the city of Villahermosa Tabasco of the Mexican Social Security Institute so that a corrective and continuous improvement can be proposed with the purpose of obtain with it quality in the service, attacking the areas of opportunity that with the analysis can be defined. Its main basis is to promote the continuous improvement and innovation of the administrative units of the Mexican Social Security Institute based on the needs of the population and demand for quality services, the optimal use of resources, recognition of the participation of workers and the improvement of the work environment; this, to project them in an orderly manner to competitive world-class levels, allowing the managers of the administrative units to have a useful diagnostic tool and continuous improvement to identify the advances and align their systems, their processes towards the needs and expectations of the users, identify the purpose of each system, the way they operate, the areas of opportunity and decide with their team, what to improve, how and when; to advance continuous improvement

Productivity, Continuous Improvement, Quality

Actividades comerciales turísticas luego de filmar *Bandidas* y *Spectre*

Tourist commercial activities after filming *Bandidas* and *Spectre*

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Abstract

In Mexico, the cases in which an increase in commercial activities for tourism following a film production have been recorded and evidenced are scarce, despite the fact that cinematographic productions (considering their multiple processes of advertising, recording and news) are a forum for the configuration of tourist areas and part an industry of distribution of cultural contents in growth ideal for the promotion of destinations. The different locations in Mexico in which ***Bandidas*** (2006) and ***Spectre*** (2015) were filmed, have made different use of the attraction of a film production and show a different tourism service planning. The methodology adopted was a combination of techniques (Arias Alpízar, 2009) (Hernández Sampieri, Fernández Collado, & Baptista Lucio, 2003). The quantitative part made use of the characterization of the area, review of the catalogs of tourist services in the regions, historical comparison of the evolution of tourist services related to the filming of films (Ander, 1989). On the other hand, as a qualitative part, the interview was used (Hernández Sampieri, Fernández Collado, & Baptista Lucio, 2003) so that those involved in these services could express their opinions on the subject. Likewise, a digital newspaper review was carried out (Ander, 1989) to know the advertising promotion of the regions using as an attribute the filming of the cinematographic productions in the area.

Spectre, *Bandidas*, Tourist commercial activities, Cinematographic productions and tourism

Deterioro de la función empresarial, debido al síndrome de dunning y kruger en el capital humano organizacional del centro de Coahuila

Impairment of the business function, due to organizational of dunning and kruger syndrome in human capital in the center of the state of Coahuila

Abstract

Syndrome or effect of Dunning Kruger (SDK), is characterized by the inability of the person to recognize his incompetence and ineptitude, this happens in areas of human laborer endeavor. It is a cognitive distortion that is reflected to perform certain activities, such a person believed to have much knowledge, even more than experts; in such a way that the less known to have the syndrome in question, you will have less ability to recognize your little knowledge and its limitation; as a result, unfounded confidence in itself, makes you believe that it is highly competent. This constraint, prevents the person to recognize their own incompetence. This study, takes place in the center of the State of Coahuila, Mexico, as an objective, is given to know that (SDK), It causes consciousness and effectiveness and show showing its effect in most organizations, causing inability to actual and underperformance in the results of the work at all levels, using a mixed-type research methodology; the contribution of the study would be to publicize and provide information about this syndrome, in the Organization and provide for their objectives.

Syndrome of Dunning Kruger, Cognitive distortion, Labor consciousness

Análisis cualitativo de la reacción al cambio de tres generaciones de empleados en la industria maquiladora

Análisis cualitativo de la reacción al cambio de tres generaciones de empleados en la industria maquiladora

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Abstract

This study analyzes with a qualitative design and a phenomenological approach the reactions to change of three generations of employees working in the maquiladora industry in Ciudad Juárez. The empirical study was conducted through the interview of 27 employees in 2019. From this analysis, five key elements emerged in the acceptance or resistance to organizational change: generational perception, perception of change, communication, impacts and impacts. Studies analyzing different generational cohorts and reactions to change have not been carried out in Mexico. The managers of the companies and academics could benefit from the results of this study and adjust the strategies of change based on the predicted behavior of the different generational cohorts. Given that this study focuses on employees of the maquiladora industry only, the size of the sample is small and limited to a geographical location. Additionally, the results can not be generalized to all companies. The qualitative method of interviews limits the possibility of generalizing its results. The analysis for future research is presented.

Organizational change, Generational cohorts, Maquilas

Hiperconectividad y psicoanálisis

Hyperconnectivity and psychoanalysis

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Abstract

Objectives: Tackling problems and prospects of psychoanalysis today, this was hypermodern hyperconnectivity and new technologies, since in the psychoanalytical clinic by the impact of the hyperconnectivity new symptoms occur today and it is need that psychoanalysis continue to give support to the mental suffering of human subjects. **Methodology:** Make a crossing of the new writings of psychoanalysis and subjectivity in this era, hyperconnected and hypermodern recovering the foundations of psychoanalysis which were established by Freud, namely, the unconscious, the transfer, the free association and demand and later worked on by Lacan, who also addressed the complications that arise in the subjectivity by the use of gadgets, complexities instructed by Lacan in *The Third* (1974). **Contribution:** Point out prospects and problems of psychoanalysis currently in this hypermodern era and hyperconnectivity, to think the psychoanalytical clinic with new symptoms and modalities, since today we are invited to enjoy in many ways and the Psychoanalysis enables us to not feel guilty for not enjoy, by virtue that in actual life there is an ethical duty to enjoy (Zizec 2006 / 2013).

Enjoy, Hyperconnectivity, Psychoanalysis

Ecosistema de emprendimiento y sus componentes, la situación actual en ciudad Obregón, Sonora

Entrepreneurial ecosystem and its components, the current situation in city Obregón, Sonora

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Abstract

The entrepreneurial ecosystem greatly favors people who wish to become entrepreneurs (Alba, 2015). The objective of this research is to identify the elements that make up the entrepreneurial ecosystem and how these are defined in Ciudad Obregon, Sonora. The type of research was descriptive, the object of study was the elements of the entrepreneurial ecosystem such as: (1) incubators, (2) financing, (3) government programs, (4) education and entrepreneurial training, (5) center of research and innovation and (6) institutions interested in entrepreneurship issues. The sources of information were secondary. The findings are presented in three sections, the first shows the elements of the entrepreneurship ecosystem according to different authors, the second section shows the current situation that Obregon, Sonora has in relation to the elements of the entrepreneurship ecosystem and finally in a third section an analysis of strengths, opportunities, weaknesses and threats was made. The report was the analysis of the current situation of Obregon in terms of entrepreneurship ecosystem and observation of a potential to work and ensure that each element is related, acting systematically, to participate as a whole independently but with cooperativity and flexibility.

Ecosystem, Entrepreneurship, Elements of the entrepreneurial ecosystem, Entrepreneurship ecosystem

Relación entre capacitación y desempeño en la pequeña y mediana empresa

Relationship between training and performance in small and medium enterprises

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Abstract

Objective: Analyze the relationship and influence of training with the performance of small and medium enterprises in Ciudad Obregón, Sonora, Mexico. To generate proposals for improvement. **Hypothesis:** H1: The training and the elements that make up this, relate and positively and significantly influence the performance of the small and medium enterprises of Ciudad Obregón. **Methodology.** A quantitative methodology was used, it has a descriptive-correlational scope with a non-experimental design (Hernandez, Fernandez, and Baptista 2010) of cross-section (Creswell, 2009); Linear regression analysis and the method of ordinary least squares were used. SMEs from the commercial, industrial and services sector were studied in Ciudad Obregón, Sonora, with a non-probabilistic sample and at the convenience of 195 companies. The instrument covered the training and performance variables, with 70 items, a five-point Likert scale. **Contribution.** Improving the performance of the SME allows it to strengthen itself as an organization, which will contribute to its permanence in the market, therefore maintaining the sources of employment, which is currently very difficult; and the mechanism to achieve this is training, especially if there is a connection with universities through professional practices.

Training, Performance, SME

Historia de vida que empodera

Life story that empowers

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Abstract

This research presents the results of a study conducted with Life History, here is the process of empowering a ten-year-old girl, through the development of her Emotional Intelligence. The objective was to: Analyze the school and family context to obtain the variables with the greatest influence in achieving their empowerment. The strategy used to achieve this is indicated, which involved the school and the family. The research question was posed as follows: How is the process of empowering a ten-year-old girl and what influences her to achieve it? The data collection was through semi-structured interviews which were triangulated to validate this research. The scientific contribution is the identification and knowledge of the dimensions and variables that most influence the empowerment of the girl. It is concluded that two of the most important variables for the achievement of the above, are those related to the dimension of personal competence, which strongly collaborates in the empowerment of this elementary student.

Child empowerment, Emotional intelligence, Achievement strategies

Maltrato en adultos mayores en Saltillo Coahuila

Elder abuse in Saltillo Coahuila

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Abstract

The present work was carried out by teachers of the Universidad Autonoma de Coahuila, its objective was to design an instrument to evaluate the abuse of the elderly in the city of Saltillo, Coahuila, to implement with the results obtained, social service programs that provide information on violence in the elderly, identify behaviors of the aggressor, observer and victim, as well as know their fundamental rights and institutions to go to. The instrument was applied at the Geriatric Hospital, 35 older adults participated, aged between 60 and 90 years. It was inspired by the Psychometric Validation of the questionnaire "This is how we get along in school", and the Questionnaire prepared by INAPAM and SEDESOL, of both instruments resulted in the adaptation consisting of 35 reagents, dispersed in 4 factors: physical, psychological, damage to the property and financial, and sexual harassment. The results show that there is abuse in this group, of 19%, although its manifestation is not very marked, if there is one, corroborating what other studies say that this health problem is silent, by the person of the third age by loyalty to family values or for fear of reprisals from the person who takes care of him.

Abuse, Elderly, Types of violence

El arte de la educación en México

The art of education in México

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Abstract

This article presents a vision of the relationship that can be established between education and art in our country, starting from the analysis of the objectives of teacher education and the role it plays in the educational process, presents a critical analysis of the intentionality of Basic education and teacher training. It is an intentional study of the role of the teacher in a country where the role of the educating State takes on the functions of designing, orienting, organizing and directing, through the school the destinies of the new generations, forming them in an educational process according to the interests and needs of. Objective: to identify the influence that the State exerts through education, in active teachers, in the training of teachers and in students of the different educational levels of our country. Methodology: qualitative documentary research, where different moments of teacher training are analyzed in the light of theory, educational laws and others related to the subject. Contribution: originate discussion points around the educational process and the State's aims in educational matters, from the training of teachers and their performance in the classroom as an agent not of transformation, but as a reproductive agent of the wishes of the State.

Education, Teacher training, Purposes

Remesas y migración en el municipio de Tecamachalco Puebla, México

Remittances and migration in the municipality of Tecamachalco Puebla, México

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Abstract

This time, the results of a survey applied in the Municipality of Tecamachalco, Puebla, Mexico, in which the target population is focused on families with one or more people who have migrated to the United States, are presented. The methodology is based on the collection of financial information on family remittances per Federal Entity with data from BANXICO (Bank of Mexico) and on the application of 478 questionnaires in a fieldwork. Also, the Migration Intensity Index was consulted at the National Population Council (CONAPO for its initials in Spanish) to analyze the number of families in Tecamachalco that receive remittances. The contribution of this project lies in the information obtained in the phenomenon of labor migration in the state of Puebla, which ranks sixth in receiving family remittances and whose main labor market in the United States takes place in the Service Sector primarily. The states where Tecamachalco migrants mainly reside are: California, Texas, and New York, and the border cities with the greatest recurrence are: Tijuana, Nogales, Agua Prieta, Nuevo Laredo, Reynosa, and Piedras Negras. Similarly, information was also obtained on the impact of remittances as well as their use and shipping method.

Migration, Remittances, Frontier

Rasgos de personalidad vinculados a la percepción del rendimiento académico de estudiantes universitarios de música

Personality traits linked to the perception of the academic performance of university music students

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Abstract

This research addresses personality from the work developed by The German psychologist Hans Jurgen Eysenck and his personality questionnaire and academic performance is generated from ideas developed by Vargas where they approach individual, family and institutional are taken into account. The goal is to know the underlying relationship between personality and perception of academic performance in music students at the bachelor's level. Quantitative, non-experimental, transverse design characterizes the population and correlates the information collected. The methodology is a correlation Moment Product of Pearson, among the topics already described. The contribution is to provide an objective study on what this particular group considers with regard to its academic performance and how it affects the personality of the students. This opens up a different spectrum in terms of the emotion and sensitivity of subject behaviors and educational context.

Perception, Personality, Academic performance

Estrategias para implementación de control operacional para la rentabilidad de empresa transportista

Strategies for implementation of operational control to the profitability of carrier

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Abstract

It is a study that aims to design strategies for implementation of operational internal control to improve the profitability of a company dedicated to transportation and land distribution of materials and goods. The research methodology is qualitative, phenomenological that Taylor and Bodgan (1987) point out: that is, understanding on a personal level of the motives and beliefs that are behind people's actions, which generates descriptive data, is a case study. A first phase of theoretical postulates of Mauleon, Perdomo, Duncan, Sistema de Administracion Tributaria (SAT), Ley del Impuesto sobre la Renta (LISR) that are part of the theoretical construct. The second phase is a field research in the transport company located in the industrial corridor, it is cross-section of the 1 January to 27 June 2019. It was considered a nonrandom sample applied 20 drivers, 4 administrative assistants and accounting and administrative manager, who, through their own experience identified the perception of the situation faced by the company. The research contributes to show the situation of the transport company and distribution that lives in Mexico and facing obstacles to its development and strategies to extrinsic factors such as, the new policies with the alien, the increases on fuels, The thefts and insecurity and the external process of corruption, which affects the day-to-day work of the carrier, but that in addition, a society in constant conflict makes people accustomed to the lack of commitment and loyalty to form an organizational culture of acts and practices not loyal. The suggested strategies is to correct processes and develop budgets for a better operational control, which detonates the profitability of the organization. The chain of external threats breaks with the internal strategies that strengthen enterprises, restructuring and adapts to a current reality in which the state of alert is the day-to-day

Strategies, Control, Profitability

Propuesta de turismo inclusivo para adultos mayores en la región de las altas montañas

Proposal of inclusive tourism for older adults in the high mountains region

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Abstract

Given the global investment problem of the population pyramid, the increase in older adults can be considered as an alternative to generate new proposals for tourism activities aimed at this segment, regarding their needs, interests and desires. In Mexico, according to INEGI (2015), the aging rate is 38% with an average age of 27 years. This alternative will have a social and economic impact on the sector, making the necessary proposals regarding the adaptability of some elements of the tourism system of the municipalities involved that make up the High Mountain Region. To do this, depending on the research objective, the methodology that was applied is mixed, consisting of an exploratory research (where various documentary sources and secondary sources were used), which served to contextualize and point out the object of study, A descriptive study was also carried out, through the application of 384 surveys that served as a preliminary tool to generate statistics and graphs that concentrate the main indicators related to the study objective. The contribution of this study is the inclusion of older adults with a social and economic impact in the region.

Inclusive tourism, Older adults, Tourist activity

Por qué viajan o no viajan las personas: Un estudio exploratorio

Why do people travel or don't travel: An exploratory study

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Abstract

Social tourism is a branch of tourism that seeks to ensure that all people have the opportunity to travel, and in this way create a development in the community where such programs are carried out as well as increase domestic tourism, and thereby fulfill the universal right to have vacations. In Mexico, not everyone has access to enforce this right since travel has become an activity only for a group of people. There is not enough information in studies about the Mexicans travel motivations, which is why it is important to identify the reasons that lead people to travel or what limits them to travel. This research is quantitative, exploratory and descriptive, where 300 subjects were studied, using the survey as a method of collection which resulted that most of the subjects travel to obtain new experiences, for recreation, to learn about new cultures and they do not travel due to lack of time and money, important data for the creation of new tourist offers that are available to all Mexican families, looking for the introduction of social tourism to Mexico.

Tourism, Quality of life, Development

Las sociedades de solidaridad social como oportunidad para la creación de un fondo para los trabajadores

Social solidarity societies as an opportunity for the creation of a fund for workers

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Abstract

The solidarity of social solidarity constitutes with the contributions of the partners to carry out purposes such as the creation of sources of work and social provision for the workers of the organizations. Using the descriptive methodology that shows the investigation of the benefits obtained by assimilated workers so that they have the social security part. It contributes to promote social, economic and cultural development within organizations for the welfare of workers and beneficiaries. The company is constituted with a collective heritage, whose partners must have legal personality, that is, be natural persons with Mexican nationality whose economic activities are especially ejidatarios, comuneros, landless peasants, parvifundistas and persons who are entitled to work. And that in this area is this research topic; that a portion of its withholdings be allocated to a social solidarity fund justifying being part of a social provision for salaried and salaried workers

Social solidarity, Salary, Background

Interculturalidad y masculinidades

Interculturality and masculinities

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Abstract

Objective.Analyze how the “Nuestra Señora del Carmen” youth group, from Nuevo Carmen Tonapac, in the municipality of Chiapa de Corzo, Chiapas, are carriers of traditional musical knowledge belonging to the Zoque culture.**Methodology.**Documentary research revolved around Ethnomusicology, Cultural Studies, Intercultural Communication, Gender Studies that together, allowed to explain and support the research topic; also, the application of unstructured and structured interviews, questions were asked from the gender perspective, to identify sexist behaviors of these young people, including their vision towards their masculine sex and also towards feminine sex, the stereotypes of the community for the identity construction of a man and a woman, and if they would allow women to participate in their musical group.**Contribution.**Disseminate the work of traditional musicians because they have the gift of understanding the music of the drum and reed, in addition to an important work in ceremonies, rites and festivities, are responsible for cheering the festivities.

Identity, Traditional musicians, Masculinities

Análisis sobre las aspiraciones educativas de los jóvenes de bachillerato

Analysis on the educational aspirations of the young people of bacculaureate

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Abstract

In this article we study the academic aspirations of the students and their relationship with the academic level of their parents. The total number of subjects was 377 young people of upper secondary level. The study was carried out in a quantitative approach with a descriptive, non-experimental and cross-sectional scope. The Questionnaire for the Evaluation of Academic Goals (CEMA-II) was used. The results show that the main reason for the students to enter the high school level was to continue their professional studies 85%, followed by why I need to work 5% and 4.2% say that they did so because of pressure from their parents or guardians. Depending on the academic level of the parents, 27% indicate that their mother has a bachelor's degree, 15% master's degree, 2% doctorate, 25% upper secondary, 22% secondary and 6% primary. In correspondence with the father, they indicate that 26.5% have a bachelor's degree, 16% master's degree, 3% doctorate, 22% average superior, 18% secondary and primary 9%. It is important to work from the tutoring individual goals to guide students regarding their interests and motivations, in relation to the content in class is substantial to work with meaningful learning.

Goals, Performance, Schooling

Conductas de riesgo psicosocial en alumnos del Plantel 01 (Colegio de Bachilleres de Chiapas)

Behavior of psychosocial risk in students of the Plantel 01 (Colegio de Bachilleres de Chiapas)

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Abstract

The present quantitative research addresses, at a comparative descriptive level, the issue of psychosocial risk factors at the high school level of school center 01 “Tuxtla Terán” of Colegio de Bachilleres de Chiapas (COBACH) located in the city of Tuxtla Gutiérrez; making a comparison between groups of regular students with irregular students. The intervention is a product of the inter-institutional work of the academic body “education and contemporary social processes” of the Universidad de Ciencias y Artes de Chiapas (UNICACH) and of the Procurator's Office of Human Rights (Directorate of Attention to Victims) attached to the General Procurator's Office from Chiapas. It tends to be thought that repetitive students are predisposed to risky behaviors and, in the words of the educational authorities, to be objects of low academic performance, school failure or dropout. Psychosocial risk behaviors tend to be increased in adolescence, with age being an indirect factor in transgressive or criminal behavior that may put their physical and mental health at risk. For example, in the use and abuse of toxic substances such as drugs, alcohol, suicide attempt, antisocial behavior, risky sexual behavior or teenage pregnancy.

Risk factor, Risk behavior, Adolescent

Una propuesta didáctica de las ecuaciones diferenciales en el contexto de la ingeniería de control

A didactic proposal of differential equations in the context of control engineering

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Abstract

The present work, tries to give account of the investigations realized in the context of the mathematics in the engineering of control, specifically in the area of the electrical and electronic engineering. Therefore, this article shows the poor application of mathematics, in the industrial environment, specifically in differential equations, the relevance of the subject of study within the area of Educational Mathematics is justified and the background is described. Necessary, to make a didactic proposal of the differential equations in the transmission lines. Research is supported by constructivism, meaningful learning and mathematics in the context of science. Which is the result of investigating how deep the applications are in the industrial environment, according to studies conducted in different companies in the Tula-Tepeji region, with the help of an exploratory research instrument applied directly to engineers in practice. Therefore, it is considered pertinent to highlight that this work is the result of the line of research cultivated by the academic body.

Educational Math, Math in Context, School Math Speech, Didactic Proposal

Desarrollo de aplicación didáctica para el desarrollo de pensamiento algorítmico

Development of didactic application for the development of algorithmic thinking

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Abstract

The purpose of the computer programs is to solve specific problems using a set of instructions composed of operations, logical decisions and repetitive cycles. The teaching-learning process uses in the early stages the Flow Diagrams that allow the student to graphically represent the sequence of a finite set of instructions but that is insufficient to learn to program due to the lack of experience and knowledge of the students in the area of programming, which consequently increases the rates of failure or attrition during the first semesters of their university education in the engineering career in computer systems, so it is necessary to develop additional resources for students to generate algorithmic thinking gradually. The methodology followed for the development of the project is based on the cascade life cycle with subprojects; Finally, with a group of 35 students, at the beginning 24 (68%) of them presented difficulties to analyze and program, using the didactic software as support in classes was reduced to 8 (22%).

Algorithmic Thinking, Flow Diagrams, Didactic Software

Equipo didáctico para la enseñanza de equilibrio en la materia de física metodología de campus viviente

Didactic equipment for the teaching of equilibrium in physics living campus methodology

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Abstract

Abstract- The work of teaching experience exposes a methodology of development for prototype used for evaluation, in the topic of reactions of the subject of static, imparted in Institutions of Superior Level as in the particular case of the Universidad Tecnológica del Norte de Aguascalientes, and y the Instituto Tecnológico de Pabellón de Arteaga, at present new challenges in the education are had, reason why the teacher must innovate in his practice applying methodologies of evaluation, designing equipment and using software. These methodologies can be unpublished or proposed by different authors (Carmona, 2014; 2016b), a complementary activity is the exchange of ideas and projects with teachers from other institutions nationally and internationally to evaluate evaluation methodologies. The use of TIC'S in the classroom has been raised by various authors (Ezquerro 2011, 2012), the equipment designed should show the values of the reactions, have an acceptable accuracy according to the strain gauge used, the costs must be accessible, the project must be scalable and portable, the equipment was evaluated by means of an R&R test to guarantee its correct operation before applying it in the practice of the subject.

Indicadores de deserción escolar y su posible atención a nivel medio superior: Un caso de estudio

Proposal for follow-up to practical activities in a higher-level presential course

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Abstract

Currently it is necessary for graduates of the upper middle level to develop skills, abilities, attitudes and aptitudes that allow them to perform in the next stage, whether work or academic, to which they are inserted, once their high school is finished. At the administrative level in every educational institution there are minimum standards to be met and they are evaluated by external certifiers, as they correspond to each educational center. These indicators are grounds for punitive actions against the institution itself, but beyond these situations there is a more relevant concern for the authors of the present work: school dropout, since as is known according to the regulations of each institution each student has 3 or 4 opportunities to pass the courses, after which the student is permanently withdrawn from the educational center. Within the institutions, will it be possible to implement strategies to combat school dropout?

Evaluation, Attrition, Indicators Projects

Desarrollo de la tutoría en la modalidad a distancia: Implementación de un proceso de seguimiento, control y evaluación

Development of tutoring in the distance mode: Implementation of a monitoring, control and evaluation process

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Abstract

This study identifies the factors and aspects that can be improved during the tutorial accompaniment towards the terminal efficiency of accountancy and administration students registered in the distance education system of the DACEA UJAT, under a qualitative-quantitative approach method. This results in a proposal based on the convergence of two types of tutoring given to the student, through the implementation of a follow-up process for both face-to-face tutoring for students who are attended in the first year and a half in the Education Centers Distance located in the municipalities and those that are served through a web application for not having chosen that option to enter and their attention is completely virtual.

Virtual tutoring, Remote Education Teacher, Follow up Process

Propuesta didáctica para la comprensión, consolidación y aplicación de las principales técnicas de conteo en la resolución y comprobación de problemas de probabilidad

Didactic proposal for the understanding, consolidation and application of the main counting techniques in the resolution and verification of probability problems

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Abstract

The Teaching-Learning process is complex; First, the interest, and motivation of the student is important. In addition to the above, the social and cultural context can have a positive or negative influence on learning in the area of mathematics and particularly on the notions of probability. The present work presents a didactic proposal that is supported by the use of computational tools. The objective of this proposal is to improve the understanding and fixation of concepts of counting techniques through the use of visual and descriptive forms (appropriate tables and codifications). Real-life examples are presented, so that the student can build formal definitions that allow generalizations under mathematical rigor. For the design of the teaching strategy we rely on constructivist and learning theories under didactic situations. These teaching models have great educational potential because they encourage reflection and analysis. In this way the student acquires skills in the approach, resolution, interpretation and verification of probability problems. In a second stage it is expected to experiment with the application of this proposal in the classroom. In this way, difficulties in teaching-learning processes can be identified and innovative teaching strategies can be proposed.

Probability, Counting Techniques, Teaching

Apoyos para el aprendizaje de las matemáticas según apreciación de los estudiantes adolescentes

Supports for learning mathematics according to the appreciation of teenage students

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Abstract

This research identifies attributes of mathematical learning in the lifestyle of high school students, teaching skills and personal, school and family factors that potentiate numerical skills. The design is non-experimental quantitative, cross-sectional applied to a random sample of 423 students with a validated instrument (Cronbach 0.94). It has 14 signaling variables and 192 simple variables with three axes: mathematical learning, teaching skills and lifestyle, twelve complex variables: student behaviors, attitudes and emotions, in class, with homework, mathematical perception, time management and health-cares. Family-social aspects. Didactic-subjects and emotional evaluations and strategies regarding the teacher. Technologies for mathematics. The descriptive, correlational and multifactorial analysis is carried out with percentages and variability, in correlation with Pearson and by Communalities ($p = 0.5$). The results show important are: habits and tasks, activities and didactics, family organization and emotional relationships that intervene in personal learning. Highlights subjective and attitudinal variables towards studying, mathematics and family environment that potentiates learning or not. The contributions are: didactic-subject's methodologies of mathematics and one flexible multifactorial model of mathematical learning according to personalities and different ways of learning from students, which considers: perception and attitudes towards numerical abstractions, cognitive skills, classroom actions, teaching didactics and Social context.

Methodology, Learning, Mathematics

Análisis de los hábitos de estudio en dos grupos universitarios de microbiología alimentaria y su relación en el rendimiento académico por competencias

Analysis of study habits in two university groups of food microbiology and their relationship in academic performance by competences

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Abstract

Study habits are methods and strategies used by student to assimilate and acquire new knowledge and improve their academic performance. The habit requires three important elements knowledge, skills and the desire to improve, without forgetting that they require effort, dedication, discipline and motivation. The objective of the study was to know the relationship between study habits and academic performance in two first year university groups in a Food Microbiology competition. A questionnaire was used to evaluate study habits according to techniques, organization, time, distractor and efficiency in academic performance. The results showed that there is a relationship between study habits and poor academic performance. This information helps to take actions to improve learning techniques and environments that help correct and resolve the deficiencies that arise in the daily work of the teacher.

Study habits, Academic performance, University student

La Profesionalización de Estudiantes Universitarios, a través de acciones del colegio de contadores públicos, caso: UII, UTT, CESUR de la UAS

The Professionalization of University Students, through actions of the college of public accountants, case: UII, UTT, CESUR of the UAS

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Abstract

The College of Public Accountants of Baja California A.C is a civil association affiliated with the Mexican Institute of Public Accountants which was constituted through the protocol act dated July 18, 1958 following the regulations of the Civil Code of the state of Baja California. It is an organization that through its diverse regulated commissions have conjugated the academic improvement of the students in the Accounting program of multiple educational institutions dedicated to higher education in Tijuana Baja California Mexico, guiding the future professionals of the career into an adequate environment for their growth and consolidation of the standards of educative quality. In the presented work, the results such as that students have improved their academic achievements adhering freely and voluntarily to this collective body elevating their sociocultural level. This causing positive impact in the terminal efficiency and the placement in the labor market. They describe occurred actions through the Government Commission of Accounting that has caused an impulse in the students to develop favorably their integral formation, promoting them in theoretic workshops offering dictated materials fortifying the conditions in order to endorse various stages from social services, the professional practices where they provide their educative knowledge to solve company problems. Lastly, they are promoted, among the collage, the labor insertion under appropriate conditions that will better their economy and promote the students to participate in their communities once obtaining the experience of the accounting profession. This alignment allows for the Educative Institutions to count on enough evidence in order to allow the process of evaluation and accreditation in a solid and sustainable manner. Allowing the students to move forward hand in hand with the professional practices with ethics and values that the College of Public Accountants of Baja California A.C promotes.

Educative Program, Accounting, Integral Formation, Competition, Labor Insertion

Desarrollo de herramientas para favorecer el aprendizaje del inglés

Development of tools to promote english learning

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Abstract

The objective of this work is the creation of tools for learning the English language using augmented reality and humanoid robots, in order to interact with people autonomously in the learning process. For this, the contents of the English language programs and programs at the higher level were reviewed, language area heads and teachers were interviewed, in order to finish cable issues in language learning. At present, having a second language in the field of education today is considered a necessity. Currently, higher level institutions use English language learning techniques based on books, flash-cards, slides, audios, videos, etc. From the above it is proposed to develop learning tools capable of interacting with users autonomously. This leads to solving major learning problems using human computer and robotic human interaction. What is presented are two tools for learning the English language, the first based on augmented reality and the second using Nao humanoid robot.

Autonomus, Learning, Tools

CMMI aplicado en el aula: Aprendizaje basado en proyectos

CMMI applied in the classroom: Project-based learning

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Abstract

This article shows the use of good practices of the CMMI quality model as part of the work methodology applied in the classroom and with the project-based teaching-learning model. The first step was the definition of the work methodology, as already mentioned adopting good practices of the CMMI quality model. It continues with the definition and integration of the collegiate body who play the role of expert leaders in their work areas and define the characteristics that form the integrating project. Finally, work teams were formed for the implementation of the methodology in a real scenario, supported by technological tools to facilitate its management. The contribution was to propose a work methodology that offers an improvement in the teaching-learning process experience, increases the level of knowledge and that favors the labor inclusion of graduates.

CMMI, Project-based learning, Quality models

Proyecto cultural para la adquisición de competencias laborales en ingeniería industrial

Cultural project for the acquisition of labor skills in industrial engineering

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Abstract

Integral training in university degree allows the full development of the potential of the human being; In addition to academics, personal growth must be cultivated, including culture and environmental care. So teachers should conceive learning activities that promote this development. The experience of an educational intervention that promotes the generation of labor competencies using a cultural project, intertwining the subjects of economics, sustainable development and metrology and standardization, based on investigation into the learning styles of university students of Industrial engineering, they presents a preference to the theoretical style, followed by active and pragmatic, so a didactic strategy was carried out that promoted the care of the environment, the traditions of the day of the dead, teamwork, cost analysis, the measurement of the structures linking the theoretical, practical and attitudinal learning, with the production of a Calaca whit reuse material that had bone proportions according to its dimensions. The participation of the students in the cultural event with their proposals of Catrinas showed their competences of the subjects.

Labor competence, Teaching strategies, Higher education

Efecto del consumo de hidratos de carbono en los deportes de resistencia

Effect of carbohydrate consumption on endurance sports

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Abstract

The aim of this review is to summarize the effects of carbohydrate consumption on endurance sports. Due to the promotion of physical activity by health authorities, participation in endurance sports is increasing. Regardless of the level, athletes look for ways to optimize their performance through training and nutrition. In consequence, research in the field of sports nutrition has focused on those strategies that can improve performance. Fatigue during prolonged exercise is associated with depletion of muscle glycogen and reduced blood glucose concentrations. Therefore, carbohydrate feeding during exercise has shown that it can improve capacity and performance, because it helps maintain blood glucose levels, as well as, increase carbohydrate oxidation rates and preserve glycogen, finding better results when are consumed multiple-tranportable carbohydrates for absortion (e.g., fructose and glucose), since in this way is possible to increase absorption rates, gastric emptying and fluid absorption, in addition to decrease gastrointestinal distress.

Endurance sports, Carbohydrates, Sport nutrition

Preservación de tradiciones en el ámbito culinario para fortalecer la sustentabilidad turística en Xicotepec mediante la capacitación académica

Preservation of traditions in the culinary field to strengthen tourism sustainability in Xicotepec through academic training

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Abstract

The project documents the research carried out on the traditional dishes of Xicotepec, because, although it has the name of Magic Town and this encourages tourism, little is the impact it has had for the gastronomic sector, being an attractive a unique gastronomy to those who are looking to know Mexico through its food. A cuisine that, due to the constant migration and globalization, it is being lost little by little, for this, economic entities and inhabitants of different places that prepare food (700 samples) were surveyed, with visits and practices with the traditional cookers of each community. Based on the analysis and interpretation of the information, favorable results were obtained with respect to the cuisine, its ingredients and ways of preparation, and an anecdotal recipe book was prepared in order to train the students of gastronomy of the Technological University of Xicotepec de Juarez, high school students with food training and students of the Centro de Capacitación y Desarrollo (CECADE), in order to promote culinary preservation and interest in local gastronomic research to achieve specialization and improve the preparation of typical dishes of the region in their future work centers.

Tourism, Gastronomy, Preservation

Discriminación laboral de las mujeres en las Pymes del Sur de Sonora

Labor discrimination of women in SMEs in Southern Sonora

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Abstract

Labor discrimination and that which afflicts women in particular, slows the development of society and does so in a serious way in a country like ours. Taking into account the above, the following question arises: What is the main cause of employment discrimination for women in SMEs in Southern Sonora? The objective is to identify the causes that influence the discrimination of women in SMEs in the South of Sonora. The method used was descriptive of quantitative type, with a sample of 250 working women from the south of Sonora. The results obtained were that labor discrimination for women with children, arguing that they miss work because of caring for their children, because of company policies and because of mistaken ideas held by the chiefs in charge of women with children. Concluding that the employment discrimination of women is a situation that should be cause for concern due to the serious consequences they cause. He can not contribute to the sustenance of the family, the personal formation of the children and that therefore can be causes of negative deviations of personality with repercussion to the society.

Discrimination, Labor Discrimination and PYMES

Copropiedad como estrategia fiscal para atenuar la carga tributaria en México

Co-ownership as a fiscal strategy to mitigate the tax burden in Mexico

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Abstract

The objective of this investigation is to describe the obligations and fiscal procedures of Article 92 of the income tax to present a case in co-ownership. Being understood as Co-ownership, the ownership of a thing shared with another or others. The methodological procedure will be carried out when an individual rents a real estate property to a legal entity or company, the income received by the individual on a monthly basis and the latter distributes it to their co-owners according to the percentage assigned in the lease agreement of the real property. How to process a case study in co-ownership?. This regime is little used due to taxpayers ignorance because the scarce information established by law. This investigation will be presented with a legal and fiscal focus, according to Article 5 of the Constitution: no person can be prevented from engaging in the profession, industry, commerce or work that suits him or she while being lawful. In the case study in co-ownership the benefits of the fiscal strategy resulted in the decrease of ISR when distributing the income among the co-owners and the authorized deductions that the co-owners can choose to deduct in the annual return, followed by the spouse.

Co-ownership, Tax Strategy, Benefits

Necesidad de un gobierno abierto en México

Need for an open government in Mexico

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Abstract

The present work consists of an analysis about the conditions that are necessary for an open government, which are fundamental for our system to function as such and be carried out as that livelihood that will favor the development of our nation. Open government and democracy are two sides of the same coin since the measures to implement it constitute a new way of approaching citizens, a revolution in the way of using information from public administrations or even a platform in which citizens become the true protagonists of democracy. The objective of this work is to demonstrate that Mexico needs to evolve towards an open government. The foregoing will be done through documentary research and international comparison. I believe that this work will contribute to the understanding of what an open government is and the importance in our country of transiting at once to this type of government.

Open government, Democracy, Evolution

La relación entre la captación de ingresos fiscales municipales y los recursos derivados de fuentes no tributarias tanto locales como externas en México

The relationship between the collection of municipal tax revenues and resources derived from both local and external non-tax sources in Mexico

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Abstract

Municipal public revenues are classified as tax and non-tax. In this work, the relationship between the income that the municipalities receive through taxes and the rest of the components that integrate the total income is studied to establish to what extent the obtaining of resources whose origin is of non-tax origin affects the generation of local tax revenue. A data panel consisting of 310 observations is used for each variable and a multiple regression model with fixed effects is used considering financial information of the 31 municipalities that are capitals of the federal entities in Mexico for the period 2008 - 2017. The results suggest that resources from federal and state transfers have a negative impact on the income levels obtained through municipal taxes. Likewise, the negative localized relationship between the contracting of public debt and the own fiscal resources could suppose a relaxation of the municipal collection policy. Finally, data on other income derived from local sources of non-tax origin such as rights, products and uses show a negative effect on the collection of income from tax collection.

Municipal income, Local taxes, Public finances

Seguridad e higiene en las empresas de la zona norte del estado de Guerrero

Health and safety in companies in the northern area of the state of Guerrero

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Abstract

Every Physical or Moral Person that develops a business, Services or Industrial activity is obliged to comply with legal provisions in matters of Safety and Hygiene with its workers, which guarantees at all times the health, well-being and preservation of human life, in order to prevent accidents, occupational hazards and occupational diseases that may occur during and after your workday. The objective of the present investigation is to make a diagnosis of the companies of the North Zone of the State of Guerrero, that when hiring workers comply with the labor and social security laws in their organizations (Office, workshops, production area, machines, with In order to avoid the payment of fines and sanctions by the Ministry of Labor and Social Welfare and constituent capital by Social Security, we thank the Technological National of Mexico campus, Instituto Tecnológico de Iguala, for the financial support and facilities for the completion of this Research.

Safety, Hygiene, Labor laws, Accidents at work

La compensación de contribuciones a partir de 2019. Compensation for contributions from 2019

Compensation for contributions from 2019

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Abstract

This material seeks to expose critically the restrictions for 2019 compensation for contributions. To do so, is a technical analysis of the reform included in the law of Federation income for this year and its comparative textual with article 23 of the Fiscal Code of the Federation as it was known until 2018 and today yet, as well as the reform proposals driven by some political groups; using a method deductive and documentary which describes the compensation and the accreditation of contributions from its semantic and legal nature, the motivations of the legislator to make changes in this area and the implications of it done at a different from the own Fiscal Code of the Federation law. The topic addressed in this way, aims to contribute to the fiscal doctrine, nurturing of more contemporary aspects to and glimpsing the tendency which expected the rest of this administration in terms of fundraising of contributions.

Compensation, Accreditation, Contributions

El proyecto BEPS y la planeación fiscal

The BEPS project and the tax planning

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Abstract

Tax planning seeks, through the application of the law and other sources of law; reduce, eliminate or defer the payment of contributions; under this scheme, it is a lawful activity which constitutes a right for every taxpayer. However, the tax authority does not share this consideration and see decreased revenues as a result of these practices, describes them as illegal. To take out this type of strategy on a large scale, multinational enterprises have managed to reduce their tax burden, especially in developing countries; for this purpose, members of the OECD and the G-20 countries undertaken a series of actions known as "Project BEPS" (Base Erosion and Profit Shifting), in Spanish Base Erosion and location of utilities. This material is intended to expose the legality or illegality of fiscal planning, the contents of the BEPS project and the reactions of Mexico in this regard; in an analytical, critical and purposeful way through of the documental available sources, using induction meanly. By the way, try it give a general panorama of the theme, providing elements of judgment of wich the reader can support this position.

Legality, Planning, Evasion

Antecedentes de la cultura tributaria en México

Background of the tax culture in Mexico

ANDRADE-OSEGUERA, Miguel Ángel, PAREDES-BARRÓN, Adriana, BÁRCENAS-PUENTE, José Luis y SILVA-CONTRERAS, Juan

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Abstract

Paying taxes is usually a cumbersome process for citizens and, sometimes they resist complying with the obligation to contribute to public spending, not knowing clearly where these payments are going to end and the lack of a tax culture for taxpayers incur administrative failures. In order to strengthen the Tax Culture in the country, it is required that the population have the knowledge on the subject, and a way to acquire said knowledge, is through history, understanding the importance of the subject and tax responsibility. In the present work, an analysis of information on the history of tax culture in Mexico is carried out, which of the guideline of knowing the economic, financial, social and political situation of our country, generating knowledge about fiscal citizenship, and that serve as a basis for understanding why it is important that citizens contribute to the State, Federation and Municipality. In the same way, through research, contribute to the generation of knowledge about the importance of paying taxes and strengthening values, which allow generating a culture that, when it is necessary to contribute, is knowing that it is for the benefit of society itself and its economy.

Tax culture, Taxes, Contributions

Efectos de la transición al RIF de microempresas de la ciudad de Valle de Santiago, Guanajuato

Effects of the transition to the RIF of microenterprises in the city of Valle de Santiago, Guanajuato

GARCÍA-PICHARDO, Sandra Ivette, BÁRCENAS-PUENTE, José Luis, SILVA-CONTRERAS, Juan y MONCADA-MORALES, Jorge Luis

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Abstract

As a measure to reduce tax evasion and informality, the Fiscal Incorporation Regime (RIF) arises with the 2014 tax reform, which generated a radical change in tax obligations and in the way taxpayers must comply, a situation that It mainly affects micro and small businesses, so this work aims to identify the affectations and benefits derived from the incorporation into the RIF of micro-enterprises in the city of Valle de Santiago, Guanajuato; It is based on a qualitative study, applying the in-depth semi-structured interview technique to 30 taxpayers who have been taxing in the RIF since January 1, 2014. The main results indicate that the tax reform is not entirely negative, the intention of the government of reducing informality has been met, however, the execution has setbacks, as small business owners do not have a sufficient fiscal culture or technological preparation to fulfill their obligations on their own, in addition to the fact that the increase in operating expenses represents a strong load for companies, a situation that places them at a disadvantage with respect to their competitors.

Fiscal Incorporation Regime, RIF, SMEs

Responsabilidad social empresarial como productora de ventajas competitivas

Corporate social responsibility as a producer of competitive advantages

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Abstract

Currently, a new company is claimed that includes the principles of sustainability and results in its actions, generating satisfaction for all stakeholders. Corporate social responsibility (CSR) seeks to create a balance between economic benefits and social welfare directly impacting various operational levels. This analysis concludes that companies must stop viewing CSR as an additional cost, since they can obtain sustainable competitive advantages by developing proactive strategies, based on the possession of certain resources and capabilities, because they can innovate to be socially responsible, increase their productivity and expand their markets in search of new growth opportunities using as a competitive strategy various social responsibility programs that include the participation of their own employees and that these programs are for the benefit of society in general, such as afforestation campaigns, assistance or prevention programs for various social health programs, promotion of youth entrepreneurship, technology products, national and international travel, etc.

Responsabilidad social empresarial, Ventajas competitivas, Bienestar social, Sostenibilidad

El efecto financiero y social que causa la compensación universal al fisco mexicano como medio de extinción de una obligación

The financial and social effect that causes the universal compensation to the Mexican Fisk as a medium of extinction of an obligation

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Abstract

The financial and economic impact on taxpayers with the entry into force of the amendment to article 25 section VI subsection a) of the Federation's Income Law in 2019, by means of which the universal compensation of taxes is eliminated, It has discouraged the causes, it has had an impact on the growth of 0.002 (zero point, zero, zero two percent) of the gross domestic product of the economy in the year of 2019, which was affected by the increase of: \$ 130,500,000,000.00 percent thirty thousand five hundred million pesos in the last three years, due to the application of the extension of obligations and which represented 48.4%, compared to two thousand fourteen, have shaken the administration headed by Andrés Manuel López Obrador, to the Ministry of Finance and Public Credit and to the Bank of Mexico, this without dimensioning that some companies would take the path of fatigue and opt for b use the protection of federal justice, as in the case of the company Rex Irrigation Zacatecas, S.A. from C.V.

Affectation, Increase, Protection

Análisis jurídico a la iniciativa de ley para regular las instituciones de tecnología financiera y sus efectos en México

Legal analysis of the Law initiative to regulate financial technology institutions and their effects in Mexico

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Abstract

On October 10, 2018, the decree initiative to issue the Law to Regulate Financial Technology Institutions was presented to the Senate. The purpose of this Law is to grant legal support to financial services within the new technologies, the analysis of this Law becomes crucial to understand the new economic and business dynamics in our country. Goals. The primary objective is to unravel the authentic ratio legis of this new Law from a literal interpretation and attached to legal formalism. The method used for this dissertation is composed of a logical-legal analysis of deductive type to find the true meaning that the legislator intends to give it and its motivations to create this regulation. It is expected that this analysis will contribute to a better understanding of the Law and its contributions in the social and economic aspects that will lead to a relatively short period of time.

Financial technology institutions, E-commerce, Crowdfunding, Cryptocurrencies

La carencia de valores, una de las de las causas de la deficiente recaudacion fiscal en México

The lack of securities, one of the causes of the deficient tax collection in Mexico

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Abstract

This work is inspired by explaining as far as possible with another perspective the fiscal problem of Mexico. Addressing issues such as civic culture and customs of Mexicans regarding optimism and collective pessimism and how it influences the development of new ideas or changing social habits, all to offer a first approach to the fiscal problem of Mexico. In fact, in Mexico it is very difficult to define the real levels of evasion and it is inclined to analyze the fiscal problem from ethics and values, it is studied as this issue that has been somewhat neglected today and how it strongly influences the behavior of people, making observations from how it affects taxation. It analyzes the values practiced by youth and contrasts them with older generations, covering as citizens think about the issues surrounding fiscal issues. The results of the research are presented around the elements that influence the formation of the new generations, and it is analyzed whether these elements are positive or harmful.

Securities, Tax Collection, Ethics

Un nuevo enfoque en la enseñanza del derecho municipal: Seminario de gobierno municipal y seguridad pública

A new approach in the teaching of municipal law: Seminar on municipal government and public safety

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Universidad de Guadalajara, Centro Universitario de Ciencias Sociales y Humanidades, División de Estudios Jurídicos.

Abstract

Teaching Law should be done in a dynamic way, new concepts are incorporated such as new laws. Students and professors need to use new knowledge to make an analysis of the object of study. In the case of the municipality Law it is important to study the legal framework. The students should study new concepts in intermunicipal cooperation, federal policies, cooperation in conflict resolutions. The responsibility of the municipality authorities when they make decisions should be studied.

Teaching, Municipal Law

Un acercamiento al estudio de la sociología y el derecho

An approach to the study of sociology and law

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Abstract

This Article makes an approach to Sociology and Law. We could appreciate both sciences are related. 5 principal elements are commented which are Sociology, Sociology Law, Legal Pluralism, Social-Law Theory and the social law concept. Different paradigms are showed to make a social approach of law.

Sociology, Law, State

Análisis jurídico a la iniciativa de ley para regular las instituciones de tecnología financiera y sus efectos en México

Legal analysis of the law initiative to regulate financial technology institutions and their effects in Mexico

RUIZ-MEDRANO, Salvador Francisco, GUEVARA-SANGINÉS, Martha Leticia

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Abstract

On October 10, 2018, the decree initiative to issue the Law to Regulate Financial Technology Institutions was presented to the Senate. The purpose of this Law is to grant legal support to financial services within the new technologies, the analysis of this Law becomes crucial to understand the new economic and business dynamics in our country. Goals. The primary objective is to unravel the authentic ratio legis of this new Law from a literal interpretation and attached to legal formalism. The method used for this dissertation is composed of a logical-legal analysis of deductive type to find the true meaning that the legislator intends to give it and its motivations to create this regulation. It is expected that this analysis will contribute to a better understanding of the Law and its contributions in the social and economic aspects that will lead to a relatively short period of time.

Financial technology institutions, E-commerce, Crowdfunding, Cryptocurrencies

La sociedad del conocimiento para el desarrollo humano desde la perspectiva de distintos modelos educativos

The knowledge society for human development from the perspective of different educational models

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Abstract

Establishes the conceptual bases about the evolutionary process of the University and the analysis of the educational models in different regions of the world such as Medieval, French, English, North American, German and the University Model in Mexico, the intention of this is identify the kind of practices that help to continue in force, adapting to the current needs in terms of administration and teaching methods that respond to the reflection on the 21st century university and establish the bases for understanding the social evolution of the university and the knowledge societies that is gestating in a world where there are no longer borders that undoubtedly impact on human and social development.

University Education, Models Teaching, Background

Propuesta de modelo de gestión del conocimiento y su impacto en la eficiencia operacional. Caso Universidad Tecnológica de Tula Tepeji, área Mecatrónica

Proposed knowledge management model and its impact on operational efficiency. Case of the Technological University of Tula Tepeji, Mechatronics area

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Abstract

The main objective of the research is to propose a knowledge management model for the educational mechatronics program of the University, which allows to increase the efficiency and effectiveness of its operations, and / or, so that they can be really processes that allow to increase knowledge effective and practical for all staff of the institution, promoting the productivity and competitiveness of graduates and academic bodies, to be triggers of social and economic development in the region, also increasing the ability to respond to a globalized and dynamic world. The present investigation is framed within the type of descriptive investigation, under the modality of a feasible project, since a viable solution to a problem of practical type is offered; In addition, it is based on the non-experimental descriptive transectional design.

Knowledge management, Accreditation, Educational program

Estudio comparativo de la aplicación de los 10 principios de la mejora de la Calidad de Joseph M. Juran en Estadías de TSU de la UTNA

Comparative study of the application of the 10 principles of Quality Improvement by Joseph M. Juran in TSU Stays at UTNA

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Abstract

This document shows a shared study of the application of the 10 principles of Joseph M. Juran in Stays of Higher University Technician of the Universidad de Tecnológica del Norte de Aguascalientes. The objective of this study is to investigate what are the aspects that our students currently apply in the resolution of industrial problems according to the theory of Joseph M. Juran explained in the 10 principles to implement the improvement that the stipulation.

Quality, Continuous Improvement, 10 Principles of Joseph M. Juran

Implementación de catálogo de servicios y servidor KACE

Implementation of service catalogue and KACE server

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Abstract

The problem focuses on the lack of a service desk system, as well as a remote desktop system, causing the support process to have a longer period of time than due, and for IT not to focus on its main task. Not having credentials for some network computers or servers, causes optimal network performance to fail. In addition, the lack of updates to computers makes them vulnerable to external attacks. This implementation aims to achieve an ideal management of hardware and software assets, as well as how to determine how the technological infrastructure of the company is constituted, this by creating a catalog of services that encompasses each and every one of the services provided by the department, as well as the implementation of the KACE server. As a result of the Project, it is possible to increase the productivity of the department, minimize the support time, have fully identified the infrastructure, automate the support process, generating with this, a competitive advantage for the company. This optimizes the use of material resources, space and information security, it also makes the work more efficient.

Server, Security, KACE

Experiencia sobre el empleo de juegos en la educación superior

An experience on the use of games in higher education

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Abstract

The adaptation of board games as didactical instruments in superior education facilitates learning. With the objective of easing the learning process and incentivize participation various board games were adapted and combined with bacteriology topics. 33 students of third semester of the bachelor's degree in Veterinary Medicine and Zootechnics at the University of Guadalajara were selected to form work groups with the objective of selecting a board game and adapt it to the assigned thematic. Also, these games were reassigned to other work groups afterwards, with the finality that the whole class played with all the board games. To evaluate the learning rate in this dynamic project a pre-test and a post-test were realized; the degree of satisfaction was also measured through a survey using a Likert type scale. The students improved their learning exponentially ($p < 0.1.95 \text{ E-}08$). 91% of the sample considers the strategy useful and attractive and 83% of the previous sample felt motivated towards the topics. Of all of the board games used the most engaging one was "Headbands". Board games are tools which facilitate the learning process and motivate participation while making scholar activities fun and entertaining.

Boar games, Motivation, Learning

Responsabilidad social universitaria, diagnóstico en dependencia de educación superior

University social responsibility, diagnosis in dependence on higher education

PÉREZ-BRAVO, Julia, VILLARREAL-ALCALDE, Jorge Gabriel, ARELLANO-ROCHA, Francisco Javier y GONZÁLEZ-NERI, Aarón Iván

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Abstract

The purpose of this article was to diagnose in the responsible campus axis, the prevalent situation in the area of Social University Responsibility (SUR) in 2018, from the perspective of teachers in a Higher Education Unit (HEU) settled in the State of Queretaro, the methodology used was a study case with field research under the focus of a descriptive scope, the instrument used was a survey structured with the Likert scale, which was answered by 28 teachers from different Faculties with a total universe of 284. The founded results were that the HEU under the study is a dependence that is found in an advance *development* on their SUR practices, due to 35% of their indicators, were seen as not accomplished of deficient and a 45% were seen as being accomplished with the characteristics of being socially responsible, it is count that 20% of items were seen as initiatives half accomplished and that they have to do better.

Social university Responsibility, Campus responsibility, Unit of Higher Education

Creencias acerca de las matemáticas en los alumnos de mecatrónica de la Universidad Tecnológica del Norte de Aguascalientes

Beliefs about mathematics in mechatronics students of the Universidad Tecnológica del Norte de Aguascalientes

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Abstract

The purpose of this article is to analyze the beliefs about Mathematics in Mechatronics students of the Technological University of North Aguascalientes. The analysis of students' belief systems is important because they are part of the factors that can affect their performance in the subjects of the area of mathematics, both positively and negatively. This research makes an adaptation of the MRBQ questionnaire, which has been used and validated to analyze beliefs in students in previous research; This instrument allows us to analyze belief systems based on the analysis of four factors, which are what the research background shows as the most influential in students' belief systems. The main contribution of the research is the approach they have for the study of beliefs about mathematics in Technological Universities, as well as a first adaptation of the questionnaire used in the context of said educational subsystem, laying the foundations for subsequent research that allow Expand knowledge about beliefs.

Beliefs, Mathematics, MRBQ

Formación de equipos de alto rendimiento con estudiantes de ingeniería, a través de cohesión y madurez grupal y su aplicación en un proyecto específico

Formation of high performance teams with engineering students, through group cohesion and maturity and their application in a specific project

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Abstract

The following paper gathers the results of applying and interpreting behavioral theories from authors such as Skinner, Maslow, Herzberg and Mc Gregor, among engineering students, to further strengthen their interpersonal skills and abilities aiming at their later incorporation into EAR (high performance teams), evaluating them through their implementation in electric energy efficiency projects at home. The study is descriptive and experimental, which was developed with 68 IPOI students (Processes and Industrial Operations Engineering) from UTH (Universidad Tecnológica de Huejotzingo), measuring it through tests' answers given in the same literature about EAR maturity and union, thus stablishing a relation with the project result. Alliance, tracking and evaluating are an essential part of the method, which through the union (54.3%) and maturity (50.46%) grade results has acquired relevance in the correlation analysis with 0.7803 and 0.8197 values respectively in the electric energy saving. The project contributes to improve the didactic overview about student's integration in EAR through attitude, satisfaction of needs and willingness to exceed expectations, observing how they are grouped, discarded, regrouped and turned into followers.

High performance team, Behavioral theories, Method

Los estudiantes de nivel superior y la administración de su dinero

Higher level students and money management

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Abstract

The practice of scheduling the expenses to be made in a certain time frame is not practiced by many people, they do not know the amount of income received as well as the exact amount they spend. This situation also occurs in the higher-level students of the administrative-economic area. Public universities in Mexico, within the curriculum discard subjects related to personal financial administration. The objective of this work is to publicize the personal praxis of financial education that a group of students of the Public Accountant has. It is a qualitative study, based on the theory of Economic Psychology, in which a tool on personal budgets for students was designed, validated and applied. The main findings are: they leave out budget planning, they spend money than they receive, the highest percentage of expenses are made in leisure activities and the lowest in sport, even though administration, finance, accounting subjects are taught in their curriculum. Little or no application of the concepts acquired during their school career is observed. It is recommended to implement a self-financial education program for the individual.

Financial education, Budget, Economic income

E-Tutor, acompañamiento estudiantil digital en la Universidad Tecnológica del Sureste de Veracruz

E-Tutor, digital student support at the Technological University of Southeast Veracruz

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Abstract

The creation of the Institutional Tutoring Program and Tutorial Action Plan, arises as a strategy of the Technological University of the Southeast of Veracruz to contribute to the student support of young students of higher level. The purpose of the incorporation of information technologies is oriented to timely address the phenomena of desertion, lag and even disapproval observed. Starting from the literature review, analysis of institutional indicators, as well as the use of the methodology of systematization of experiences, it is possible to accommodate electronic student accompaniment, which allows evaluating results through the statistics presented, being favorable, thereby Decision-making is timely, identifying cases of failure to offer academic advice, mitigating up to 20% of school dropouts also highlights the innovation achieved in the management of information allowing its obtaining in real time.

Accompaniment, Tutoring, Digital

Comparativo de inserción a estadias del nivel TSU en Turismo de la UTRM entre el modelo BIS y tradicional

Comparison of insertion to stays of the TSU level in Tourism of the UTRM between the BIS and traditional model

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Abstract

Objective: In order to follow up on the research published in 2017 regarding the insertion of TSU Tourism: Hotel Area students in the process of the professional practicum within the productive sector, a comparative analysis of the traditional modality and the Bilingual, International and Sustainable (BIS) modality was carried out to identify the contribution from the students in the formation of human resources of the institution towards the hospitality industry. **Methodology:** This was a qualitative study, with a descriptive scope. The results obtained from the first investigation were considered and contrasted with the results of the insertion in professional practicums of the generation of 2017 – 2019 BIS modality. The factors considered in the comparison were: socioeconomic, company and area of insertion. **Contribution:** The results will be a reference for the Subsystem of Technological and Polytechnic Universities that impart the BIS modality in the Tourism program. This will allow them to identify the formation of the human resource by students in the BIS modality compared to what was seen in the traditional model, within the hospitality sector.

BIS Model, Professional Practices, Comparative

La enseñanza de migración de datos con el apoyo de la plataforma eminus

The data migration teaching with the support of the eminus platform

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Abstract

The research denotes the importance of data migration to an educational platform, which allows teachers and students to participate in a digital environment through new technologies and computer management, making intensive use of the facilities provided Internet and digital technologies through the institutional platforms, so it is necessary to use the tools offered by the Veracruzana University (UV) in order to manage and migrate virtual information, as well as to venture into the different demands in the careers they offer Currently, addressing these changes in the new study programs that may be Online, which allows updating the Learning Teaching process and obtaining a change in students and teachers. The objective is to manage the tools in face-to-face and virtual mode Implementing the use of online platforms. Therefore, this research allows us to answer what are the benefits of migrating information, content, forums, tasks, multimedia to platforms. This work will be quantitative, descriptive method as an integrating and collaborative axis of the achievement of objectives that the University implements.

Teaching, Eminus Platform, Migration

Temas de interés para los asistentes a la expo tutoría: Nuevas áreas de oportunidad

Topics of interest for expo tutoring attendees: New areas of opportunity

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Abstract

The present work shows the results of a study carried out in the development of the Third Expo Tutoría. The objective was to identify topics of interest to students in tutoring activities. The research was developed under a quantitative, descriptive approach. We surveyed 105 attendees in simple random sampling. A survey was used in which the impression of the event was requested and they were asked to write the topic (s) they would like to be taught in the next event and to rescue them in their tutorial sessions. The results show that the topics of greatest interest are violence (family, school and dating) 19% and medical first aid with the same percentage (19%), sexuality and stress issues with 16% respectively, followed by vocational guidance and drugs with 9% each, the student teacher and self-esteem ratio with 6% respectively. The resignification of teaching practices, tutorial activity, institutional climate and collaborative work are the aspects to work with young people.

Mentoring, Thematic, Upper middle

Seguimiento a la aplicación del programa de estudios de la MIEEB

Follow up on the implementation of the program of the MIEEB studies

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Abstract

The Follow-up to the application of the Program of Studies of the Master in Educational Intervention for Basic Education (MIEEB), in the Normal School of Ixtlahuaca (ENI) is being made from various procedures, moments and functions, such as: the procedure “monitoring and evaluation to the application of plans and programs of postgraduate study” of the Quality Management System (QMS), another is the follow-up that is carried out from the position of the Postgraduate Coordinator. The objective of these procedures is: “Obtain information on the progress and incidences of Postgraduate Educational Programs that are offered in the Normal Schools, to help in the assurance of their educational quality "(SEN, 2017), and the one in this report, is to reflect on the results of the application of the MIEEB Program of Studies: strengths and weaknesses. The methodology of this study is based on the analysis of documents that have been administered to students and teachers, those that have been issued to inform school and educational authorities. It is intended to contribute to the reflection of the scope of the master’s program in the professionalization of teachers of Basic Education.

Follow-up, Master’s, Reflection

La gestión cognitiva y la mediación institucional en el contexto de las instituciones de educación superior: Una revisión teórica

Cognitive management and institutional mediation in the context of the higher education institutions: A theoretical review

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Abstract

This article departs from the objective to contribute with the state of the art in the theoretical framework that links the organizational cognitive management with the higher education institutions. This linkage between institutions it is understood in the literature as a product, but also as an input to the organizations, however we must define a point of view to analyze the cognitive manifestations that has been defined in the context in which are developed as a process, such as research generation, technology transfer, innovation systems, and many others. Besides these processes, it is necessary to generate a theoretical background that can help us to understand how the cognitive manifestations would be coordinated thru the linkage among several public and private institutions. We analyze three main theoretical themes that gather the institutional linkage among higher education institutions and other dependences as a mediation thru cognitive manifestation; to this finality several documents were reviewed an analyzed to generate a primal theoretical framework that can establish the basis for a theory that can dilucidate how the institution relationships can produce cognitive manifestations.

Knowledge management, Institutional linkage, Higher education institutions

Influencia de la satisfacción laboral y la percepción del abuso del poder jerárquico en el bienestar subjetivo del docente universitario

Influence of job satisfaction and hierarchical abuse perception in university professors subjective well being

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Abstract

Objectives: Explain the subjective well being perception and job satisfaction of the professor thru power abuse perception. **Methodology:** The intention is to correlate some variables, thru descriptive stadistical operations and structural equations, using SPSS AMOS 25. The questionnaire will be answered by a population of private university teachers from the metropolitan zone of Guadalajara, with similarities of market share and agreements. Another viable option in time and resources could be in different UAG campi, as in Tabasco and Tepic. The first questionnaire was designed taking in consideration the constructs to measure, according the bibliographical research until now, taking into account the parsimony and the suitable people of the study for the contemplated universe, using a 1 to 5 likert scale. **Contribution:** **Theoretical:** to explain if exists a subjective well being moderator effect in light of abuse percetion and job satisfaction in university teachers; to contribute in mexican teachers papers. **Methodological:** validate questionnaires in different contexts and people. **Practical:** identify opportunity áreas for the program implementation in job satisfaction improvement and decrease abuse perception.

Subjective well being, Job satisfaction, Hierarchical power abuse

Validación del instrumento autoevaluación de habilidades del aprendizaje: Un pronóstico del rendimiento escolar en estudiantes universitarios

Validation of the learning skills self-assessment instrument: A forecast of school performance in university students

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Abstract

Learning skills are reflected in the student's school performance, which is expressed by the teacher's assigned grade or the average earned by the student. Learning problems often manifest themselves by low school averages. Objectives: Validate and correlate an instrument for the self-assessment of learning skills and school average in students of the Juarez University of Durango State. Methodology: Exploratory, cross-cutting, descriptive, correlational and validation research, with non-probabilistic sampling, for convenience upon signature of informed consent. Contribution: The self-assessment tool for learning skills is reliable and allows to identify the level of efficiency with which participants in the studied sample are self-assessed, so it can be used to guide the needs educational care in higher education students

Learning Skills, Self-Assessment, University students

Compromiso estudiantil y responsabilidad social universitaria: Una experiencia en la Universidad Politécnica de Pénjamo

Student commitment and university social responsibility: An experience at the Polytechnic University of Pénjamo

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Abstract

Social responsibility is a duty of organizations, in the same way, Universities have participated in the flow of Social Responsibility, as part of their very essence. González (2014) the University Social Responsibility (RSU) guarantees the quality of higher education as a whole. This research analyzes the Polytechnic University of Pénjamo (UPPE) as an educational institution, to visualize the options to implement a model of University Social Responsibility. In particular, the Student Decalogue is presented, which is one of the results of the research carried out around the RSU. The research aims to determine the options to implement, within the Polytechnic University of Pénjamo, a model of University Social Responsibility, which was achieved through the results of the application of the instruments proposed by Vallaey in the First Steps Manual for the RSU. The results contribute to learning through case studies to show that IES perform various actions from within to develop in students the sensitivity, awareness and co-responsibility in solving the problems of the Environment.

University Social Responsibility, Students, Ethical decalogue

Una mirada a los estereotipos de la violencia simbólica en los contextos educativos

A look at the stereotypes of symbolic violence in educational contexts

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Abstract

This research provides insight into the most current topics from the perspective of educational figures regarding stereotypes that surround symbolic violence, including vocational orientation or curriculum, sexuality, racism, economic level, *machismo* and violence *per se*. It is observed how within today's society these topics become a topic of discussion, so it is important to know the factual reality offered by statistics to determine how they are presented in schools. The aim is to know the reality that confines symbolic violence in schools. The methodology used is quantitative at a descriptive level frequently and percentage for signalitic and univariable analysis with central trend and dispersion statistics. The contribution is an objective look at the current situation of symbolic violence in educational contexts, from the perspective of teachers.

Symbolic violence, Curriculum

Logística del cambio en instituciones educativas con hoja de cálculo

Logistics of change in educational institutions with spreadsheet

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Abstract

The accreditation and certification processes are an imperative of the institutional evaluative culture, taking its foundations in the research methodology, with a careful selection of the variables under study and the analytical categories that support it. This study aims to elucidate the categories in which the institutional evaluation rests, its sources, and its derivation in attributes to be evaluated, a process prior to the elaboration of the SWOT diagnosis. The concentrate of the areas subject to institutional evaluation described and elucidated is presented as the limit of the present work with the objective of developing a technique that allows to carry out the institutional evaluation and with it the strategic planning in the schools or higher education institutions to reach the quality of continuous improvement processes, using in both cases (diagnosis and planning) a spreadsheet. The technique was successfully tested in the self-evaluation of a Master's Program in Education Sciences of the Autonomous University of Coahuila to integrate it to the self-evaluation of the information requested by the accrediting bodies. This technique is useful for educational institutions that do not have sophisticated programs to change and adapt to new educative realities.

SWOT, Institutional evaluation, Strategic Planning

La mediación docente para fomentar la educación emocional de los estudiantes de una Universidad Pública de Toluca

Teacher mediation to promote emotional education for students of a Public University of Toluca

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Abstract

Emotional life is the same as mathematics and reading, it can be handled with greater or lesser skill and requires a unique set of skills (Goleman, 1995). The fact that students are able to control their emotions will reduce the problematic behaviors observed in students and in turn improve their social and family relationships. The present investigation will serve to understand the causes of the bad behaviors of the students, likewise it will be proposed through the educational mediation a workshop "between equals" that will allow to improve the performance of the students, develop positive emotions, achieving an integral development. The diagnosis was directed to a sample of 50 students of first and second semester of a Public University of Toluca, of the morning shift, chosen by simple random sampling. As well as 20 inhabitants of Toluca chosen at random; in order to know how they perceive the behavior of the students of the same University. Through an observation guide and 2 structured questionnaires, it was identified that due to the situations that students witness and protagonize, they manifest their emotions in an inadequate way, channeling them in a negative way, which seriously affects their integral formation.

Teaching mediation, Emotional intelligence, Positive emotions

Diagnóstico que permita detectar fortalezas y debilidades para ofrecer la modalidad mixta en el Instituto Tecnológico de Altamira

Diagnosis to detect strengths and weaknesses to offer the mixed modality at the Technological Institute of Altamira

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Abstract

Currently our country has a coverage of 38.4%, leaving ten points below the average for Latin America and the Caribbean (UNESCO, 2018), that means that so far only a little more than a third of the social demand has been met or target population. With respect to the state of Tamaulipas, in 2017 it was below average, widening its coverage gap by 15.5 percentage points (ANUIES, 2018). One way to increase coverage is to use innovative educational processes (Mortis Lozoya, Del Hierro Parra, García López, & Manig Valenzuela, 2015). The objectives of this work are: Make a diagnosis to detect strengths and weaknesses to offer the mixed modality at the Technological Institute of Altamira. For this, a survey will be carried out on the actors involved in this process, the students, the teachers, and the authorities.

Mixed Modality, Teaching Competencies, ITA

La evolución de los cuerpos académicos y de los investigadores registrados en el SNI de la Universidad Autónoma del Estado de México, Periodo: 2002 – 2017

The evolution of academic bodies and researchers registered in the SNI of the Autonomous University of the State of Mexico, Period: 2002 - 2017

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Abstract

The National System of Researchers (NSR) was created on July 26, 1984 by presidential decree and published in the official journal of the federation. It was established in order to recognize the work of those engaged in producing scientific knowledge and technology, this award symbolizes the quality and prestige of scientific contributions. Its overall purpose is to promote the development of research activities to enhance the quality, performance and efficiency. Therefore, this document reflects the status of the academic bodies of the Autonomous University of the State of Mexico (UAEMEX) and researchers recognized by NSR.

Academic body, Researchers, SNI

El programa institucional de tutorías (PIT): Impacto en la formación de los estudiantes universitarios

The institutional mentoring program (PIT): Impact on the training of university students

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Abstract

The present study has as main objective to analyze the relationship between the mentoring institutional program and the formation of college students. It is an exploratory study type, phenomenon is examined from a distinct perspective to other studies made; descriptive, since it is specified how is the phenomenon study and correlational (Hernandez 2014). A survey is applied to 100 students from the Science, Education and Humanity faculty of the Autonomous University of Coahuila, results are explored in the following analysis; Descriptive, integrational and relational. Main results are that support of the personalized services of mentoring have impact in the student's formation since the skills development as decision taking and in their learning resources. Besides in their achievement of planed objectives. Parting from the results is pretended to improve the mentoring work from the student's perspective that allows them a cultural change as to how to take the process of tutoring.

Mentoring, Impact, Forma

La acreditación de programas de educación superior

The accreditation of higher education programs

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Abstract

The need to accredit educational programs arises in the 1980s, when evaluation processes began to be given importance, recognizing and guaranteeing quality in education. International organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organization for Economic Cooperation and Development (OECD) have been promoters of accreditations since its inception, creating policies and programs in set of world governments. The objective of this research was to analyze the accreditations that the different higher education programs of the University of Guanajuato have and the impact they generate on their quality. A qualitative methodology was used, applying semi-structured interviews to academic coordinators. Among the main results, there is the relevance of generating strategies to improve terminal efficiency and for this reason, special emphasis has been placed on tutoring and student support

Accreditations, Education, Quality

Diagnóstico del desempeño docente en el esquema de evaluación de asesores de los Programas Educativos del Sistema a Distancia en la UAEM

Diagnostic of teaching performance in the evaluation scheme of advisors of the Education Programs of the Distance System in the UAEM

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Abstract

The objective of this research is generate a diagnostic of teaching performance at the Autonomous University of the State of Mexico, derived from the results in a satisfaction survey applied to students in which it is identified that they partially agree to establish adequate communication between the members of the community corresponding to non-school modality, distance system. Three aspects are reviewed: the waiting time in the evaluation of the activities, the time in the attention of academic requests and the quantity of academic publications. The type of research is quantitative and data collection is directly from the reports obtained from the educational platform used at the Autonomous University of the State of Mexico; research analyzed data with statistical techniques. As a contribution, proposed implement strategies in a way that helps to establish adequate communication between the members of the group with a tendency to changing student perception, aligned with greater credibility in the modality.

Communication in virtual education, Teacher performance, Student perception

El impacto de la reforma educativa en la planeación de la práctica profesional

The impact of educational reform in the planning of professional practice

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Abstract

Educational reform, planning and professional practices superior formadoras de futuros educadores de la Escuela Normal de Educación Preescolar y la Benemérita Escuela Normal de Coahuila. Se pretende conocer el impacto de la Reforma Educativa en la planeación de la práctica profesional. La muestra fue de 70 sujetos. El instrumento tiene 4 variables señalíticas: edad, genero, escuela y especialidad, y 3 ejes: reforma, planeación y práctica, con veinte variables cada uno, la escala fue de Likert decimal. Se procesaron los datos en paquetes estadísticos, utilizando medidas de tendencia central y variabilidad, frecuencias y porcentajes, análisis integracional. Resultados. Se obtuvo un Alpha de Cronbach de .94. En el integracional, con la Reforma Educativa se pretende que los resultados del aprendizaje se relacionen con evaluaciones internacionales, así como también se pretende el aumento de la matrícula en educación básica de calidad y así puedan tener un máximo logro educativo. En el de regresión: los alumnos tienen un mejor desarrollo académico cuando los maestros llevan a cabo un diagnóstico del aprendizaje y se da una interacción positiva entre alumno-maestro, y que los padres aporten una opinión acerca de los programas educativos de sus hijos para que así en conjunto toda la comunidad se dé una educación de calidad.

Educational reform, Planning and professional practice

Modelo de prevención de deserción escolar para alumnos de la carrera de innovación agrícola sustentable y gestión empresarial en el Instituto Tecnológico Superior de Salvatierra

School dropout prevention model for students of the sustainable agricultural innovation and business management degree at the Instituto Tecnológico Superior de Salvatierra

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Abstract

This research was carried out at the Salvatierra Institute of Technology facilities, with the objective of identifying the causes of school drop-out of first-semester students of the Engineering in Sustainable Agricultural Innovation and Engineering in Business Management, evaluating the evolution of attrition by identifying the causes of dropout, in the search to propose alternatives and reduce school drop-out in the institution. The method that is specified for this quantitative research, a descriptive level, seeking to know the possible causes of school dropout, the applied survey is divided into five sections, Economic, Social, Psychological, Academic and Institutional Organization, which had a series of questions

Dropout, Education, Strategies

Estrategias para el incremento de la eficiencia terminal de un Programa Educativo de Licenciatura en una Universidad

Strategies for increasing the terminal efficiency of an Educational Degree Program in a University

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Abstract

The design of strategies to increase the terminal efficiency of the Educational Program (PE) Bachelor of Administration of the Sonora Technological Institute (ITSON) Empalme Campus, in order to contribute to compliance with the indicators of the external accrediting body Council of Accreditation in Sciences Administrative, Accounting and Related (CACECA), is the objective of this investigation. One of the main problems of this Bachelor, is the low terminal efficiency. To counteract this situation, it was decided to apply the methodology of Hernández (2011), who proposes four stages: set goals, define problems (gap) and define livelihoods, strategic ideas of modernization and their scenarios (awareness) and formulation of the strategy. The results obtained were differences of the data of the Comprehensive System of School Paths (SITE) of the ITSON with the data of the Educational Program (PE), a database was generated with specific information of the generational cohorts 2013-2017, 2014-2018 and 2015 - 2019, the relationship with the cultural, social services and school registration departments of the institution was strengthened, a report was made of the current situation of the students, the creation of an individual action plan, all of the above aimed to increase terminal efficiency.

Academic career, Graduate, Terminal Efficiency, Accreditation

Plan de negocios estratégico para productos naturistas en amecalco de bonfil, Querétaro

Strategic business plan for natural products in amecalco de bonfil, Queretaro

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Abstract

The present research had the purpose to realize a study of the organizations and family workshops dedicated to the elaboration of natural products in the state of Queretaro, in the county of Amealco de Bonfil, since in this region, there are ethnic groups with ancestral knowledge in the healing with plants and natural drugs, this work was directed to the implementation of a business plan for these producers, as well as an adequate strategic planning, the research was carried out under the mixed method, through interviews with the producers and also the observation on the site, as well as questionnaires to the consumers of this type of products, the scope of the study was descriptive and correlational of the variables studied, where results were found that identified the shortcomings and subsequently the recommendations of training actions in the field of developing naturists business to improve their production and marketing processes of these organizations and family workshops. It has been considered different business naturist products established in Amealco de Bonfil, Queretaro.

Strategic Planning, Business Plan and Naturist Business

Movilidad laboral y sus efectos en la dinámica familiar

Labor mobility and its effects on family dynamics

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Abstract

This research reveals the effects that are presented in families, due to the labor mobility of the oil worker, mainly in its dynamics (communication, cohesion, family adaptability, roles and hierarchy) since it generates a series of problems in the inside of her. In the city of Poza Rica, the main work activity of parents is the oil industry, some of them work in the same city, but others in Ciudad del Carmen, Campeche, on marine platforms, where they have to be absent for 15 days, hence this research seeks to answer: What are the effects of labor mobility on family dynamics? This work is of a qualitative type, with the phenomenological method, it arose from the interest of venturing into reflection, analysis on the subject, which allowed us to dimension the complexity of labor mobility in which various families from urban communities are involved, also because this research means a first approach to the analysis of the effects of labor mobility on the family dynamics of workers in the oil industry, because there is no regional background of research work related to this problem.

Labor Mobility, Family Dynamics, Oil Workers

Propuesta de un modelo de desarrollo de la cadena farmacias del ahorro, en Villahermosa, Tabasco

Proposal for a development model for the farmacias del ahorro chain in Villahermosa, Tabasco

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Abstract

At present, it is very important to carry out an analysis of the productivity of the organization, because it is necessary to know where it is and where it is going, this in order to have a clear idea of the present, as well as future plans . In this work, a comprehensive and reliable scenario will be designed through formal context measurement tools that allow us to develop a proposal for a development model. The research will work under a quantitative approach because the observed phenomena are measured and quantified by giving a statistical analysis, in addition to the types of research used; documentary, since documents and statistics will be used to perform the analysis in addition to applying surveys and evaluations to pharmacies belonging to said area and the correlational, since the context variables, their interrelation, will be analyzed to determine their impact on the research . This work will increase the benefits for the organization, including having current data and statistics about productivity, as well as a proposal for improvement that will allow us to reduce the deficiencies in the organization in order to achieve a competitive advantage over its competitors.

Productivity, Model, Pharmacy

Propuesta de ejes temáticos para el modelo de certificación de empresas sociolaboralmente responsables del Estado de Guanajuato, México

Proposal of thematic axes for the model of certification of social and labor responsible companies in the state of Guanajuato, Mexico

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Abstract

Introduction: This article presents a literature review for the proposal of the dimensions of the certification model known as “Company with Social and Labor Responsibility”, in the State of Guanajuato, Mexico. **Method:** Various national and international literature sources were analyzed on best practice in companies in labor and social matters, as well as other forms of certification for companies in this field, in order to outline the body of knowledge of the investigation. Additionally, the concepts of Social Responsibility, Companies Social Responsibility (CSR), Environmental Responsibility, among others, they have been developed by various sources. **Results:** With this frame of reference of the investigation and taking into account the needs of the Subsecretaría del Trabajo y Previsión Social; There were generated nine axes for the certification model "Company with Socio-Labor Responsibility", which respond to the current needs in matter of socio responsibility of the companies and the society of the State of Guanajuato, Mexico. **Discussion or Conclusion:** The nine guiding principles relate to the functional areas of the company, the staff working on it and the contact there of with the community in which it operates.

Corporate Responsibility, Labor Responsibility, Certification Model

Calidad pre y postcosecha de Chiltepín (*Capsicum annum* L.) Producido bajo condiciones de cielo abierto en Xicotepec de Juárez, Puebla

Performance and quality of Chiltepín (*Capsicum annum* L.) Produced under open-air conditions in Xicotepec of Juarez, Puebla

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Abstract

The Capsicum plant develops naturally and comprises the majority of domesticated chile in Mexico. The fruit presents gastronomic, cosmetic and pharmaceutical uses. The economic and commercial value of the Piquín pepper is due to the nutritional contribution and content of carotenoids, vitamin C and tocopherols. The study was conducted at the Technological University of Xicotepec de Juárez, Puebla, Mexico. Pests and / or diseases in culture were identified using 50 random plants, Capsaicin content (HPLC), fresh weight (AOAC), and color (Hunter Lab®) in fruit. The pests and diseases found were: spider (*Tetranychus urticae*), white mosquito (*Trialeurodes vaporariorum*), chicharita (*Empoasca* spp), aphid (*Bactericera cockerelli* Sulc.), Cricket (*Acheta assimilis*) and blight (*Xanthomonas campestris*) with incidence rate of: 4 %, 6%, 4%, 4%, 58% and 6%, respectively. The fresh weight of the fruit was 0.13 g, the values for color L: 14.42; a: 12.37 b: 6.47 indicate opacity, tending to dark red, stem growth was 4 to 18 cm, capsaicin content of 168 µg / mL. Piquín pepper has a high content of carotenes related to chronic degenerative diseases, oxidative stress, cancer, etc. The plant during its low incidence of diseases that do not affect the development of the fruit.

Capsicum, Capsaicin, Pests and diseases

Estrategias para impulsar el desarrollo económico y turístico bajo el esquema de Pueblos Mágicos en Xicotepec de Juárez, Puebla

Strategies to boost economic and tourist development, under the scheme of magical Towns in Xicotepec de Juárez, Puebla

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Abstract

The changing conditions of the economy in our country, coupled with a rigorous global environment; they demand alternatives that allow to achieve an efficient administration of the production of goods and services to reach the favorable conditions that generate the material means of well-being to preserve the same standard of living in any of the entities that comprise it. It is a priority to know currently in the Municipality of Xicotepec de Juárez, Pue. its cultural value to generate strategies that strengthen its economy and contribute to the preservation of cultural roots and strengthen tourism sustainability. For this purpose, a quantitative empirical study was carried out through a field research instrument to identify the sustainability actions undertaken, market analysis, sales management, production, operation, installed capacity, finance and use of technology in Micro and small local businesses (MYPES). Obtaining various results that makes evident the lack of a business culture that allows the proper development of the local economy. Therefore, we hope to contribute to the design of strategies that allow achieving tourist sustainability and improving social and environmental economic conditions as well as preserving traditions and cultural roots in Xicotepec de Juárez, Pue.

Sustainability, Development, Strategies

Estudio sobre la gestión del conocimiento y la innovación abierta

Study on knowledge management and open innovation

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Abstract

The present research aims to empirically evaluate the variables that impact knowledge management and open innovation processes. To this end, a quantitative non-experimental, transversal and correlational research is conducted that allows the obtaining of exploratory results from the inferential statistical analysis. A pilot study has been implemented with a 60-item instrument set up on a Likert scale in 5 types of organizations in the agro-industrial sector of the state of Jalisco, applied to directors involved in innovation processes. This is based on the works of (Martínez – Conesa, 2017), (Popa et al. 2016), (Chang et al, 2011), (Collins & Smith, 2006), among others. The results obtained have been able to confirm the validity of the criterion and construct of the instrument and in turn, the verification of the correlations between the variables. Also, the existence of a consistent theoretical model through factor analysis and Pearson correlation matrices. The results are sought to help in the design of strategies that promote Open Innovation in organizations as a competitive advantage that promotes multisectoral development.

Knowledge management, Open innovation, Leadership

Liderazgo en la calidad de los servicios hoteleros de la ciudad de Campeche, México

Leadership in the quality of hotel services in the city of Campeche, Mexico

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Abstract

The remainance and development in the market depend, among other factors, on the quality of sold products or provided services, which is a situation of concern in sectors such as tourism where globalization demands first level services, as is the case in the city of Campeche, where businessmen are investing in hotel infrastructure according to the colonial characteristics of the town. The research's objective is to identify the incidence of leadership in the quality of services under the perception of hotel managers as responsible for the operability results. This research is a descriptive type with non-experimental transversal design, with a enumerated population; the results obtained through the quality and leadership indexes indicate that, contrary to expectations, managers consider that the provided services don't have an adequate level of quality, and the design of new strategies is needed to improve the processes under the transformational leadership which must face problems with opportunity in order to innovate in the services of the market where they participate.

Quality, Leadership, MSMEs

Importancia de la gestión del conocimiento en las grandes empresas de México

Importance of knowledge management in Mexico's large companies

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Abstract

Objectives: The objective of this research work is to know and analyze the importance of knowledge management through the main lines of research related to knowledge management and the extent to which it involves people working for the welfare of an entity. Through it, companies can create and disseminate vital information in a systematic and efficient way in order to achieve better performance in the areas of the organization and improve its competitive advantages. **Contribution:** If organizations leverage these resources, they will be able to implement a system of transmission and knowledge generation that allows them to improve their business processes, improve the capabilities of their employees and obtain greater Benefits. **Conditions** should be created that allow knowledge management and business process management to complement each other. It is recommended to map each level of the process of conception of the knowledge management project, to better understand the steps and requirements that take place in them, and also facilitate the identification of inputs, outputs, resources and controls according to company characteristics.

Markets, Knowledge, Management

Impacto de los recursos y liderazgo transformacional en la gestión estratégica de las pequeñas empresas comerciales

Impact of resources and transformational leadership in the strategic management of small business enterprises

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Abstract

A study with a quantitative approach was carried out in 140 small companies in the commercial sector of Ciudad Obregón Sonora, which sought to achieve the objective of analyzing the impact of the company's resources and transformational leadership in the strategic management process; this allowed an analysis of the strategic situation of these companies. To achieve the objective, the process of the scientific method was used, where a 36 question instrument with six levels of Likert scale was applied, and the SMART-PLS Model, Structural Equations, was used for statistical analysis, where it was observed that the Resources variable have a positive, direct and highly significant effect ($\beta .405$, $p \leq .000$), in the Strategic Management variable, on the other hand Transformational Leadership, has a positive and direct effect but not statistically significant in Strategic Management, ($\beta .218$, $p \leq .090$ n.s.). In this investigation it was concluded that the entrepreneur is not clear about this leadership and that when a strategy is formulated and executed efficiently through the correct allocation of resources at each stage of the same, a successful situation is achieved in the strategy of the company.

Strategy, Leadership, Resources

Propuesta de estrategias de servicio al cliente para una micro empresa de consultoría fiscal y financiera

Proposal of customer service strategies for a micro fiscal and financial consulting firm

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Abstract

Proposal about Strategies of Customer Service to a Micro Company in Tax and Financial Consulting. Purpose: To increase company's competitiveness, developing customer service digital strategies in a micro company in Chihuahua City, which is dedicated to perform activities that are focused in areas such as: business consulting in IT, Corporative Finance, Marketing, Corporative Image. Method: This research is exploratory, since this, realize an analysis of the company's current situation, this is performed through an interview for the owner of the company. Also it uses a qualitative method, since a group session realized with current customers, and also quantitative and descriptive method uses through an applied questionnaire to specific market segment. Results: To obtain the automatization of training process for each employee who are involved on the sales process/ telephone attention. Since the employees have available information, the person in charge to provide the customer service or any other person in the company, will be able to know accurate operation related to the problem that the user has, as well as, new employees will be able to know easily the sales process, after sale service, in order to provide better attention, more easy and effectiveness through the digital communication tools.

Strategies, Sales Process, Customer Service

Innovación al proceso de evaluación del desempeño en un departamento gubernamental del estado de Puebla mediante el uso de herramientas de gestión estratégicas

Innovation to the performance evaluation process in a Puebla's government department by means of management tools strategies

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Abstract

The purpose of this work is to present an innovation to the performance evaluation process for a government department in the state of Puebla, which has as its main function the evaluation and monitoring of the scopes, goals and objectives of all the City Council dependencies and entities from the municipality of Puebla. The innovation presented is supported by the use of the Balanced ScoreCard (BSC) tool, automated by the use of strategic management software to provide timely, visual and executive monitoring of the results and scope of the strategic indicators proposed. In the development of this work, the following is proposed: the bases of the strategic planning of the government department in question, through the proposal for the BSC as well as, the elaboration of the strategic indicators of the same and ending with the simulation of the operability of the department already mentioned, in a software that supports the management of the BSC. The results showed a significant advance in the dependency's operations, reducing the time in the operative tasks in the evaluation process, deliverable executive documents for their valuation and making timely decisions for a constant improvement regarding the service provided.

Innovation, Performance, Balanced scored card

Cultura organizacional y la calidad bajo la percepción gerencial del sector hotelero

Organizational culture and quality under the managerial perception of the hotel sector

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Abstract

This study analyzes the dimensions of organizational culture and its possible influence in the quality of services offered by hotels in the city of Campeche that don't belong to big hotel chains. The research is descriptive with non-experimental transversal design, considering the small hotels as population under study, which were enumerated according to the data of the Mexican Business Information System; the obtained results indicate that the organizational culture is based on the levels of trust developed among the collaborators, but the leader must encourage an open communication that strengthens its building, transmission and preservation, since the managers consider that the provided services don't have an adequate quality level, so new strategies must be designed to improve the processes to innovate and remain in the market where they participate.

Organizational culture, Quality, Hotel sector

Diseño de un Sistema de Gestión de la Calidad en EBPC Consultores de Ingeniería y Procesos de Negocio, S.C.

Designing a Quality Management System at EBPC Engineering and Business Process Consultants, S.C.

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Abstract

The following investigation focuses on the design of a Quality Management System, incorporating principles and key concepts in the design of a flexible and competitive system and the certification's normative. The success is complemented with the management direction with a focus in continuous upgrades with a basis on the efficiency and effectiveness of every established process in its model. The purpose is to implement a system to the organization Engineering and Business Process Consultants (EBPC), analyzing the context of the organization, as well as the good practices that are carried out. The impact is consolidated in gaining experiences in the process of applying international standard criteria and the development of the "Operations Management and Innovation" knowledge generation line of the Academic Corps of the EP industrial engineering "Innovation in Management Systems" UV-CA-470 consisting of the Analysis and improvement of management models and systems.

System, Model, Quality

Potencial productivo para contribuir a la soberanía alimentaria mediante paquetes tecnológicos generados por el INIFAP

Productive potential to contribute to food sovereignty through technology packages generated by INIFAP

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Abstract

The research objective was to quantify INIFAP's contribution to food sovereignty by generating technological packages in the agriculture sector. The methodological process began with the integration of two research teams: one at the central level that was responsible for the coordination and elaboration of the productive potential mapping that was classified as high and medium of the most representative product systems in each state of the Mexican Republic and the other, he was responsible for updating the technological packages generated for the agricultural sector; subsequently, the review, homogenization, editing and publication of 32 Agricultural Technical Agendas was carried out. INIFAP contributed 483 technology packages nationally and the Northwest region was the one that contributed the most with 86 of them and at the entity level was the Estado de Mexico, which generated the most with 30 packages and the grasses were the most worked with 165 in which it was relevant corn that had a national cover and with 31 of them. Finally, the scientific community has a technological bibliographical collection that can be consulted for free on the INIFAP portal

Innovation, Productive potential and technological packages

Productividad laboral de la generación millennial en instituciones de educación superior

Productivity of the millennial generation in institutions of higher education

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Abstract

General objectives: evaluate the relationship that exists between job satisfaction, organizational climate and leadership within higher education institutions in the Metropolitan Area of Guadalajara. Specific: analyze the relationship between job satisfaction and productivity in the millennial generation (GM), analyze the relationship between the labor climate and productivity (GM) and analyze the relationship between leadership and productivity (GM). Methodology: It is about making a comparison between the generations: millennial (1980-2000), baby boomers (1945-1965), "X" (1965-1980) and "Z" (2000-present), it is a theoretical support of articles, a quantitative research is carried out, in which up to now the application of 50 instruments has been carried out in a simple random pilot sample which gathered people of all ages who are currently responding at the Autonomous University of Guadalajara. Contributions The theory aims to contribute to the generation of a model on the characteristics that millennials are interested in their work. In the methodological aspect a specific instrument is used for each variable: job satisfaction in Meliá and Peiró (1998), organizational climate of Koys and Decottis (1991), leadership of Bargavi, Paul & Samuel (2006) and for productivity Sources (2012)

Prodcutivity, Labor Satisfaction, Organizational Climate, Leadership

Elementos para considerar el videojuego como herramienta de apoyo en el aula universitaria

Elements to consider the video game as a support tool in the university classroom

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Abstract

The video game represents a great opportunity for the student community to refresh and diversify the activities and tasks inherent in teaching and learning, taking advantage of the immersive, interactive and multimedia features offered by videogames to improve the use of university students. The objective of this work is to identify and make known the characteristic elements that certain videogames must have so that they can be used in university work, since there are endless options in the market whose general purpose is to entertain, however, you can highlight certain elements within them that can support the teaching practice. The present investigation methodology is of the theoretical type with descriptive study through which it is tried to offer validity, utility and universality to the phenomenon of study. The contribution is led towards the improvement of certain university educational procedures by identifying certain distinguishing parameters in video games that provide certainty that they could be used as support to improve the university teaching practice.

Videogame, Tool, University

Optimización de transferencias de importación de un recinto fiscalizado aplicando un modelo de servidores

Optimization of import transfers from a customs bonded warehouse using a server model

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Abstract

It is currently necessary to implement proposals that reduce service level times in the area of customs control. For this it is necessary to carry out a study of mathematical models that adapt to the reduction of possible problems. Once an appropriate predictive pattern is found, it is necessary to carry out an implementation to find the best option allowing to obtain a continuous flow of service, achieving optimal scaling. But above all achieving a better control in all the processes developed with better fluidity in the input and output modules and in the operational area.

Optimization, Mathematical models and customs

Relación entre la autoevaluación del estado emocional y el promedio escolar en estudiantes de Terapia de la Comunicación Humana de la UJED

Relationship between emotional state and school average self-assessment in UJED Human Communication Therapy students

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Abstract

Objective: To identify the relationship between self-assessment of emotional status and school average in students of Human Communication Therapy of the UJED. **Methodology:** Non-exploratory, survey, cross-sectional, descriptive and correlational research, with non-probabilistic sampling, for convenience, after signature of informed consent. **Contribution:** The information analyzed had a Cronbach Alpha of .83. About 75% of students self-assessed with anxiety, anguish and fear; 60% said they felt low self-esteem; 50% expressed apprehension, aggression and depression and 35% have felt shy. The correlational analysis between aggressiveness and school average showed $r = -.206$ with $p < .05$ which makes it possible to establish that the greater the feeling of aggressiveness is lower the school average or that the lower the feeling of aggressiveness is the higher the school average. Self-assessment of anxiety, anguish, apprehension, low self-esteem, depression, anger, fear, nervousness, rebelliousness and shyness showed no correlation with the school average.

Emotional state, University students, School average

Inundación costera, áreas y profundidades, en una playa de arena del Caribe mexicano bajo condiciones de tormenta

Coastal flooding, areas and depths, on a sand beach in the Mexican Caribbean under storm conditions

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Abstract

The objective of this study is to calculate the areas and depths of flooding that originate under storm conditions, in a pristine sand beach in the Mexican Caribbean. The calculation is done with the help of the XBeach numerical model. The simulated scenarios correspond to three storms that have occurred in the study zone, and the water wave conditions (significant wave height, propagation direction and period) of each storm were obtained from results of the WAVEWATCH III model. The topography and bathymetry used to generate the meshes have a resolution of 5 and 4 meters, respectively. Water level and sediment transport results were processed to obtain flood areas and depths. These data are very important because they contribute to establishing a flood risk zoning that serves as a guide to define the most appropriate area, design and construction processes and thus maintain balance in the coastal ecosystem avoiding beach loss and structural damage.

Coastal Flooding, Flood Depth, Storm

Acciones de seguridad e higiene industrial para el crecimiento empresarial en una industria del ramo metalmeccánica

Industrial safety and hygiene actions for business growth in a metalworking industry

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Abstract

Goals. Improve the working conditions and productivity index through the implementation of Industrial Safety and Hygiene and Plant Distribution actions in a pressure foundry company

Methodology

1. Analysis of the manufacturing process of aluminum and zamak parts.
2. To identify the risk elements those do not allow to work in a safe and a right way.
3. To assign safety equipment according to the risks of the area and the integration of a Joint Commission on Safety and Industrial Hygiene.
4. To identify the containers for waste management in the different phases of the process.
5. To re-distribute the lay out to improve ventilation and lighting of the areas.
6. To analyze the results, considering the impact on the improvement of the company's productivity.

Contribution

Ensure the safety of its employees, achieve a better work environment, comply with established regulations and improve productivity in the company.

Security, Terms, Improvement

Las 9 fases de atracción de talento humano de calidad con calidez

The 9 phases of attracting quality human talent with warmth

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Abstract

This article aims to provide a new vision of attracting talent to recognize and reassess a process of integration of human talent that is committed to the Organization and that finds in it a space for personal and professional development. This writing is the result of the experience of the authors in the application of a model of the process of Selection and hiring of human talent derived from the management of human talent in the financial sector and consultancy in the same subjects, adding to this the documentary study of research and teaching on the subject, which has been taught during the training of professionals in human capital engineering. All of which can support a more humane process of talent integration that will result in a joint development of the talents of the people who join, that contributes and allows an successful expansion of the Organizations with a social as well as economic vision.

Human talent, Attraction of human talent, Selection process

La lectura en la era de la globalización y las tecnologías de la información en la sociedad contemporánea

Reading in the era of globalization and information technologies in contemporary society

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Abstract

Literacy in general and in particular the so-called digital literacy, we have to analyze it as a sociocultural problem linked to the formation of individuals. Every social or technological change has always demanded a profound transformation from humanity, due to the vertiginous advances that have occurred; Throughout history, man has seen the need to transform some practices. Reading has been one of the fundamental axes because the human being has been in need of addressing and being able to face the challenges facing globalization and information technologies. The deep and rapid transformations in all fields of modern life is something that characterizes the world in which we live. The new forms of communication have accelerated, a revolution of wide scope that revolves around the transformation of the mechanisms of production, diffusion and access to information; as well as in the expressive and representative languages of culture and knowledge. In universities, they must identify the areas that need to be strengthened to support students in carrying out the readings responsibly.

Reading, Globalization, Tnformation tec

Bruxismo, estrés y ansiedad en jóvenes

Bruxism, stress and anxiety in young people

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Abstract

Introduction. The bruxism that is the act of clenching and/or grinding the teeth, a habit that compromises the orofacial region. It is often associated with emotional aspects, such as anxiety and stress, and can lead to alterations in orofacial structures, functional modifications and social repercussion. (1)The etiology of bruxism is unclear, but the condition has been associated with stress, occlusal disorders, allergies and sleep positioning. (2)**Objective.** Determine the relationship between bruxism, stress and anxiety in university students of the Universidad Veracruzana.**Methodology.** A descriptive, observational, cross-sectional study was conducted. In students of the Faculty of Engineering. Evaluation instruments were applied to measure anxiety, stress and the presence of bruxism, as well as the clinical examination that allowed to diagnose the presence of manifestations of bruxism.**Contribution.** Comparing the level of stress and anxiety of the individuals who presented dental damage and those who did not present it, no significant differences were found between the two groups, which confirms the indefinite etiology of this pathology. However, it is important to note that the study was carried out in university students and that at an early age they present important manifestations of bruxism.

Bruxism, Stress, Anxiety

Influencia de edad y escolaridad en la percepción de delincuencia y situación económica de las mujeres que habitan Ciudad Obregón, Sonora

Influence of age and schooling in the perception of delinquency and economic situation of the women who live in Ciudad Obregon, Sonora

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Abstract

The increase in violence, insecurity and impunity have increased the dissatisfaction of society that feels that crime has exceeded all limits bringing as effect a sense of fear and anguish, so the objective is to determine if age and level of influence studies on the perception that women in Ciudad Obregon, Sonora have on issues related to Security and Economic Situation. The variables of economic situation and security that compose the Citizen Trust Index are used to measure the perception of women in Ciudad Obregon in relation to these variables. Women are chosen as subject of study given that many investigations show the female gender with the highest percentage of victimization of violence. With a sample of 270 women classified by age and level of schooling, it is found that there are significant differences in the perception of both groups, in this case regardless of age or level of schooling, delinquency is an issue that concerns women, It is special to women over 50 and to women with university careers.

Security, Governmental Institutions, Performance

La Santa Cruz de Huatulco, elemento sociocultural turístico

The Santa Cruz de Huatulco, sociocultural tourist element

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Abstract

In 1984, more than 21,000 hectares of Santa María Huatulco were expropriated, including the entire coastal area in favor of FONATUR, as a result of the positive global tourism trend and that Mexico began in the 1960s with the development of the Integrally Planned Centers. (CIP) to contribute to the economic development of backward or isolated areas of the country (Espinosa C., 2013). However, this model of tourism development of Sun and Beach, brought to the community challenges and impositions of regulations, new subsistence techniques and change of ownership of the land; what questions and deeply questions the methods, customs and, fundamentally, the identity of the community, leaving aside the importance of the local culture that was not subsumed to the economic interest but ignored. This descriptive research was carried out by crossing techniques at different levels: first of all, the data sources that were processed in the analysis were not solely of a disciplinary origin. Different institutions were attended as they are religious, historical and tourist. The data collection work is qualitative based on review of the hemerobibliographic file, as well as semi-structured interviews (Quivy, 2004, page 185) and non-participant observation (Quivy, 2004, page 188).

Huatulco Bays, Santa Cruz de Huatulco, Huatulco Development

Acciones sociales y su importancia en MiPyMes: Desde la óptica de sus dirigentes

Social actions and their importance in MSMes: From the perspectives of their leaders

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Abstract

The purpose of this research is to identify the value that entrepreneurs place in carrying out social in their organization. Seeking to answer the research question: What is the degree of importance that business leaders attach to the development of social actions within your organization? Subsequently, a non-experimental transactional study applied to 32 MSMes of Cd. Obregon, Sonora was carried out. Questionnaires consisting of 16 multichoice questions were applied; some of them are measured on a Likert scale of 1 to 5, divided into three modules: I. Businessman Data, II. General company data and III. Social Responsibility. Obtaining as a result that the majority of entrepreneurs consider having an average/low degree of knowledge about Social Responsibility, they also show no interest in participating in actions that contribute to the public good (culture, relationships with authority and corporate ethical behavior). Respondents consider the benefits that contribute to the company's image and profitability to be more relevant. The conclusion of this study will provide adequate information for the relevant measures that contribute to the change of the participating companies.

Social responsibility, Stakeholders, Social responsibility actions

Los conocimientos detrás del oficio tradicional: Conceptos y dimensiones para su análisis

The knowledge behind traditional trade: Concepts and dimensions for analysis

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Abstract

Traditional trades are a means of producing material goods. They have distinguishing characteristics that differentiate them from other forms of production. Their study is relevant since they conceptualize the sociocultural structures created at a given moment in history, and speak to the social relations forged during production. Similarly, they account for the social transformations that emerge as a consequence of changes experienced by these means of production (Martínez, 2009). The current study is being approached from an educational perspective. Its objective is to carry out a conceptual analysis of traditional trades, with an emphasis on the transfer of explicit and tacit knowledge and the role of education in their rupture, continuity, transformation and/or consolidation. The research methodology is derived from a thematic analysis of scholarly literature that allowed for the conceptual framing of traditional trades. Notwithstanding, there is a limited supply of specialized literature available on this topic, and this study aims to contribute elements for future imperial analysis. Furthermore, the findings will result in a greater understanding of the socio-educational wealth of knowledge contained in these means of production that have been devalued by the formal educational system.

Traditional trades, Education, Tacit artisanal knowledge

El análisis de los elementos culturales como influencia de generación de conocimiento en las organizaciones agrícolas del Valle del Yaqui

The analysis of the cultural elements as influence of knowledge generation in the agricultural organizations of the Yaqui Valley

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Abstract

Agriculture in Mexico is a relatively small sector since it represented around 4% of the Gross Domestic Product (INEGI, 2009). However, the generation of employment is relatively greater, representing some 3.3 million farmers and 4.6 million wage and unpaid family workers. The purpose of the research is to analyze the influence of cultural factors in the generation of knowledge of the agricultural organizations of the Yaqui Valley for the construction of a theoretical model that describes a reality. For this, a mixed methodology was applied, for the quantitative study a questionnaire of 28 Likert scale items was designed, five points, which was applied to 90 agricultural organizations of the Yaqui Valley. For the qualitative study, a semi-structured interview was designed which was applied to seven leaders of agricultural associations and local producers. As a result, it was obtained that cultural factors influence the generation of knowledge by 20%, a low influence is estimated, and it is verified with qualitative results, which show that cultural elements such as tradition, customs and values are aspects that hamper the generation of new knowledge in the Yaqui Valley.

Culture, Knowledge, Agriculture

Troya (Wolfgang Petersen, 2004) como fenómeno turístico y gran producción en Cabo San Lucas

Troya (Wolfgang Petersen, 2004) as touristic phenomenon and great production of Cabo San Lucas

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Abstract

The cinema is a means of communication that generates the construction of imagination through an emotional impact (Domínguez López, 2015). We define enjoyment through the theoretical perspectives of uses and gratification Lozano, (2007); (Jensen and Rosengren, 1990) and entertainment (Bryant and Zillmann, 1996); In that sense, it is pertinent to ask the following: What do people do with such media? Specifically, What filming conditions of a great production film genre (Bergan, 2011) like Troya (Wolfgang Petersen, 2004) can do on the promotion of Cabo San Lucas? The objective of this research is to reflect from a holistic approach Bryant and Zillmann (1996); (Martin, 2003); (Goliot-Lété and Vanoye, 2005), Domínguez (2015); the following aspects: 1) The use of cinema to promote a destination; 2) Collective identification values; and 3) The traveler-spectator phenomenon regarding the characteristics of this place and its history reflected on the screen from one of the main locations in Cabo San Lucas.

Cinematic tourism, Troy, Cabo San Lucas

Imagen fílmica y narración. Análisis cinematográfico de *Sensatez y sentimientos* (Ang Lee, 1995)

Cinematic Analysis of Sense and Sensibility (Ang Lee, 1995) through Film Image and Narration

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Abstract

The film *Sense and Sensibility* of Ang Lee (USA, 1995) narrates one of the literary works of the British writer Jane Austen (1775-1817), who is not only most famous for writing under the domain of drama and romance genres (Bergan, 2011), but specifically has written about women in 19th-century England facing problems related to their social position and relations. We wonder the following: “how the sensibility and senses in the Victorian Era is materialized in the narrative of Ang Lee (1995)?” Therefore, this film study will investigate how the roles of cinematographic language (Martin, 2002) and elements of narrative analysis (Casetti y Di Chio, 2003); (Stam, 2014) are used in scenes and/or sequences (Aumont y Marie, 2009). Our purpose is to further understanding how feelings like sense and sensibility (Sellés, 2010) are materialized through three aspects in the film: the characters and the narrative language of the cinema (Aumont y Marie, 2009).

Film analysis, Jane Austen, Sense and sensibility

Región y patrimonio biocultural de los ch'oles de Tacotalpa, Tabasco

Region and biocultural heritage of the Ch'oles de Tacotalpa, Tabasco

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Abstract

The objective of this work was to define and characterize the region occupied by the Ch'oles de Tacotalpa, Tabasco, as well as identify their biocultural heritage. To delimit the region, the criterion of localities with more than 40% of speakers of the CH'ol language and the ejido nuclei occupied by these localities was considered. The characterization of the region was carried out by review of secondary sources and interview, and identification of the biocultural heritage through interviews and observation. The region is made up of 31 localities in 22 ejido cores with an area of 22,414,791 hectares. 79.43% of the inhabitants of the towns that make up this biocultural region speak the CH'ol language and maintain customs and traditions related to Catholicism and ancestral practices. The environmental situation in this region is related to natural resources and culture. The economy of this region is focused on agricultural activities, basically in the production of the cornfield and the growth of cattle and monocultures (palm oil and teak). The biocultural heritage of the region is represented by traditional agriculture, traditional medicine, use of natural resources and dances and rituals.

Territory, Heritage, Biocultural

Conductas violentas en la relación de noviazgo en adolescentes

Violent behaviors in dating relationships in adolescents

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Abstract

Current changes lead to a new social, family, economic, political and educational reality, the educational one is the result of multifactorial elements that have changed the dynamics of classroom work, the discipline, the school environment and ways of learning. So the teacher should be able to use teaching strategies able to develop skills in students to respond to the diversity and heterogeneity of today's society. The goal of this study was to identify the teaching strategies used by high school teachers that promote significant learning chords to learn to learn, know-how, know how to be and how to live, and describe the characteristics of a good teacher. A quantitative cross-sectional research was applied to 126 high school students; 41.7% were male and 57.5 % were women. The sample selection was by chance. The results show that the strategies that are the most used by the teachers are: positive attitudes, persuasion, commitment, exposition and collaborative work. The features that stand out in a good teacher are: ability to teach, intelligent, hardworking, strict, honest and responsible.

Strategies, Meaningful Learning, School Education

Las características de los Dinki's: Factores de Hedonismo y Utilitarismo influyentes en el comportamiento de consumo

The Characteristics of the Dinki's: Hedonism and Utilitarianism factors influencing consumption behavior

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Abstract

Objective The purpose of the following investigation is to determine the hedonistic and utilitarian characteristics of the Dinki and the relationship with the consumption behavior. **Methodology** The methodological design was quantitative, exploratory and descriptive studying the Dinki's lifestyle, from the instrument the degree of hedonism and utilitarianism was studied, performed on 224 individuals with the characteristics of Dinkis (Double income, no children), in the municipalities of Colima and Villa de Álvarez. The instrument consisted of a survey with a semantic differential scale, which evaluates two opposite adjectives to identify hedonism and utilitarianism (Batra and Ahtola, 1991) composed of five statements with four items for hedonism and four items for utilitarianism. The validity was analyzed to determine its consistency using the SPSS statistical program, the quality was considered adequate, the scale had a Cronbach's alpha of $\alpha = 0.932$. **Contribution.** A model is proposed to show the relationship of the variables, as well as the data obtained that determine the hedonistic or utilitarian characteristics and their relationship with their purchasing behavior, using a Principal Components Analysis and a regression.

Dink's, Hedonism and Utilitarianism

Factores que impiden el empoderamiento económico de la mujer chihuahuense

Factors that prevent the economic empowerment of chihuahuense women

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Abstract

In recent decades, the participation of women in all movements is increasing, in the field of labor statistics affected by this increase, however, the percentage of discriminatory practices towards women has also been detected in Mexico in the labor market, which has managed to generate high rates of wage discrimination and a lower probability of obtaining better paid positions. Due to the importance of this issue, this study presents the main factors that impede the empowerment of Chihuahua women, through a descriptive statistical methodology, focusing their analysis on the study of the characteristics between men and women when entering the labor market and how they are reflected in the salary remuneration, with the way of knowing if this phenomenon is due to sociodemographic factors or a gender perspective problem, and thus show the current panorama faced by women in the state of Chihuahua.

Discrimination, Gender perspective, Empowerment

Conocimientos sobre plantas medicinales en seis comunidades Ch'oles de Tacotalpa, Tabasco

Knowledge about medicinal plants in six Ch'oles communities of Tacotalpa, Tabasco

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Abstract

The Ch'oles of Tacotalpa, Tabasco; have knowledge and practices about traditional health systems that they share with each other. Knowledge about Traditional Mexican Medicine (TMM) is enough and it is used to take care of their health. This work had the purpose to identify the knowledge that the population of six communities have about medicinal plants and their uses. It was a quantitative study carried out during January-August 2019. An interview of six categories of questions was the instrument used, involving 143 inhabitants from systematic sampling, including youth and adults, men and women. As part of the results, 69 medicinal plants used for various conditions belonging to seven groups of diseases were identified: immunological, gastrointestinal, respiratory, skin infections, cultural affiliation syndromes, osteomuscular and nervous system. 28 medicinal plants were registered in Buenos Aires, 14 in Noypac, 49 in Oxolotán, 27 in Puxcatán, 22 in Guayal and 17 in Libertad. The plants with the greatest mention are maguey, sábila, basil, rue and epazote; some of these are introduced to the region, such as moringa, chamomile and saffron crocus. The diseases in which they are mainly used are cough, injuries, infection, stomachache, evil eye and diarrhea. There is a variety of knowledge and practices relating to traditional medicine that are worth identifying, systematizing and sharing inside and outside the communities, allowing the recognition of community and traditional knowledge.

Diseases, Traditional Mexican medicine

Patrimonio biocultural de tabasco: Elaboración de platillos tradicionales en comunidades indígenas

Tabasco Biocultural Heritage: Elaboration of traditional dishes in indigenous communities

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Abstract

The objective about this research was to identify the traditional dishes in the municipality from Centla and Tacotalpa that belongs to the territory of Tabasco for recognizing the biocultural heritage at indigenous areas. This survey was developed since 2016 to 2018 and the way of study and methodology was qualitative through the open interviews to people who cooks traditional dishes in order to have a selection of chefs were in charge the plates. This selection was performed with persons related to the students of turistic development career in this case families, relatives and acquaintances. The interviews were recorded in a mobile device and transcribed to a Word processor in order to add this information in a data base. The final results show that were 69 dishes distributed in the following way: The municipality of centla obtain 40 rescued recipes and the municipality of Tacotalpa obtain 29 recipes and two of them were identifying in indigenous language as Zoque. The interaction between nature resources and the biocultural heritage for the municipality of centla they were mainly with the wildlife as crustaceans, chelonians, reptiles and fishes so for the mountain area Tacotalpa can be found plants, mammals, gasteropods and fishes.

Tourism, Rural, Culture, Education, Region

El concepto de la resiliencia a través de la historia

The concept of resilience throughout history

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Abstract

This research aims to illustrate the importance of resilience throughout history and how it has been taken into account by different authors in the most unfavorable social scenarios, as well as offering a theoretical contribution from it, by different authors. At present, resilience has been proposed as a topic that is attractive in the eyes of researchers, however, it is pertinent to know where this word comes from, which now stands as a capacity developed by human beings who manage to get out. Forward after multiple adversities, their notions are varied, but usually fall in the same direction "people who manage to get ahead after adversity."

Resilience, Adversity, Subjects

Importancia de las relaciones interpersonales en la satisfacción en el trabajo

Importance of interpersonal relationships in job satisfaction

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Abstract

Among the fundamental conditions of the human being considered for optimal performance at work are social interpersonal relationships. These are an essential part of psychological stability and the work environment. From a biological perspective, the human being is diligently dependent on communication and social coexistence. It is essential to survive the social need to be productive and work in functions that allow you to sustain yourself and give to others, this forms the labor relations. This is where the optimal development and capacity is measured within the assigned jobs that you have within the work environment. The variables measure with quality standards and objectively emotional indexes generated within the work. The objective of this non-experimental, quantitative research is to analyze how interpersonal relationships impact on job satisfaction, since that is where the conditions create feelings of pleasure, attachment or investment, reflecting personal and work success. Here we show innovation factors that impact the sense of work belonging based on experiences of workers and within the environment, which generate feelings of well-being and satisfaction that impact good work performance.

Job satisfaction, Interpersonal relationships

La sustentabilidad en tiendas de conveniencia de la ciudad industrial en villahermosa. Tabasco, para el desarrollo de una propuesta

Sustainability in convenience stores of the industrial city, in villahermosa. Tabasco, for the development of a proposal

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Abstract

This research analyzes the sustainability of the convenience stores of the industrial cd in Villahermosa, Tabasco. Considering the behavior of the research variable (sustainability) in different international, national and local contexts. As well as the theoretical foundations on which this variable is based. A diagnosis is made on the sustainability of convenience stores, generating a comprehensive scenario, in order to design a proposal. The tool that was used was the Likert scale from which an instrument was designed to determine how each of the cultural, economic, social, political, technological and environmental variables (independent or context variables) influence the research variable (sustainability of convenience stores). These context variables are in constant changes and movements and directly influence the convenience stores either positively or negatively. The instrument was applied in the convenience stores of the industrial cd of Villahermosa, Tabasco, in order to obtain decisive results for the sustainability of the self-service stores, the Excel tool version 2010 was used, in which tables were obtained and graphics, simplifying the content of the data giving specific and necessary results for the development of the proposal. From the results obtained, a model is designed to improve the sustainability of the convenience stores of the industrial cd in Villahermosa Tabasco, which will achieve a growth that will be strongly linked to social responsibility to provide attention to the workers who are part of them and the reduction of the impact on the surrounding environment. Ensuring the competitiveness profitability and permanence of convenience stores forman parte de ellas y a la disminución del impacto en el entorno que las rodea. Asegurando la competitividad, rentabilidad y permanencia de las tiendas de conveniencia.

Sustentabilidad, Crecimiento, Social

Diagnóstico de planeación estratégica para empresas comerciales de Ciudad Obregón, Sonora

Diagnosis of strategic planning for commercial companies in Ciudad Obregon, Sonora

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Abstract

This study consists in elaborate a diagnosis of strategic planning for SMEs in the commercial sector of Ciudad Obregón, Sonora, answering the question posed: How to contribute to the improvement of the organizational performance of SMEs in the locality? The established objective is to carry out a diagnosis of strategic planning for SMEs in Ciudad Obregón, Sonora based on obtaining information through the application of an instrument, with the purpose of generating proposals that contribute to the improvement of their organizational performance, increasing their probabilities of permanence in the market. The research is qualitative and descriptive, designing an instrument to diagnose strategic planning for five SMEs in the commercial sector. Finding mainly lack of strategic planning and to perform the analysis of the environment, both internal and external, it can be said that they have no accurate knowledge of these, causing uncertainty. Concluding that it is vital that every company has a strategic planning, because when planning and organizing work, it becomes less difficult (Aguilar, 2000); and by continually evaluating strategies, they prevent them from becoming obsolete, in addition, this contributes to the objectives and strategies being established in a coordinated and conscious way, avoiding bad decisions (David, 2003, cited by Valdez, Zerón and Morales, 2008).

Strategy, Strategic Planning, SMEs

Derrama económica por las fiestas patronales y eventos de la marca GTO

Economic spill for the celebrations and events of the GTO brand

GÓMEZ-BRAVO, María De La Luz, GOMEZ-BRAVO, Jessica Margarita, ANDRADE-OSGUERA, Miguel Ángel, BARCENAS-PUENTE, José Luis

Abstract

The research is based on the fact that so much economic spill leave the patron celebrations or events of the GTO brand, in the state of Guanajuato and in its different municipalities where these events are held, to which a wide publicity is carried out by different means, evoking to that the society consumes local and handmade products, to mention an example in the municipality of Valle de Santiago, the chubby festival was held last June “8 thousand people gathered at the chubby festival , about 20 thousand chubby were consumed, had an economic spill of about 4.5 MDP in a single day ”, this published on the page gourmetaro.com.

Estudio de condiciones de mercado para la comercialización de shampoo sólido

Study of market conditions for the marketing of solid shampoo

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Abstract

The purpose of the research was to analyze the viability of the business model “IUHCAYO solid shampoo” in Guadalajara. IUHCAYO Shampoo consists in an organic product for hair care, which aims to offer a healthier product that is environmentally friendly. The objective of the business model is to replace liquid shampoo products with solid bar shampoo, thus reducing the use of plastic containers in addition to reducing harmful chemicals for hair with this organic product. A market research was conducted between men and women above 18, through a survey using multiple selection. Results conclude that product is accepted by the sample. Through probabilistic sampling, individuals were located who contacted the Great Guadalajara to men and women above 18 years old. The type of questions used was the one of closed questions, of multiple selection with only answer. Finally, the market research conclude that the product is viable. Objective. Identify market availability to acquire the Shampoo bar in the Great Guadalajara Area. Methodology. A quantitative study was carried out having as a data collection instrument a survey applied in the Guadalajara Metropolitan Area to a representative sample of 1,067 surveys of men and women over 18 years with a 95% confidence level and a margin of error of 3%. The survey was conducted by simple random subsampling by clusters and random home routes.

Solid shampoo, Market research, Comercial viability

Diagnóstico de mercado para conocer escenario comercial de snack para mascotas

Market diagnosis to learn about the commercial snack scene for pets

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Abstract

The snacks for dogs based on flour extracted from crickets, contain the same protein that a pound of beef. But obtaining the beef consumes two thousand times more water than producing a pound of crickets, also more land and energy, not to mention that generates 100 times more greenhouse gases. Insects have as many proteins as beef or chicken, and they also have more vitamins.

- **PRODUCT** Dog biscuits based on cricket flour.
- **PRICE** The price to the public is \$ 100 MXN. 450 gr. (12 pcs)
- **PLACE** Supermarket, convenience stores, pet stores, veterinary, pet accessory stores and website.
- **PROMOTION** - Online coupons - Discounts on special dates - Quantity discounts - Free Shipping from a certain amount of purchase on the website - Draws for social networks

Objective To validate commercial viability of selling snacks made from cricket flour for dogs in the Great Guadalajara Area. **Methodology** A quantitative study was carried out on pet owners, specifically dogs; the survey was applied in the Great Guadalajara Area to a representative sample of 380 surveys of men and women over 18 years with previous filter question with a confidence level of 95% and a margin of error of 5% The survey was conducted by simple random subsampling by clusters and random home routes.

Market research, Pet shack, Comercial viability

Estudio sensorial y tendencias de mercado del agua purificada utcgg Petatlán, Guerrero

Sensory study and trends of the purified water market utcgg Petatlán, Guerrero

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Abstract

Objectives: To evaluate the sensory characteristics (taste, smell, clarity and brilliance) of UT Purified Water, and identify new products with the possibility that in the future they will be commercialized in the potential consumer and business markets of Petatlán and Zihuatanejo de Azueta, Gro ., as well as its area of influence. **Methodology:** Quantitative Research, Descriptive type and stratified sampling. The population corresponds to 2,132 students from 7 different educational programs; 60 are professors of the teaching staff of the UTCGG, 45 administrative and service staff of the UTCGG. So the population size is $(N) = 2237$, it is for that reason that the author's formula Díaz, 2011 was used. **Contribution:** The Academic Logistics and International Businesses in coordination with the Academic Science and Technology of Foods in the Costa Grande of the state of Guerrero of the Technological University of the Costa Grande de Guerrero (UTCGG) headquarters in the city of Petatlán, is of interest to know the possibility of launching to the market the packaged product of purified water that is processed in the plant of the aforementioned educational program. This is a study of the sensory characteristics of purified water currently produced by the UTCGG purification plant, as well as market trends, a survey was applied to 185 people among students, administrative staff and teachers of the University, with The purpose of knowing if UT purified water turns out to be competitive to market it in the not distant future.

Purified Water, Petatlan, Market

Impacto financiero por el desabasto e incremento de la gasolina en el Estado de Guanajuato

Financial impact of the shortage and increase of gasoline in the State of Guanajuato

GÓMEZ-BRAVO, María De La Luz, GOMEZ-BRAVO, Jessica Margarita, ANDRADE-OSGUERA, Miguel Ángel, BARCENAS-PUENTE, José Luis

Abstract

This work is focused on the financial impact that the state of Guanajuato suffered in the first months of this year due to the shortage of gasoline and the increase in its price, the entrepreneurs of the state of Guanajuato are the main affected by the situation that is being experienced in the state since they are quantifying the affectation within the tourist, commercial and industrial sector that are the main source of wealth of the state. In the economic report carried out by CITY BANAMEX, we are informed at the beginning of January that the losses on the Gross Domestic Product GDP are in a range of 0.1% to 0.3% due to the shortage of fuel. The crisis due to the shortage of gasoline forced the state of Guanajuato to set the objective of how to face future contingencies and thus be able to count on infrastructure and integral actions.

Factores determinantes para el emprendimiento de los empresarios del sector comercial de San Luis Río Colorado, Sonora

Determinant factors for entrepreneurship in the business sector of San Luis Río Colorado, Sonora

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Abstract

Entrepreneur have been studied since several centuries ago from Cantillon to Schumpeter, who in recent decades perceived the entrepreneur as an extraordinary person capable of promoting new combinations or innovations. The activity of entrepreneurship implies starting a path to the unknown and new, individuals who have certain characteristics are able to bear the risk aversion of starting a new idea. The objective of this research is to determine what endogenous and exogenous factors the businessmen that belong to the commerce sector possess, to identify what internal and external characteristics they have or developed to be able to undertake at some time. The analysis of the data was 100 commercial companies through a self-directed survey, where the results seek to describe both external and internal characteristics of businessmen in the commercial sector of the City of San Luis Río Colorado, Sonora. The main contribution to the theory of entrepreneurship is that internal factors such as leadership, effectiveness, efficiency and adventure are essential and external factors as the contribute to society, apply new ideas, tolerance to uncertainty, not possess studies and always live Oriented towards an entrepreneurship highlighting these factors as basic to undertake.

Factors, Entrepreneur, Entrepreneurship

Financiamiento en áreas estratégicas para la competitividad de las empresas comerciales

Financing in strategic areas for the competitiveness of commercial companies

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Abstract

This is a research (cross-sectional, non-experimental quantitative approach) based on a survey, of a sample for convenience of 365 micro, small and medium-sized commercial enterprises (MSMEs). The objective of the present was to identify the association that exists between the financing and the competitiveness of the MSMEs of the commerce sector, for which the correlations were determined using the Stata software of the 3 analyzed variables (sales, quality and environmental management) with a level of 5% significance, with the results obtained, the correlation map of the 3 variables was prepared. Therefore, it is stated, what is the degree of correlation that exists between the financing applied to the areas of (sales, quality and environmental management) and the competitiveness of the SMEs of the commerce sector? The study reveals that the MSMEs, show a correlation of 0.9917, 0.8971, and 0.9220 in the variables of sales, quality and environmental management respectively, which means that the MSMEs that used the financing resources in the sales areas, achieved a competitiveness greater than those that used them for the quality area and that financing environmental management contributes to the competitiveness of the company.

Financing, Competitiveness, Commercial companies

Mejora de la calidad: Reducción de piezas defectuosas en el departamento de estampado de una empresa automotriz

Quality improvement: Reduction of defective parts in the stamping department of an automotive company

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Abstract

Complying with the quality that customers require is an essential part of an organization, whether they are internal or external customers. This investigation was carried out in the Stamping and Body Departments of an assembled car company, these have performance indicators that impact both, one of them is *Body Bining to Stamping*, which represent the incidents in R / 1000 of defective parts released by Stamping found in Bodywork. During the analysis of the report, an increase in the indicator from 30.43 R/1000 to 44.14 R/1000 was noted, limiting the flow of parts of the manufacturing process, influencing productivity and the use of resources to repair parts with defects. Therefore, the objective is to reduce the number of defective parts of the *Body Bining to Stamping* indicator to increase the quality of the parts in the department studied. The procedure to be followed was DMAIC methodology, using the following activities: define the project to be attended, measure the process, analyze the causes of origin, improve the process, control the improved process and document the problem-solving process. The results that obtained show a decrease in the amount of defective parts of DPMO sending to the internal customer in approximately 65%. The goal of the Closures indicator was to send 28 R/1000 monthly incidents and managed to send 15.39 R/1000.

DMAIC, Continuous improvement, Quality

El análisis FODA y su interacción con la planeación estratégica en las empresas

SWOT analysis and its interaction with strategic planning in companies

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Abstract

Strategic planning allows organizations to visualize and build their future and can be conceptualized as an important process to help determine the major purposes of an organization. Therefore, the case study presented is referred to a company in the telecommunications sector, considered as a small company because of the number of people working in it, but due to the wide market it would be considered within the medium-sized company, it started operations Without considering strategic planning, therefore the growth phase in which it is located, is representing a serious problem, since it has not been able to determine the areas of opportunity it has to achieve the goal of staying in the market and continuing to be part of the supply chain for regional companies. Therefore, one of the fundamental parts of strategic planning is precisely the situational analysis, also known as SWOT analysis, which allows the collection and use of data, which makes it possible to know the operating profile of an organization at a given time, since it favors the development and execution of formal planning, from there an objective diagnosis is established for the design and implementation of strategies that help improve the competitiveness of said company.

Planning, Strategies, SWOT analysis

Análisis de la productividad del proceso de distribución de la empresa DICONSA en Villahermosa Tabasco, para la generación de una propuesta de mejora

Analysis of the productivity of the distribution process of the company DICONSA in Villahermosa Tabasco, for the generation of a proposal for improvement

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Abstract

The objective is to carry out an analysis of the productivity of the distribution process, in the company DICONSA in Villahermosa Tabasco, for the generation of a proposal for improvement. This research will address topics of interest on the productivity of the distribution process, of the company DICONSA that is responsible for supporting both urban and rural communities. Productivity is a topic of great interest within the business sector, since based on it; The future of any company depends on the application and its use within the organization. Productivity indicators are essential to really know what state an organization is in. The research method is descriptive, since it was made from documentary research of primary and secondary sources of information. It will contribute with a diagnosis of the situation of the company and a model of improvement for productivity, within the company DICONSA located in Villahermosa, Tabasco.

Productivity, Improvement, Processes

Análisis del potencial innovador de las micro y pequeñas empresas de México y Colombia

Analysis of the innovative potential of micro and small companies in Mexico and Colombia

SERRANO-TORRES, Ma. Guadalupe, QUEZADA-FLORES, Ma. De la Luz, ZAMBRANO-VALDIVIESO, Óscar Javier, GONZALEZ-GALLARDO, Sofía del Carmen

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Abstract

The objective of this research is to present the results and comparative analysis between the countries Mexico and Colombia in the implementation of innovation, used as a tool for improvement in production, in the sales process, in the organization, in the promotion of products. And services, as a strategy of permanence in the market for micro and small companies in these countries. Surveys were randomly applied by students from both universities, the methodology applied for this research is quantitative in that it measures the percentage obtained as a result of the implementation of the innovative potential by entrepreneurs, 33,076 questionnaires were applied in the Mexican Republic and 4,050 surveys in Colombia. As a result, it was obtained that both countries agree that they offer products and services derived from the suggestions made by their clients. It is this questioning that has the highest percentage as a result of the use of innovation by companies in Mexico and Colombia. This research was carried out in 2018 and contributes with statistical data that allow us to increase and improve the level of innovation of the MIPES of Mexico and Colombia for the following years of life of the companies.

Innovative potential and micro and small businesses

Análisis comparativo del desempleo y la inflación en México

Comparative analysis of unemployment and inflation in Mexico

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Abstract

The article examines, based on panel regressions, the long-term relationship between inflation and economic growth based on information for 70 countries and annual data for 1950-2010. The results do not find evidence of a significant trade-off between inflation and long-term growth for this sample and period, except if national experiences with average annual inflations above the annual 65% threshold are included. That is, outside regimes with persistently very high rates of inflation, there is no systematic or significant inverse relationship between inflation and the growth rate of productive activity. The absence of such long-term trade-off for the aggregate panel is far from implying that for any individual economy the inflation undermines its growth only if it exceeds the 65% per annum. The analysis by groups of countries reveals that the value of the threshold of significance is a function of the current monetary regime.

Trade-off, Inflation and economic growth, Panel regressions, Monetary regimes, Latin American economies

Estado de flujos de efectivo y el análisis financiero: El caso de una empresa multinacional en México

Estado de flujos de efectivo y el análisis financiero: El caso de una empresa multinacional en México

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Abstract

The statement of cash flows, based on the financial information standard (NIF) B-2, issued by the Mexican Council of Financial Information Standards (CINIF, whose objective is to present to users, the generation and application of cash for activities of operation, investment and financing. The analysis of cash flows, the application of methods and techniques of analysis to the basic financial statements as a whole, provide relevant information about operational and financial strengths and weaknesses of an economic entity. In the case presented by a Mexican multinational company, the financial statements as of December 31, 2018, 2017 and 2016 are analyzed, using vertical and horizontal techniques, determining the generation and use of cash flows, financial ratios, percentages and trends. The statement of cash flows in conjunction with the statement of financial position, statement of comprehensive income and the statement of variations in stockholders' equity, they provide relevant information about the financial situation of an economic entity; and thus identify the reasons that explain the aspects of liquidity, leverage, profitability, activity and coverage, having more elements of judgment that allow it to support decision making.

Financial Statements, Cash Flow Statement, Financial Reporting Standards, financial analysis

El esquema de financiamiento en México para el emprendimiento universitario

The financing scheme in Mexico for university entrepreneurship

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Abstract

The objective of this work is to identify the schemes, sources and financing instruments available for university entrepreneurship in Mexico from the change of federal government on December 1, 2018. The methodology applied for the development of this work consists in the first instance of a review of the National Development Plan with the objective of identifying the plans, strategies and lines of action embodied in the document related to financing for university entrepreneurship. Subsequently, a review of the organizational structure of the current federal government was carried out to identify the entities and agencies whose functions are oriented to promote the economic development of the country through the granting of financing schemes for entrepreneurship and the form and requirements that must be met to access such schemes. The results obtained contribute to the strengthening of the applicable strategies of higher education institutions in terms of the entrepreneurial training of their students and, consequently, to the strengthening of the business ecosystem and economic development through the creation of employment generating companies by of the most trained agents for this purpose.

Entrepreneurship, Financing, University

Factores para la medición de la gestión del conocimiento y del capital intelectual en el sector público Jalisciense

Factors for measuring knowledge management and intellectual capital in the public sector of Jalisco

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Abstract

In the public sector, stresses the importance of Knowledge Management and Intellectual Capital, as raw material in the generation and provision of services to citizens, depending on existing needs, as well as in the modernization of public administration. In this sense, the objectives of the present research are focused on identifying the necessary factors for the measurement of Knowledge Management and Intellectual Capital in the public sector of Jalisco, as well as explaining the behavior of the variables under study. For this, the scales of Rodríguez-Ponce (2007) and Chahal and Baskhi (2015) were used with six dimensions or factors, appropriate to the Mexican public context. With a cross-sectional study and a non-probabilistic sampling for convenience of 52 employees of middle managers and directors of the public sector of social assistance from Jalisco, who voluntarily accepted to participate, the results were obtained that allowed validating the instrument with necessary dimensions or factors in the explanation of the variables under study, by means of descriptive statistics and statistical tests of reliability, normality tests and correlations between elements by factor.

knowledge management; Intellectual capital; Public sector

Análisis comparativo entre el modelo de empresa integradora y consorcio de exportación en México

Comparative analysis between the integrating company model and the export consortium in Mexico

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Abstract

Globalization has forced entrepreneurs of all types of companies to orient their steps of commercial leadership, to search for new forms of internationalization in order to be at the forefront of business transcendence. In Mexico, about 98% are small and medium-sized companies who seek to consolidate their exportable offer through different forms of international commercial collaboration. These figures involve substantive benefits such as: fair trade, specialization and the consolidation of the exportable supply. This research will address the figures of Integrative Company and the Export Consortium to make a comparison between both forms of international business cooperation. This qualitative research with a grounded theory research design had an extensive review of the literature that was carried out. It is concluded that although both figures have similar characteristics, the Integrating Company model offers more support to microenterprises, while the Export Consortium focuses on the work of small and medium enterprises.

Integrative Company, Export Consortium, Fair trade

Estudio de las variables del contexto para el diseño de un modelo económico sostenible en estaciones de servicio de gasolina en Villahermosa, Tabasco

Estudio de las variables del contexto para el diseño de un modelo económico sostenible en estaciones de servicio de gasolina en Villahermosa, Tabasco

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Abstract

Objectives: To study the context variables, for the design of a sustainable economic model such as improvement to companies with service stations in Villahermosa, Tabasco. **Methodology:** Describe the most appropriate strategies to reach the target group: people who have vehicles for family use, shall apply where a survey to a sample of the population seeking to identify characteristics as habits of consumption, frequency of use, additional services and budget to invest. **Contribution:** The design of a sustainable economic model.

Model, Sustainable, Gas stations

Propuesta de certificación para las cocineras tradicionales del Estado de Puebla

Certification proposal for the traditional professional cook of the State of Puebla

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Abstract

Eating is a biological act and cooking, a cultural act; the gastronomy in Mexico, for the culinary variety is the third in the world. The cuisine is made up of indigenous, spanish and asian elements, making it one of the most representative of the country, which consolidates its legitimate pride of identity. A good part of tourism moves, to a large extent, in search of gastronomic delights, find these in the typical markets of a province, a place or a good inn; allowing to interact with the popular gastronomic identity. The objective is to create a certification for the traditional professional cook of the markets of the city of Puebla in order to have the knowledge and technical tools to offer food with the best possible quality, thus allowing to generate an identity of gastronomic culture. In order to substantiate this certification, a study was carried out in the markets of the city having generated results that allowed the realization of the first training courses, which shall lay down the basis for the relevant certification. The kitchens in Puebla, have been laboratories of the food culture, the traditional professional cook, possess a culinary knowledge that contribute to the intangible cultural heritage, for this reason it is necessary that they possess a certification that gives them certainty of value in the activities that they carry out to frame in food identity.

Culture, Traditional Professional Cook, Certification

La capacidad turística en el desempeño de un destino

The tourist capacity in the performance of a destination

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Abstract

The purpose of the research was to analyze the dimensions of Tourism Capacity as an element of the Performance of the Tourist Destination through a case study in Guaymas, Sonora. The methodological process was based on the documentary review to define the indicators of tourism capacity; likewise, the probabilistic and random sample formed by the various tourism service providers in the region was determined and the Multivariate Analysis technique was used to accept the research hypothesis. It is concluded that the Tourist Capacity can be formed by: tourist attractions, accessibility to the site, a tourist influx, public safety, tourist equipment, diversity of the tourist offer, urban planning and tourism regulations to achieve the performance of the Tourist Destination.

Performance, Tourist Destination, Tourist capacity

Seguridad laboral en una empresa de envasado y distribución de ácido clorhídrico

Job security in a packaging and distribution of hydrochloric acid company

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Abstract

Hydrochloric acid is a chemical compound with broad applications in industry, chemistry, mainly used for the manufacture of agrochemicals, veterinary products, production of PVC, the process of demineralization of water, activation of oil fields, process of tanning skins, process of stamping in the textile industry, production of pharmaceuticals as well as applications in the food industry as an additive in the manufacture of gelatin and sugar. In recent years in Mexico, the chemical industry has held between the third and fourth place in the value of GDP is a 10.7% of this (INEGI, 2015). The growth of this industry every year, explains the increase in the demand for the product of the study dedicated to the purchase, storage, packaging and distribution of hydrochloric acid and muriatic. This company raises the need to distribute their areas of production, optimizing the working conditions and the need to expand to implementing a better distribution of plant that guarantees the security of the worker and increase its production capacity and competitiveness.

Job security, Hydrochloric acid, Risks

Diagnóstico del perfil gerencial de los sistemas producto. Un estudio de caso en Aguascalientes

Management profile diagnosis of the product systems. A case study in Aguascalientes

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Abstract

Our society and its organizations demand an effective management, being the role of managers essential for success, in particular at the Product System created to increase the quality and competitiveness of the agrifood chains of strategic products. This project aims to identify the degree to which managers in Aguascalientes cover the profile required to face the challenges that demand promoting the integration of agrifood chains of added value and achieve the sustainability of the Product System Committees. The process was developed under a mixed research approach (qualitative and quantitative) of descriptive scope, as a case study, with the application of specific tools from the position and performance analysis, to 50% of managers, with a non-sampling probabilistic for convenience. The diagnostic results indicate a high average (90%) in the position-person profile affinity, placing planning less than 75% as the main areas of opportunity, which negatively influences the achievement of sustainability, and on the other hand the level of mastery (33%) of the guidelines and strategies of integration and operation of the Committees. Derived from the analysis of results, recommendations related to talent management and managerial development were outlined.

Manager, Profile, Product-Systems

La función de integración de personal en empresas de ciudad Obregón

The function of integration of person in city companies Obregon

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Abstract

One of the company's needs nowadays is personal ideal according to the profile, which has been complicated by several factors. This work aims to identify companies that carry out a formal application phases of the process of integration of personnel. This is a research with a sample of convenience not probabilistic involving 50 companies of different turns of Ciudad Obregón. For the collection of data was used a questionnaire designed by experts from the administrative audit, which allowed to identify immediately the implementation of the basic elements that make the process of integration of personnel: recruitment selection, recruitment and induction. The importance of the project offers is that a picture of the implementation of the basic process of the integration of personnel in companies. In terms of the findings found that 36% reported not to carry out a process of personnel selection, another result is that 20% do not have a formal recruitment activity, 22% not performing activity of induction to the company and 18% does not a formal recruitment.

Recruitment, Selection, Hiring and induction

Remuneración salarial y beneficios recibidos relacionados con la calidad de vida laboral percibida en el Noreste del estado de Guanajuato, caso; Victoria, Tierra Blanca, Santa Catarina, Xichú y Atarjea

Wage remuneration and benefits received related to the quality of working life received in the Northeast of the state of Guanajuato, case; Victoria, Tierra Blanca, Santa Catarina, Xichú and Atarjea

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Abstract

This study shows the perception of workers in the municipalities of Atarjea, Tierra Blanca, Santa Catarina, Xichú and Victoria who make up the Northeast of the State of Guanajuato, regarding the current wage structure, result of exploratory quantitative research carried out by students and teachers from the Universidad Tecnológico de Norte de Guanajuato, Campus Victoria.

Wage perception, Wage structure, Benefits, Stimulus

Opción de aplicar deducciones personales para disminuir la base gravable o incrementar la recuperación de impuestos de personas físicas en México

Opción de aplicar deducciones personales para disminuir la base gravable o incrementar la recuperación de impuestos de personas físicas en México

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Abstract

This research objective is to identify all personal deductions of the 151 article of the income tax law that meet all the fiscal requirements in order that the individuals can deduct when presenting their annual income tax return. Personal deductions are the concepts that the legislator allows to deduct from the annual income tax statement. When discount personal deductions? The process is performed when the taxpayer may apply certain deductions established by law. Taxpayer must know specific aspects such as: deduction's types, that the deductions are strictly necessary, know the limitations that the legislator allows to deduct, as well as know who can be the beneficiaries of the taxpayer among other requirements. The individuals may enjoy the benefits that the legislator allows by subtracting the accumulative income. For the practical case are used: the ISR law, Regulations, RMD and decrees. If the taxpayer makes use of this option in a legal manner, the taxpayer will have the result of paying less taxes or to increase the balance at its favor of the income tax and therefore may request the tax refund.

Personal deductions, Taxes, Benefits

Análisis de las escalas de medición del compromiso organizacional

Analysis of the scales of measurement of organizational commitment

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Abstract

The main objective of this study is to identify and analyze the measurement scales used to determine the organizational commitment (CO) of the workers, based on an exhaustive bibliographic review in the main scientific databases. The research is of a qualitative, descriptive type of comparative cut between the different instruments used to measure the level of identification of employees with the organization, as well as reliability through internal consistency, through literary review related to the construct in study. The importance of identifying the degree of involvement of labor personnel towards the organization, as well as their classification in the dimensions that make up the organizational commitment is necessary for social research and organizations, to formulate proposals focused on the contribution and strengthening of the labor relationship –employer.

Organizational commitment, Scale, Reliability

Efectos de la transición al RIF de microempresas de la ciudad de Valle de Santiago, Guanajuato

Effects of the transition to the RIF of microenterprises in the city of Valle de Santiago, Guanajuato

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Abstract

As a measure to reduce tax evasion and informality, the Fiscal Incorporation Regime (RIF) arises with the 2014 tax reform, which generated a radical change in tax obligations and in the way taxpayers must comply, a situation that It mainly affects micro and small businesses, so this work aims to identify the affectations and benefits derived from the incorporation into the RIF of micro-enterprises in the city of Valle de Santiago, Guanajuato; It is based on a qualitative study, applying the in-depth semi-structured interview technique to 30 taxpayers who have been taxing in the RIF since January 1, 2014. The main results indicate that the tax reform is not entirely negative, the intention of the government of reducing informality has been met, however, the execution has setbacks, as small business owners do not have a sufficient fiscal culture or technological preparation to fulfill their obligations on their own, in addition to the fact that the increase in operating expenses represents a strong load for companies, a situation that places them at a disadvantage with respect to their competitors.

Fiscal Incorporation Regime, RIF, MSMEs

Empaques para alimentos y su normatividad en México

Empaques para alimentos y su normatividad en México

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Abstract

Food packaging and its regulations in Mexico. Objective: To identify the context in terms of legislation for food packaging in Mexico. Methodology: A qualitative documentary investigation was carried out, to obtain from Mexican national official and institutional primary sources, the existing published information regarding food packaging. The information was recovered, analyzed, classified and organized by food groups, as is done in other international references. Contribution: This paper presents a description of the parameters that regulates food packaging based on the existing regulations for food in Mexico and its sources of obtaining. From the analysis of the information obtained, this paper contributes to the dissemination of the existing Mexican regulations of the regulations for the packaging of food products and the degree of inclusion of the needs of Mexican consumers in this matter regarding the form as presented in the United States in its CODEX and in the European Union. A brief discussion of the food groups, their social impact and the comparison in proportion of existing legislation for their packaging and the number of products marketed are presented.

Packaging, Processed foods, Regulation

Diagnóstico del sistema de costos en empresas Mypmes del sector textil del Sur de Sonora, México

Diagnosis of the cost system in SME companies in the textile sector of South Sonora, Mexico

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Abstract

The objective of this work is to diagnose the current situation of the Mypmes of the textile sector of the South of Sonora for the determination of how the financial administrator can make decisions through the analysis of the environment and the veracity of the information that the cost system throws, and with it facilitate the development of possible solutions that maximize the profitability of companies. The research has two approaches: qualitative for the characterization of the phenomenon and quantitative for the causal relationships between the variables under study. The study is exploratory, since it works on knowledge gaps that have different results depending on the context; It is descriptive because specific results of microenterprises are shown. The research is non-experimental, since there is no control over the variables. The instrument was designed based on the National Survey on Productivity and Competitiveness of Micro, Small and Medium Enterprises (ENAPROCE) 2015. The SPSS and SmartPLS were used to determine the causal relationships and validation of the instrument's reliability, as well as the verification of the hypotheses. It contributes to the promotion of applied research in regional issues for possible solutions associated with the well-being of organizations.

Cost System, Financial Administrator, Accuracy of Financial Information

Modelo de gestión para la investigación aplicada e innovación tecnológica, como estrategia para la productividad e impacto en el sector productivo. Caso: Universidad Tecnológica de Tula – Tepeji

Management model for applied research and technological innovation, as a strategy for productivity and impact on the productive sector. Case: Technological University of Tula - Tepeji

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Abstract

Currently, in the face of such a competitive economy, it is important that companies innovate. Innovation has become the engine that drives the transformation and growth of companies and is essential to improve living standards. There is a close relationship between innovation, research and University: research produces knowledge and innovation, and universities are the main place to conduct research, because they concentrate infrastructure and qualified personnel. Through the Teaching, the Advice and the participation in projects, the Researchers transmit to the student's knowledge of innovations and projects, methodologies and strategies; what contributes with the mission of the Universities to train professionals to solve current and future challenges. This article is generated from a documentary research on research management models, with the aim of serving as a reference to propose a documentary model of research management, which is feasible to apply in a Public Higher Education Institution, whose Contribution will be the mechanisms that allow the teacher to carry out research and technological services to impact the productivity indicators of the productive sector.

Management Model, Applied Research, Innovation

Calidad del servicio; una mirada a los establecimientos de alimentos y bebidas de un municipio del sur de Sonora

Quality of service; a view at the food and beverage establishments of a municipality in southern Sonora

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Abstract

The main objective of the investigation was to determine the level of quality of the service provided in the food and beverage establishments of Huatabampo Sonora. The methodology used in this research work has a quantitative approach and is descriptive non-experimental cross-section. Therefore, a documentary investigation was carried out to give theoretical support to the selected instrument. He multidimensional quantitative model called Dineserv, developed by Stevens, Knutson and Patton, (1995) cited by Guzmán and Cárcamo (2014), derived from the Servqual or Service Quality methodology of the authors Parasuraman was used to perform the service quality assessment, Zeithaml and Berry (1985). The results showed that the food and beverage establishments evaluated have a high level of service quality. To mention other results you can say that the contingency tables showed no significant differences in the age and gender of the subject in relation to the perception of service quality. Finally, it is observed that there is a significant positive correlation between the dimensions.

Quality, Service, Restaurants

Competitividad turística, una interpretación para el Pueblo Mágico de Salvatierra, Guanajuato, México

Competitividad turística, una interpretación para el Pueblo Mágico de Salvatierra, Guanajuato, México

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Abstract

The objective of the research is to make an interpretation of the analytical tourist tourism competition The 2017 Travel and Tourism Competitiveness Report of the World Economic Forum, the guide for the execution of Magical Towns and the Model of Tourism Excellence of the state of Guanajuato. The research approach is qualitative, qualitative research seeks subjectivity and explaining and understanding individual and group subjective interactions and meanings. (Álvarez- Gayou, 2012). Interpretive referential framework Hermeneutical Phenomenology, which seeks to discover non-multiple meanings, analyze and describe them (Álvarez-Gayou, 2012). Proposing to establish indicators of tourism competitiveness for the Magical Towns of the State of Guanajuato by means of which the form of the tourism situation can be evaluated in order to detect areas of improvement and generate strategies that increase the tourism competitiveness of said tourist destinations and It translates into a benefit for the Magic Town of Salvatierra and the State of Guanajuato.

Tourism competitiveness, Magic Villages, Tourism competitiveness indicators

Simulación de la productividad del personal en el proceso de llenado de garrafones de agua mediante simulación dinámica

Dynamic simulation applied to personnel's productivity in the filling water jugs process

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Abstract

Companies require tools for analysis and take decisions, so the simulation tool presents a competitive advantage to be able evaluating situations and scenarios that allow establishing properly structured action plans and gather all available information on resources, processes, and elements involved in the operation dynamics. The dynamic simulation offers an integrating vision that allows seeing the impact of external variables on the internal variables of interest to be evaluated as a time function, with a systemic approach. This paper seeks to visualize and detect the dynamics of the interrelationships that occur between the problems that arise in the process of filling water jugs of a purifying company and the problems at the organizational level, to assess the impact on the Productivity. At the first, the pertinent information was collected in the company together with the opinion of experts in the corresponding areas and based on this develop a model with the main variables of operation of the process and personnel's operational performance that makes up the production system of the company under study. Subsequently, the model was validated to analyze it and draw conclusions that allow us to establish proposals for improvement.

Productivity, Dinamic Simulation, Human Resource

Estudio sobre autoestima de estudiantes de nivel superior

Study on self-esteem of upper level students

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Abstract

This article deals with self-esteem as an aspect of enormous relevance in the life of the person, inasmuch as it contributes to their existence being more satisfactory. The investigation is of a descriptive quantitative cut. The objective is to know the level of self-esteem in the upper level students. For which the IAME instrument was applied to 148 students. In the analysis it is observed that the students manage a high level of self-esteem because the young people of higher education show a level (85%), which can be a product of age, family environment and personal characteristics, however 15% of the surveyed population shows difficulties in self-esteem, this population is the point to work as an institution because having low self-esteem not only affects the personality but the development of various academic activities which leads to a low academic performance, that is why it is proposed to implement guidance strategies for university students on the impact on the various aspects of life that has low self-esteem and propose a channeling if necessary to a specialist.

Self-esteem, Upper level

Estudio sobre el consumo de riesgo y perjudicial del alcohol en alumnos de la UT del Norte de Aguascalientes

Estudio sobre el consumo de riesgo y perjudicial del alcohol en alumnos de la UT del Norte de Aguascalientes

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Abstract

This article presents a study about the risk and harmful consumption of alcohol in young people of the Technological University of North Aguascalientes, whose objective is to make a situational diagnosis about the habits of alcohol consumption, as well as their level of risk, harmful consumption and possible dependence in said population, for this purpose the Identification Test of Alcohol Consumption Disorders (Alcohol Use Disorders Identification Test, AUDIT) was used as an instrument, which was applied digitally in 756 students of second semester in 14 educational programs of the Higher University Technical level, in this way the type of alcohol consumption was identified, which will allow the University to implement actions to raise awareness and awareness of the negative consequences of its consumption in the different areas of his life as the academic is, manifested through the low scholastic performance, lag and / or desertion, as well as in the personal, social and family area.

Alcohol, Consumption, Diagnosis

Enseñanza de las ciencias bajo el esquema del proyecto de ciencia, tecnología, ingeniería y matemáticas (STEM)

Science teaching under the scheme of the science, technology, engineering and mathematics project (STEM)

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Abstract

Industry 4.0 represents the fourth of a series of industrial revolutions, which in turn transformed economies, jobs, including society itself, whose strength derives from training in science and technology, however, the enrollment of students in STEM careers It is critical. To strengthen the efforts, in the formation of careers in STEM, a collaboration group was formed by three universities to integrate a STEM + A network (where A signifies the inclusion of the Arts) in the region with the objective that more and more young people enroll in the areas of science, technology and engineering and mathematics, in addition to promoting retention and gender equality. In the first phase, the project focused mainly on the measurement of relevant indicators using the IRIS-Q instrument as a support base for the design of actions to be implemented in a second stage. The resulting indicators show how cultural training, youth identity and gender equality have a positive impact on career options related to STEM by students in the border area of Baja California and Sonora. Based on these results, you can define which strategies universities should design and implement and what are the success factors for recruiting and retaining students in STEM careers.

STEAM, Industrial revolutions, Skills for the 21st century, Engineering education, New educational model, STEAM ecosystem

La labor de los cuerpos académicos en el programa educativo de Mantenimiento Industrial caso de estudio UTCV

The labor of academic bodies on the Industrial Maintenance educational programme study case of UTCV

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Abstract

The integration of academic bodies is an important step to the professionalization of the teacher's work. This article aims to describe the developed works by the CA3 of the Universidad Tecnológica del Centro de Veracruz, with a view to on the development of social and technology projects. With the supervision of the master Celia Fernández Vásquez important achievements have been obtained like the participation in the National Entrepreneur price in 2017. In this way the methodology is shared to the catchment and support of innovative projects including the patent process. It shows the participation of the society with the academic bodies in the implementation of projects without mentioning the effort of the students. All of the above favors the binomial: university-society, that under the perspective of the authors, the academic bodies are in charge of making this linkage and offer technologies closer to the Mexican society. Objective. Capture and develop innovative projects that cause a social impact with the support of the academic bodies considering the participation of students and other members of academic bodies to the society's develop. Methodology. The search of projects under the concept of integrated project, model of the UTCV, was carried out. Then the develop of the project starts with the help of experts and members of others academic bodies from different areas, during this time is necessary to patent the utility models. An important step is the active social participation in the acquisition of technology developed by students and academic bodies. For this purpose, the academic body offers workshops and gives practice demonstrations of practical projects. Finally, the academic body participates on calls to show the recent research and thereby contributing to the research process. Contribution. The task of the academic allows to the society the accessing to new machines, tools and methods to improve its life condition and make good use of resources. With the projects the materials have been recycle to avoid the pollution in favor of the environment.

Academic body, Projects, Society

Impacto en los niveles de deserción y reprobación en los estudiantes usuarios de la estancia infantil de la Universidad Tecnológica de Chihuahua

Dropout and impact failure of students users of the childrens stay in at the Technological University of Chihuahua

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Abstract

Being a father and mother and student at the same time is an increasingly frequent challenge among young people in the city of Chihuahua. The Technological University, having an important number of students in this situation and with the difficulty to looking after their children while attending classes, decides to open a day-care center, with a compatible schedule with their studies. The project aims to measure the impact that the nursery has on the rates of failure, permanence and attrition, with the users of the service three years after its foundation. The type of conclusive, descriptive and cross-sectional research is used through a structured questionnaire and statistics analysis of the students who use the service. The most relevant results are: 82.6% are women mothers, most of them use the service since they started in college and 87% decided to enter the UTCH for having a day-care center, and 91% said the failure index has decreased and the academic achievement has improved. Students perceive that the day-care has provided them with economic, academic and security benefits by having their children close and attended by expert staff.

Day-care center, Permanence and dropout rate

Técnicas de administración de los inventarios que usan las microempresas en Salvatierra, Gto., Pueblo Mágico

Administration techniques of inventories using microempresas in Salvatierra, Gto., Magical People

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Abstract

The inventory for organizations is important because it represents a considerable monetary investment. In the present investigation, the techniques used by microenterprises in this area are evaluated, making a descriptive investigation to identify their inventory management practices. Therefore, the objective of the investigation is to evaluate the inventory techniques that the micro enterprises of the city of Salvatierra use, other than being a Magic Town, the level of service they provide is associated with the inventory that the micro enterprises have at a given time to be able to meet the needs of customers, and thus provide a service that maintains the appointment. First, an instrument is developed that contains a series of issues related to ABC techniques, economic order quantity and just in time. The instrument makes use of a Likert scale to facilitate its analysis. Subsequently, it is applied to microenterprises using random sampling, having previously identified that they correspond to the micro sector, finally, a descriptive analysis is carried out, which shows the techniques they use within the administration of inventories, of such so that it is known how microenterprises work in the city of Salvatierra.

Evaluation, Inventories, Inventory techniques

Caracterizacion, simulacion y propuesta de mejora del proceso de reinscripcion en el instituto tecnologico superior de Huatusco

Simulation and improvement proposal for instituto tecnologico superior de Huatusco's reinscription process

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Abstract

One of the key processes, about service to students in educational institutions, is the re-enrollment process. At the Tecnológico Superior de Huatusco, this action is still carried out with the participation in situ of the students, where they go through various processes until they remain legally registered for the following semester. A critical activity in the process has to do with the reticular counseling, where the students spend with the teachers and taking into account the reticular progress, as well as the subjects offered, the student is assigned the number of credits that suits them, looking for With this achieve a steady advance in your career. Students are classified as regular and irregular, and according to this classification is the time required to carry out the reticular counseling, since a regular student consumes less time than an irregular student. Various efforts have been made to expedite reticular counseling, but the results have not been very encouraging. Using a simulation model, we seek to find reengineering that allows us to reduce counseling time and thereby reduce the complaints of students in this process.

Simulation, Characterization, Reengineering

Desarrollo de la primera etapa del sistema de emisión de títulos profesionales digitales conforme a los lineamientos de la Secretaría de Educación Pública

Development of the first stage of the system for issuing digital degree certificate in accordance with the guidelines of the Ministry of Public Education

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Abstract

The results of the first stage of the project System for issuing digital professional titles are described, which aims to generate a tool that allows the issuance of Digital Degree Certificate according to the new guidelines of the Ministry of Public Education (published in the official gazette of the federation) in the superior technological institute of southern Guanajuato. The methodology of this project is proposed through the use of the life cycle based on the iterative and incremental models, which will allow the project to be divided into iterations that generate value increases, in order to stabilize the system in early stages. When issuing the digital titles, we want to take advantage and enhance the comprehensive system of school control that is currently in the institution, which will improve our service to our students by not relying on third parties in the issuance of the electronic title that would allow us Streamline student attention and know at all times the current status of the digital title issuance process. In the first stage the requirements, design and non-functional prototype are defined, with the first generation version of the XML corresponding to the title.

Software, Digital Degree Certificate, Graduates

Sistema de emisión de títulos digitales: Módulo alumno y público en general

Digital degree certificates issuance system: Student and general public module

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Abstract

In recent years, the Ministry of Public Education (SEP) has established new standards for the issuance of Digital Bachelor Degree Certificate titles by educational institutions and their registration with the Directorate General of Professions (DGP). Currently, the Technological Institute of the South of Guanajuato (ITSUR) through the academic body of Software Development under software engineering methodologies, is completing the first stage of developing an application to issue, sign and register digital bachelor degree certificates before the DGP. This application does not have any module that allows access to the student or general public interested in their validity. Therefore, it is required to develop new modules that require the student to follow up on the process, download the degree certificate and the graphic representation, as well as allow those employers or affected to verify the validity of a degree. The methodology to use will be iterative and incremental, to divide the project into iterations that generate increases in value and achieve stabilization in less time. This new version will have greater impact, as it may be distributed to other Technological Institutes that have implemented the Integral School Control System (SICE) owned by ITSUR and thus reduce the gap in the issuance of digital degree certificates.

Software, Digital Degree Certificate, SICE

Programa de educación para la salud: Estilos de vida y factores de riesgos en universitarios

Health program: Lifestyle and risk factors in college students

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Abstract

The purpose of the study was to determine the efficacy of an educational program for change lifestyles related to risk factors on subjects with a disease or in the risk of suffering one or both chronic-degenerative diseases, implemented at a university in northwestern Mexico. A sample of 40 college students between 18 and 20 years was studied, indicating inclusion criteria. This study used a descriptive transversal design, with measurements before and after the intervention. Results showed hypertension incidence on elevated systolic pressure in 100% of cases, being statistically significant. Regarding the evaluation of program effectiveness on the Body Mass Index (BMI) and knowledge, statistically, no differences were found. However, within individual-analysis, reflected knowledge showed an increase; in the same way, there was an individual decrement on BMI. Even when the program does not show significant differences, had an impact on 73% of the sample. Applied research it is a learning generator, thus, in this case, at the moment of design, apply, and evaluate the program, give us the opportunity to correct strategies and procedures that help to decrease risk factors and improves the college student health.

Education, Health, Risk Factors

Autoempleo y el perfil de emprendimiento

Self-employment and entrepreneurship profile

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Abstract

The current labor market is characterized by its complexity in the lack of sources of formal employment and added to it, the difficulty that young people, women, the disabled, immigrants and all those over 40 have to find a job stable in any part of our society seeing itself in the need of self-employment. Therefore, the self-employed person is the person who has decided to become their own boss, charging for what they work, generating income that goes directly to their pockets, allowing them not to have intermediaries or companies involved in taking their decisions that They allow you to fulfill all the responsibilities that this economic activity implies. Therefore, the purpose of this research is to identify the profile of entrepreneurship in individuals who are self-employed in order to obtain information that allows identifying, understanding and considering some action strategies that may contribute to the strengthening of self-employment in municipalities of San Luis de la Paz, Dolores Hidalgo and San Diego de la Unión belonging to the state of Guanajuato.

Self-employment, Business Vision, Business Profile

Variables determinantes del crecimiento de las micro y pequeñas empresas

Variables determining the growth of micro and small businesses

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Abstract

Both developed and emerging nations share a high proportion of SMEs in their economic structure. For developing countries like Mexico, this situation can represent development opportunities. In this context, the objective of this study is to statistically analyze the relationship between the variables finance, technology, competition and human resources, with the variable dependent on business growth in the micro and small companies of southern Sonora. To do this, we propose a structural model, tested through the model of structural equations with estimated panel data and a contrast of said results through a multiple linear regression model. The sample size reached was 65 companies and the information was collected through interviews. The results through structural equation models and linear regression show that there is a positive and statistically significant relationship between viable technology and competition with business growth, not being so with the variables finances and human resource, when not being significant, concluding that the variables technology and competition explain the behavior of the dependent variable (business growth). The findings are consistent with those found in other research conducted in other countries.

Business growth, Micro and small enterprises, Multivariate analysis

La contaduría pública como profesión en México

Public accounting as a profession in Mexico

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Abstract

Every profession has a function of responsibility to society, which implies dedication, compliance and permanent updating, credibility and, above all, appropriating their ideals, making them part of their being, with certain ideas, ethical compliance, values and practices that characterize him as a professional. Exercising the profession of Public Accountant implies a sense of social responsibility, of acting with integrity of values and ethics, if one takes into account that society demands such compliance, in addition to a behavior of honesty and certainty. In Mexico, the Public Accountant has different areas of specialization in which professionals can find work cavity today. The main objective of this article is to analyze and identify the functions of a future professional in Public Accounting as well as the work areas to be carried out. The background, essential characteristics, challenges and fields of action of the profession in Mexico are included, thus contributing to the election of career for university futures.

Responsibility, Ethics, Honesty and certainty

Impacto financiero por la entrada de divisas al estado de Guanajuato

Financial impact of foreign exchange entering the state of Guanajuato

GÓMEZ-BRAVO, María De La Luz, GOMEZ-BRAVO, Jessica Margarita, ANDRADE-OSEGUERA, Miguel Ángel, BARCENAS-PUENTE, José Luis

Abstract

This work is focused on the financial impact that the state of Guanajuato has for the dozens of families that depend on the currencies sent by their relatives who are in the United States of America since these are the ones that reactivate the economy of the 46 municipalities of the state, the Currencies are almost 90% of the sources of income for families in the state. The Bank of Mexico reported that in the first half of the year more than One Thousand Two Hundred million dollars arrived, then approximately 600 million dollars are arriving in the state per quarter, this money that is sent by migrants has been destined to the basic needs of their relatives a 70% is used in food the other 30% is used in health and housing modifications. This places the state of Guanajuato in 3rd place of migrants to the neighboring country, the currencies for the state represent 6% of the Gross Domestic Product GDP of the state

Retos de la gestión ambiental de la minería en México

Challenges of the environmental management of mining in Mexico

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Abstract

Mexico has a high potential in terms of mineral resources, promoting investment, employment generation and strong fiscal contributions; mining activity at the national level has incorporated strategies that also allow it to comply with environmental protection requirements, so it recognizes that sustainable development allows it to harmonize this economic growth, with the right of future generations to achieve their well-being. Based on the descriptions provided in a Focus Group composed of the members of Minera Tierra Adentro, environmental challenges are identified that the Mexican Mining and Metallurgical Industry faces with respect to the fulfillment of goals derived from the Sustainable Development Goals (UN, 2015). Therefore, the objective of this work is to describe the main environmental challenges currently faced by mining companies in Mexico, to contribute as a sector oriented towards sustainability. The methodology, of qualitative nature, includes documentary research and the analysis of different sources of information through its reading and reflection, the Focal Group is also used as a technique for the collection of information.

Sustainable development, Mining and Metallurgical Industry, Remediation, Environmental challenges

Propuesta de un modelo de desarrollo de las medianas empresas recicladoras de residuos sólidos urbanos, en el municipio de centro Tabasco

Proposal for a model for the development of medium sized urban solid waste Recycling companies, in the municipality of Centro Tabasco

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Abstract

The valuation of urban solid waste consists of the specific transformation of waste considered as waste, through prior treatment, into reusable resources. In this way, the valuation of Urban Solid Waste is achieved through the processes of reuse, reduction and recycling as well as the collection of them, to transform the traditional management of this waste into integrated systems in a sustainable and friendly way with environment. This document presents an overview of the reality experienced by companies engaged in collection and recycling in the municipality of Centro in the state of Tabasco, to perform a comprehensive analysis of productivity in the current reality that allows obtaining a proposal for development that may be applicable to increase productivity in accordance with the current context, observing in detail the current conditions and taking a prospective of the expected situation in the near future of these companies in the municipality of Centro

Urban Solid Waste, Productivity, Model

Factores de incidencia en el desarrollo económico sostenible

Impact factors in sustainable economic development

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Abstract

This study is carried out with the purpose of determining the correlational-causal relationship between the variables sustainable economic development, equitable social development, efficient and participatory institutional development and technology, for this the following methodology was developed: a quantitative study, with a non-experimental design, of transectional cut. The measurement instrument used was the questionnaire, consisting of three independent and one dependent variables, with 71 questions. Each construct contains a series of items that are related to the variable to be measured. The statistical methods that were considered the most appropriate for the analysis of the data collected were: cronbach's alpha, to measure the reliability of the instrument and; the multiple linear regression method for checking the model. The results obtained show that there is a positive relationship between the variables and, with the ANOVA test it was possible to verify that the three independent variables proposed in the theoretical model are statistically significant, since they have a significance level of 0.000, therefore it is considered relevant. The contribution of this research lies in granting the input of strategies to the authorities of the surveyed municipality to help improve their economic conditions.

Development, Economic, Sustainable

Desarrollo de la cadena de valor y cadena de suministro para las MiPymes del municipio de Mixquiahuala de Juárez Hidalgo para generar redes de colaboración mutua

Development of the value chain and supply chain for MiPymes of the municipality of Mixquiahuala de Juárez Hidalgo to generate networks of mutual collaboration

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Abstract

The present investigation intends to follow up the results of the activities that are part of the work previously carried out by the academic body of the Superior Technological Institute of the West of the State of Hidalgo, which was to identify the current situation of the economic development of MSMEs of the municipality of Mixquiahuala de Juárez Hidalgo, as these are the largest economic impact in the region and as the strategic management and use of information and communication technologies, as well as the tools and methods they used to do so, in order to detect opportunities for improvement, and propose alternative solutions based on this information. Therefore, thanks to the results obtained from the previous study, we intend to manage the collaboration networks through a model of the value chain, as well as one of the supply chain using the affected mechanisms, which affects their development. Another of the important points that will be considered a favor, were the necessary elements for the creation of both the value chain, and the supply chain, since both depended both on its turn, and its size, since while some companies need certain specific areas, others not, due to their characteristics. Thanks to the creation of success, the aim is to achieve the growth of MSMEs on the one hand, and on the other the management of the collaboration networks among themselves.

Online and offline market, Technology, Economy

El impacto de la cultura organizacional en la innovación para el desarrollo de las pymes turísticas en el Municipio de Caborca, Sonora

The impact of organizational culture on innovation for the development of tourism Smes in the municipality of Caborca, Sonora

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Abstract

The results presented in this study related the factor of organizational culture with innovation for the development of small tourist businesses (SMEs) in the municipality of Caborca, Sonora. For which an exploratory analysis of the model, was made to subsequently analyze the Association of variables through the model of the Chi-square and thus be able to check the predictive and explanatory power of the same by means of Probit and Logit analysis. The collection of data was used as measurement instrument a structured questionnaire was administered to managers or entrepreneurs of tourism SMEs in the municipality of Caborca, Sonora. Where was the reliability of the instrument for measuring, the R² and significance of the model Chi square statistical analysis was used to identify the relationship and association between the variables of the proposed model, obtaining the coefficient Gamma with a strong correlation between the variables, as well as Gamma, Probit and Logit values, acceptable values for the relationship between the dependent variable and the independent variable was observed. A higher rate and robustness of prediction of the variables with acceptable significance was also obtained.

Development, Innovation, Organizational culture, Small tourism businesses and Tourism

Competitividad empresarial en las pymes manufactureras en Sonora

Business competitiveness in manufacturing smes in Sonora

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Abstract

Business dynamics and global openness have opened the possibility for small and medium-sized enterprises (SMEs) to market their products in a variety of markets. The objective of the present work is to identify the areas that influence competitiveness under the systemic competitiveness model at the micro level and that are based on the decision making made by the owners or administrative managers of these entities. The research methodology is descriptive, not experimental, cross-sectional. An instrument was applied 60 questions in Likert scale, it was considered a sample of 50 entities. The findings identified the active participation of managers in decision making, which influence the day-to-day operation of these organizations and which are aimed at achieving the level competition of a regional market. Some of them with the opportunity to participate in global markets. Finally, industrial companies in Sonora, seek to be in competition and the permanence of them is a clear example of this. It should be noted that work has still to be continued at all levels as indicated by the systemic model to take advantage of business opportunities in an international environment

Systemic competitiveness; Small and medium businesses; Manufacture

Estudio diagnóstico de la gestión de costos en PYMES manufactureras de Colotlán Jalisco

Estudio diagnóstico de la gestión de costos en PYMES manufactureras de Colotlán Jalisco

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Abstract

Cost control in companies plays an important role for decision making regardless of size. Prior to this investigation, there was no precise information regarding the situation of cost management in manufacturing SMEs in Colotlán Jalisco, Mexico. When carrying out this research work, information was obtained according to the measurement, analysis and cost management of these companies. The methodology used was a quantitative type by applying an instrument/questionnaire to a sample of the study universe. The surveys were applied by the visit to 51 companies, which were selected in a multivariate way in respect to each economic activity. The universe of manufacturing SMEs in Colotlán Jalisco was taken from the National Statistical Directory of Economic Units (DENUE) of INEGI. The sample was calculated with 95% confidence and an error margin of +/- 5%. (DENUE, 2019). By having this information, it will be possible to have indicators that will work as a basis for the generation and application of projects that have an impact on the improvement of the integral management of the SMEs under study. Projects that will be carried out in conjunction with the research group of the University of Buenaventura Colombia.

Cost, SMEs, manufacturing

Sistema de gestión de inocuidad: Programa maestro de sanitización en una empresa de la región

System of management of safety: Master program of sanitization in a company of the region

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Abstract

Safety is established as an essential part of the food industry because it guarantees that the products consumed are of quality and do not cause harm to health. The company studied does not have a Master Sanitation Program (PMS), an essential tool to perform health tasks in it. In order to meet the requirements established in ISO 22000: 2018, Food Safety Management System (SGIA), the company needs to have a PMS in its processes to improve its Food Safety Management System. The procedure of this investigation consisted of: identifying the main process; Sanitation processes; determine the percentage of compliance with the SGIA; determine POES; identify type of sanitation and frequency of cleaning of areas; establish training plan; and elaborate PMS. The main results were: determining the percentage of compliance with the SGIA through an audit through a checklist; realization of POES of each existing equipment in the process area; realization of an equipment cleaning matrix indicating the type of sanitization required; tabulation of plant areas including frequency of cleaning and preparation of PMS, concluding satisfactorily with the objective

Safety, Management, Sanitization

La logística interna como herramienta de control y modelado en los procesos de las organizaciones

Internal logistics as a control and modeling tool in the processes of organizations

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Abstract

Nowadays, companies face scale or production volume margins accelerated to respond and meet the needs of international markets, logistics and supply chain is then a key strategy to add value and competitive advantage. Through an investigation of observation and data collection, it was determined that there is no capacity for response and control before the increase in production, it is then that the objective of this work is to establish an order in the internal flow of materials, by medium of the implementation of an internal logistics process in a company that produces aluminum parts. For which a model was created that considered variables such as: the determination of spaces, control of documented information, creation of traceability and training record formats, which produced the following results: improvement in internal flows by 80%, a correct traceability in the handling of the materials that reduced the times by 50%, in addition to the incorporation of programs of administrative platforms. Therefore, the appropriate elements that make up the adoption of the strategy and its measurement in performance indices were determined.

Internal logistics, Traceability, Internal flow

Modelo de gestión del capital intelectual para la competitividad en un hotel de playa: Estudio de Caso en la Ciudad de Manzanillo, Colima

Intellectual capital management model for competitiveness in a beach hotel: Case Study in the City of Manzanillo, Colima

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Abstract

For decades the economy was based on production and physical assets were the main source of resources. This situation has now changed, with intangible assets now being the main source of value creation and sustainability of competitive advantages in the company. The current definition of intangibles has focused on the strategic area within the Resource-Based Approach, emerging as a complementary structure to the Competitive Advantage approach. Goals. The analysis of intangibles as a scenario of competitiveness in the hotel industry, in particular, such as management, control and identification of unspecified intangibles. Methodology. Starting from the general objective, this research will have a mixed, quantitative and qualitative methodological approach. And through a quantitative research approach of analytical type, it is intended to know the influence of intangible resources on the factors that allow obtaining and sustaining a competitive advantage in the company. The above is based on the "Intellectus Model" (IADE-CIC, 2003) and the "Five Capital Model" (IADE-Caja Madrid, 2004). Contributions. Based on 106 variables analyzed, the multifactorial analysis by reduction of factors allows to determine 11 cross factors that contribute to generate the space of the intangible assets that in the case of the hotel which allows to be more competitive.

Intangibles, Competitiveness, Processes

Un análisis correlacional de ratios financieros de empresas que cotizan en el mercado de valores mexicano en el periodo 2008-2017

A correlational analysis of financial ratios of companies listed on the Mexican stock market in the period 2008-2017

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Abstract

The objective of this investigation was to determine the correlation rates by economic sectors of companies that are listed on the Mexican stock market in the 2008-2017 period. The variables were: as dependent the financial ratio on operating profitability and as independent those of acid, financial cycle, working capital, net working capital, financial expense coverage, solvency ratio, short-term debt, accounts receivable days, inventory days, suppliers days, available, current assets turnover turnover, net fixed assets turnover and total assets turnover. To calculate the correlations, the financial information of 29 non-financial public companies in the Economática database was used. Correlation rates were calculated using bivariate linear regression analysis in the SPSS. The main findings are that in the sector of merchandise stores and department stores and in the sector of the beverage industry, significant positive correlation rates of 0.720 and 0.672 were obtained respectively. And three sectors with medium positive correlation which were residential building, food industry and the basic iron and steel industry. The most important relationship was between operating profitability and financial expense coverage.

Economic sectors, Linear regression, Financial ratios

Análisis de la gestión financiera para la toma de decisiones en las medianas empresas de Ciudad Juárez, Chihuahua

Analysis of financial management for decision making in medium-sized enterprises in Ciudad Juarez, Chihuahua

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Abstract

The objective of this research was to analyze the financial management in medium-sized enterprises in Ciudad Juarez, Chihuahua. For this, a quantitative methodology of descriptive non-experimental transactional design was used. Medium-sized businesses from the commercial and industrial sectors, established in Ciudad Juarez, Chihuahua, were considered as the unit of analysis. 87 businesses were identified with these characteristics. The fieldwork was completed with 31 medium-sized businesses, a questionnaire validated by experts was implemented and applied to the general administrators of each business. The results show that medium-sized businesses have an efficient financial management due to their low level of debt and completion of investment projects, however, these projects are primarily financed by partner contributions and accumulated profits. Thus, to improve the financial management in medium-sized businesses external financing is recommended through bank loans or the stock exchange market, likewise, the financial resources obtained should be allocated mainly for investment projects previously analyzed.

Financial management, Decision making, Medium-sized enterprises

Motivación de estudiantes de la carrera de cirujano dentista de la zona conurbada Veracruz-Boca del Río para estudiar un posgrado: Un estudio comparativo

Students motivation of the surgeon dentist career of the Veracruz-Boca del Río area to study a postgraduate program: A comparative study

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Abstract

Objectives.The objective that we intend to reach is to diagnose the motivation that our students of the last periods of the Dental Surgeon Career of Veracruz-Boca del Río have to continue with postgraduate or specialty studies. Find out causes and factors that arouse this interest of both students of public institutions such as UV and private institutions such as CME and UVM.**Methodology.** Elaborate questionnaires that address the sociodemographic factors of each one; interviews with a small group of students to learn first-hand what their opinion is about postgraduate studies inside or outside the university, alike Likert scales to know the attitude of the students regarding the importance of doing postgraduate studies.**Contribution.**Despite comparing two private universities with a public one, there is no significant difference in terms of motivation to study a postgraduate program, but it is interesting to know what the study shows as: the concern of the economic factor that implies, the disinformation they have of the specialties, the little information provided from their respective institutions as well as not giving the necessary importance to be a specialist in a specific area to provide better patient care.

Motivation, Postgraduate, Students

Factores relacionados con sobrepeso y obesidad en población universitaria

Factors related to overweight and obesity in the university population

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Abstract

Chronic noncommunicable diseases (CND) and chronic degenerative diseases (CDD) are the current event worldwide, affecting the health and quality of life of thousands of people throughout the world. Information was collected from 1696 people, 716 men and 940 women in an age range of 17 to 32 years, to whom descriptive statistics were obtained to obtain the mean \pm standard deviation of each of the determinations and measurements performed, grouped according to the year of study and by the percentage of alterations in each of the measurements. It was found that, despite the national strategies created to combat overweight and obesity, and if a tendency to decrease in the percentage of alterations is found, the difference is not statistically significant, which indicates that reforms are required in the strategies for Obtaining better results.

Overweight, Obesity, CDD

Biología y física, multidisciplinariedad en un cuerpo académico

Biology and physics, multidisciplinary in a cuerpo académico

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Abstract

In 1996 it was created in México the Teacher's Improvement Program, PROMEP (so called by its acronym in Spanish), now it called PRODEP. This program was design to make higher the teachers' academic level who was working as fulltime, by organizing them in working groups called Cuerpos Académicos (CAs), this it was done in order to improve their academic and scientific productivity. Educational institutions, specifically universities, implement the CA model and the Universidad de Guadalajara was not the exception. To create a CA it is necessary to take in account specific characteristics, from the areas of knowledge involved, the empathy of the members until the delimitation between personal and group work; but nevertheless, the experience does not end by delimiting the rules to ensure success in the conformation, growth and consolidation of them. This work described the action plan executed to design, shape and implement a multidisciplinary academic CA, under the environmental conditions of a state public university.

Cuerpo Académico, Multidisciplinary, PRODEP

Prácticas socialmente responsables: Compromiso manifiesto en las universidades

Socially responsible practices: Manifested commitment in universities

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Abstract

The deep and constant transformations at a global level, have led the higher educational institutions to rethink their social function, requiring the formation of individuals sensitive to the social problems that afflict the community, assuming social responsibility (RS) as a guiding axis for the social transformation; being this one of the main indicators in terms of educational quality stipulated by the ANUIES. Different research has shown that although there is a positive perception of the educational community about SR, there is no common regulatory framework for its development, which allows the unification of acting within the institution. The objective of this cross-sectional quantitative study is to determine the frequency with which the principles and values of the university are presented in a public university in Sonora from the student perspective, applying an instrument composed of 66 items to 100 students. The main results show the need to deepen in areas such as inclusion, democracy, participation, and freedom mainly.

Social responsibility, Socially responsible practice, Participation

Calculando la dispersión cognitiva del curriculum

Calculating the cognitive dispersion of the curriculum

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Abstract

The main objective of this study is to develop a technique to evaluate the cognitive dispersion that exists in the contents and subjects of the curricula. The problem perceived by the authors is that learning is difficult when students have a greater diversity of subjects in their daily classes, when there are too many subjects per course or curricular axis and when they have fewer hours/class per day, which probably represents them greater cognitive complexity due to the dispersion of the contents to be learned. The experience of the authors in the design of the curricula has implied assessing the cognitive dispersion of multiple cases and the role of academic planners in systematically avoiding it. This research collects the methodology and experience of other studies in various areas and applies them in order to obtain a Cognitive Dispersion Index that allows us to evaluate this aspect when designing the study programs.

Curriculum, Curriculum trajectory, Cognitive dispersion, Study programs

Implementación de estrategias de enseñanza-aprendizaje que apoyen a las competencias del ser, relacionadas a la asignatura de formación sociocultural

Implementation of teaching-learning strategies that support the Learning to be (pillar in education) applied in the Socio-cultural education subject

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Abstract

In order to guarantee the requirements and needs of the productive sector, each Technological University conduct a Situational Analysis of employment (by its Spanish acronym AST) aiming to identify the current needs of the graduated students of each educational program. One of the room of improvement area identified is related to the deficient performance of the Learning to Be or soft skills: social skills, team work, creativity, ethics and leadership, all specific contents of the subject of Socio-cultural Education (by its Spanish acronym FSC). The main goal of this research is to apply teaching-learning strategies in FSC with the students of the certified technician level of education (by its Spanish acronym TSU) of the Technological University of León in order to improve the execution of the soft skills in the productive sector. The methodology was three fold: 1. Opinion analysis from business owners, teachers, graduated students, and students in the final stage of their technical education, through focus groups, surveys and interviews about the importance of the soft skills and how they are acquired; 2. Training sessions to teachers to design teaching-learning strategies; 3. The implementation of these strategies in test groups and the evaluation of the outcomes. The goal is to replicate the strategies in the rest of the subjects.

Productive sector, Soft skills, Teaching-learning

Clínica y educación básica ¿Cómo hacerlas converger?

Clinical practice and basic education. How to make them converge?

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Abstract

The psychologist's job within basic education schools is increasingly requested, however, it is important to think about what is expected of that role. Managers, administrators, teachers, students and parents have different imaginaries about what a psychologist is, and making them converge might seem like an impossible task. The clinical listening, the intervention and the clinical look can be generators of a large number of structural and subjective movements within basic education context; these allow the infant to resist the transition in that period of his formation. Therefore the objective of this article was to think about the clinical psychologist's practice in basic education, from a direct type experience.

Clinical practice, Education, Psychology

6 Biotecnología y Ciencias Agrícolas

Revigorización de semilla deteriorada de maíz con la técnica de humedecimiento y secado

Reinvigoration of deteriorated corn seed with wetting and drying technique

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Abstract

With the objective of reinvigorating damaged corn seed, the technique of wetting and drying the seed with five types of water and 10 imbibition times. Estimating the variables emergency percentage, emergency speed, seedling length and root length, and plant height 30 days emergency. For the variable speed of emergency for imbibition time the highest vigor corresponded to 18 and 12h, and with an emergency percentage of 62% higher in 10% of the control, it was 4, 8 and 18h. In water types for emergency percentage, the highest values were observed in artesian well and Key water. In seedling length with values of 25 to 24 cm were distilled water 30h, artesian well 8h y 18h; and the control was 22 cm. In radicle length the highest values corresponded to E. Pure® 24h and key water 14h. For plant height in 8h artesian well present a value of 175 cm, and the control with a value of 165 cm.

Reinvigoration , Corn, Wetting, Imbibition

Producción de biogás a partir de estiércol de ganado bovino y punta de caña de azúcar (*Saccharum officinarum*)

Biogas production from cattle manure and sugar cane tip (*Saccharum officinarum*)

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Abstract

The purpose was to study the use of bovine manure mixed with sugarcane tip (*Saccharum officinarum*) in the production of biogas. A semicontinuous biodigester prototype of 1.7 m long and 6 in. diameter was designed and built with CPVC material. The waste was collected fresh for physical-chemical characterization, based on basic laboratory methods. Then the prototype was put into operation under controlled conditions. The biodigester was fed in two moments: the first, with 200 g of manure diluted in 750 ml of water and the second with a mixture of 200 g of manure and 50 g of cane tip, diluted in 750 ml of water. Finally, the volume of biogas produced and its quality were measured, with a water column pressure gauge and with a 540 multitec device, respectively. The results show that manure with the cane tip generates more biogas, this is attributed to the higher percentage of volatile solids in the mixture, whose organic components were converted to methane. The biogas production studied is a management option for waste from the agricultural sector and thus mitigate CO₂ emissions in the region.

Bovine manure, Sugar cane tip, Biogas

Determinación de proteína de insectos comestibles

Determination of protein of edible insects

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Abstract

Mexico is a country with a wide variety of edible insects. Because of its high protein intake, insect consumption is proposed as a solution to hunger. However, studies on nutritional value are necessary. The objective of this work was the determination of chapulin protein. In this study, 14 chapulin (*Sphenarium purpurascens*) samples collected in Guadalajara from Oaxaca and Morelos were analyzed and processed according to the Weende proximate analysis methodology that includes the Kjeldahl procedure for protein determination. The results on fresh weight basis were: water 22.68%, dry matter 77.32%, ashes 12.8%, fat 6.78%, fiber 3.38%, protein 33.15% and nitrogen free extract 21.21%. Protein digestibility was 91.21%. Because of the protein content, chapulin flour can be used as a protein ingredient in other food products.

Insects, Nutritional value, Protein

Identificación de células vivas y células muertas simultáneamente de *Bacillus subtilis* MZ mediante el empleo de ioduro de propidio y naranja de acridina

Identify healthy and dead cells simultaneity of *Bacillus subtilis* MZ through to use of propidium iodide and acridine orange

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Abstract

The use of microorganism in a lot of process brings the development of new technologies. For guarantee the effect and the impact of the microorganism, even, the production rate when these microorganisms are involved in the production of a particular compound, become necessary know the number and condition of this organism. In the actuality, there are a lot of tools to identify this condition, since kits of staining cells, until, the best microscopy technology. But the use of this tools could become inaccessible due the high cost and in the case of de staining kits had a limited test. Then emerge the necessity to search and implement news methodologies to help us to identify health and death cells in different inoculs or products. In this work, we proposed a new technology for the simultaneous observation of healthy and dead cells trough the staining samples with propidium iodide and acridine orange using an optic microscopy with incandescent light and ultraviolet light.

Healthy and dead cells, Microorganism staining, Acridine orange, Propidium iodide

Influencia de la fertilización nitrogenada y orgánica en la producción de pungencia en el cultivo de chile jalapeño (*capsicum annum*), en invernadero y en cielo abierto

Influence of nitrogen and organic fertilization in the production of pungence in the crop of chile jalapeño (*capsicum annum*), in greenhouse and open sky

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Abstract

Capsaicin and dihydrocapsaicin are responsible for 90% of the pungency of the fruit; the rest of the capsaicinoids participate to a lesser extent in the itching, but contribute strongly to the diversity of spicy flavors in the different species of Capsicum. In the present project the application of 7 treatments T1 = Chemical, T2 = Chemical + Bioferment, T3 = Chemical + Leached, T4 = Bioferment, T5 = Leached, T6 = Bioferment + Leached, T7 = Chemical + Leached + Bioferment, in greenhouse was evaluated and in open sky, a randomized block design with three repetitions was established. The variables evaluated were plant height, temperature, relative humidity, production weight, fresh weight, root depth, dry weight and pH. The data generated in this research indicate that the treatment that generated the most amount of capsaicinoids was the chemical treatment in the greenhouse with 37.7 ml of capsaicinoids and in the open sky with 36.96 ml.

Generación de biogás a través de biodigestores anaerobios

Generation of biogas through anaerobic biodigesters

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Abstract

The general objective of this project was to measure the biogas produced by anaerobic digestion from two prototypes of biodigesters, supplied with organic waste and pig manure, at the Technological University of Cancun, to see what type of waste is most optimal in production of biogas. For the measurement of biogas, first the two biodigesters were built and in each one a pressure gauge was installed to measure the gas pressure generated in each container, in the same way bicycle chambers were installed to store the biogas obtained and observe what waste it produces plus. It was observed that the biodigester with pig manure provided 11.3 psi and the biodigester loaded with organic waste produced 8.5 psi of biogas. Therefore, it is appreciated that pig manure has a faster process in the generation of biogas, than other waste, however both are recommended for the generation of biogas.

Biodigester, Biogas, Organic waste

Utilización de un sistema de destilación solar para remoción de arsénico y flúor en agua subterránea destinada al consumo humano

Use of a solar distillation system for arsenic and fluoride removal in groundwater intended for human consumption

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Abstract

Arsenic and fluorine occur naturally in groundwater, especially in desert and semi-desert areas. Chronic exposure through drinking water to these substances causes adverse health effect, which are limited in water intended for human consumption. Objective. This work was carried out with the aim of improving the quality of water from wells with high contents of arsenic and fluorine, achieving compliance with the limits established in the Mexican regulations for drinking water. Methodology. A system of two-panel solar distillation was used for treatment of water from three wells characterized by high levels of arsenic and fluoride, which are intended for human consumption. Contribution. The solar distillation system used improved the quality of the groundwater through the removal of arsenic (99%), fluoride (96%) and dissolved solids (98%). The proven system is a viable alternative for water treatment in small communities that do not have access to demineralization water plants that operate with high costs, thus eliminating health risks associated to the chronic intake of these elements.

Groundwater, Arsenic and fluorine, Solar distillation

Eficiencia de mezclas para el control de nematodos a base de aceites esenciales de orégano, canela y extractos hidroalcohólicos de gobernadora

Efficiency of mixtures for the control of nematodes based on essential oil of oregano, cinnamon and hydroalcoholic extracts of governor

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Abstract

This research was developed in order to determine the ideal concentration of the mixture between oregano essential oil (AEO), Cinnamon oil (AC) and a governor hydroalcoholic extraction (EHG) in the treatment of soils contaminated by nematodes. The objective of the work was to identify and eliminate nematodes present in the soil; It was developed in the water technology laboratory of the Technological University of Rodeo. The method used was flotation to identify the nematodes and a simplex centroid for optimal concentration. AEO, AC, and EHG organic treatments were used to control nematodes without damaging the plants. Where the presence of the *helicotylenchus* nematode species was obtained, by means of 40x microscopy (vermiform/spiral worm form), in a sample of soil collected from the Agrocemosa S.P.R greenhouse of R.L de C.V. in Jalpa, Name of God Durango. Using the Simplex Centroide with the following results: a quadratic model DU: R-SQR =85.77 %; ADJ; 67.99% of response variables for the treatment mixtures, where the most efficient mixture was treatment 10.-AEO 0.66%, EHG 0.17% and AC 0.17% with 99% and treatment 3.- AEO 0.5%, EHG 0.00% and 0.5% AC with 99% for nematode control. Concluding that this method is effective in the application of organic essential oils in the elimination of nematodes present in contaminated soils.

Oregano, Cinnamon, Governor, Essential oil and nematodes

Alternativa biotecnológica contra el cáncer: Parasporinas de *Bacillus thuringiensis*

Biotechnological alternative against cancer: Parasporins of *Bacillus thuringiensis*

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Abstract

Currently, cancer is one of the leading causes of death worldwide. The latest reports from the World Health Organization (WHO) of 2018 show alarming figures that indicate 18.1 million new cases and recorded 9.6 million deaths from cancer, with a 5-year prevalence of 43.8 million patients. The low efficiency of conventional cancer treatments has generated scientific research focused on identifying new products with specificity to efficiently treat this disease. Various bacterial metabolites such as parasporins (PS), cytotoxic proteins of *Bacillus thuringiensis* (*Bt*), have been successfully applied against different cancer cell lines in the past 19 years. Therefore, it is important in this work to contextualize cancer as a global health problem, and briefly mention the conventional treatments used. The most relevant investigations to isolate *Bt* strains producing PS are described, as well as the classification, production and purification of these metabolites. Finally, the nature of the high cytotoxicity of the 19 PS reported to date is mentioned, emphasizing the feasibility of its application as an alternative high-cytotoxicity cancer therapy, and with great potential to treat various types of cancer.

Cancer, Metabolites, *Bacillus thuringiensis*

Análisis microbiológico de biosólidos para su aprovechamiento en cultivos de tallo corto

Microbiological analysis of biosolids for use in short stem crops

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Abstract

Sludge and biosolids samples were analyzed microbiologically according to NOM-004-SEMARNAT-2002, of the Intermunicipal System of Wastewater Treatment and Disposal of the municipalities of Rincon (SITRATA) for a period of 10 months in 2017, the most were found within the LMP according to regulations. In addition, it was detected that the use of peracetic acid in doses greater than 0.1 % v/v may be an alternative disinfection in its use in sludge, to reduce the microbiological load, before being used in crops. Physicochemical analyzes were performed on samples of mud and soil to determine their N and P content, finding that the solid mud has 1.19 % of N and 3.51 % of P₂O₅ determined on a dry basis; which correspond to high values of these macronutrients, essential for crops. Greenhouse tests were carried out with application doses of 0 to 100 percent by weight of biosolids incorporated into the soil, to measure the crop yield of radish (*Raphanus sativus*), onion (*Allium cepa*) and carrot (*Daucus carota*), resulting in Agronomic dose of 20 % w/w the highest yield.

Microbiological, Sludge, Yield

Physiological responses of *Zea mays* during *Ustilago maydis* infection in different soil humus concentrations

Respuestas fisiológicas de *Zea mays* durante la infección por *Ustilago maydis* bajo diferentes concentraciones de humus en suelo

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Abstract

The available resources during plant development, sometimes plant can be limited due to energy used during physiological plant defense to pathogens attacks. The main of this work was the physiological analysis of *Zea mays* plants development under different sustainable fertilization systems, as the earthworm-humus, and their relation with the response to *Ustilago maydis* infection, a biotrophic fungus that causes the disease known as common coal or cuitlacoche in corn. Mize seedlings developed with different % of humus/soil under greenhouse conditions were inoculated with *U. maydis* (T1), and plants not inoculated as control (T0). Physiological and growth measurements in T1 showed a significant effect on the plant, the best was a 25%. After infection, the plants growth was lower as a result in decrease in photosynthesis activity, however, the presence of humus partially counteracts the fungus infection. High concentrations of humus reflected a negative effect on plant growth. In the future, the studies in the field will serve to deduce the importance of these agricultural practices in plant-fungus responses.

Maize, Humus, *Ustilago maydis*

Análisis bioinformático de las rutas pks y fas en plantas y uso de inductores exógenos sobre la producción de acetogeninas en guanábana cultivada *in vitro*

Bioinformatic analysis of pks and fas pathways in plants and use of exogen inductors on the production of acetogenins from soursop cultivated *in vitro*

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Abstract

Goals. To analyze the effect on the production of acetogenins of *Annona muricata* cultivated *in vitro* by means of Temporary Immersion Bioreactors (BITs) promoted by the use of exogenous inducers proposed from a bioinformatic analysis. Methodology. A bioinformatic analysis was carried out at the KEGG site of the metabolic pathways of polyketide synthetase (PKS) and fatty acid synthetase (FAS) plants from which acetogenins are derived. Five treatments were performed in the BITs with soursop explants; 1) BAP, 2) BAP + AAs 3) BAP + AAs + Putrescine, 4) BAP + IAA and 5) BAP + IAA + Citrate. BAP and IAA are plant hormones, AAs is a mixture of three ketogenic amino acids, Putrescine and Citrate are inducers of PKS and FAS. Contribution. The cultivation of soursop explants was monitored using BITs of the 5 treatments for 8 weeks without apparent contamination. Sprout observation started from week 6 in treatment 1 and 2 but not in 3 over 8 weeks, with putrescine being more than an inducer a stress factor for the explant as they became necrotic. Treatments 4 and 5 were only monitored until the third week and no information on sprouting was collected. Differences in the profile of acetogenins by HPLC-PDA were observed between soursop leaves to *ex vitro* and *in vitro* and between treatments 1, 2 and 3.

Soursop, Acetogenins, *In vitro* culture

Análisis de parámetros del cultivo y procesos de la transformación del café

Analysis of crop parameters and coffee transformation processes

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Abstract

There are environmental factors that influence the "quality" of coffee: soil, altitude, water, shading, temperature, winds, precipitation. This research paper analyzed physical and chemical factors: altitude, humidity of the environment and soil, and soil pH, in three different regions such as Córdoba, Coatepec and Xico. These temperatures and humidity varied, the pH of the soil was more acidic in high and humid regions and they were also variable in the different samples, due to temperature changes. The percentage of coffee bean moisture was analyzed, as it is an important condition to consider coffee suitable for the next roasting process. Finally, the coffee roasting process of each region was carried out; using a light, medium and dark term. Subsequently, the pH of each sample of coffee ground in hot water is analyzed, however, the acidity does not refer to the level of acidity of the coffee, it should not be confused with the character of acidity. Purely chemical process, A high acidity is described as bright, while a coffee with low acidity can be described as mild, and the low, considered uninteresting. A total lack of acidity can also result in a flat coffee.

Acidity, Quality, Environmental factors, Coffee

Acondicionamiento de señal de sensor infrarrojo

Conditionated infrared sensor

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Abstract

In the present work, the design and implementation of a device capable of monitor the cardiac pulse by means of photoelectric sensors was carried out, using the oximetry technique and in turn the photometry. Heart rate monitoring has great relevance in the field of health and technology, due to the large number of cardiovascular diseases and millions of deaths worldwide annually. There are currently several heart rate counters with limitations that cannot send your information via internet or GPRS, and cannot be filed on a computer. This prototype was made, based on a microcontroller that receives an infrared sensor signal, once properly conditioned It can be transmitted to a computer. The information obtained can be analyzed and stored by medical specialists, as well as transmitted by Wi-Fi to an application of a remote device providing a service with the use of technologies.

Photo sensor, Heart rate, Remote

Uso y aplicación de la bioinformática para la caracterización de proteomas vegetales

Use and application of bioinformatics for the characterization of plant proteomes

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Abstract

Proteomics and some other cutting-edge technologies have generated information clusters in sequencing and protein studies for plants, which can be used in other areas, such as food in quality control, pharmacological in allergens, characterizations of organisms in studies biological and agronomic for vegetables. The following is a description of the information that can be found in the databases (DB) and their interrelations with other specialized DB, of all the references to describe a protein. For this investigation we used a storage protein, Glutelin-2 in (*Zea mays*), we show some of the interrelated DB that can offer information for multiple studies of proteins in plants like UniProt KB and STRING-DB.

Protein, Glutelin-2, Proteomic, Data base, Description

Documentación de los procesos de comercialización, mantenimiento y financiamiento para una empresa de giro agroindustrial del sur de Sonora

Documentation of the marketing, maintenance and financing processes for an agribusiness company in southern Sonora

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Abstract

Organizations that want a high competitive level are in the search for the standardization of their processes with the formalization of their activities, using tools that adequately contribute to their correct performance. The project was developed in an agribusiness company in southern Sonora, which lacks the documentation of the processes, which does not allow a clear definition of the functions of the different positions. For this purpose, the objective of documenting the marketing, maintenance and financing processes to standardize the activities carried out in them was established. The procedure was structured by the following steps: elaborate the process map of the company, determine the processes to document, obtain the current practice, define the format to document, elaborate processes in draft, validate the processes and finally correct and deliver them for use. At the end of the project, the standardization of the activities was obtained through the documentation of the commercialization, maintenance and financing processes of the company, thereby obtaining the means of support for the effective and efficient operations of the processes, which impacts in satisfying customer needs.

Standardization, Documentation, Improvement

Betalainas de tuna: Un colorante natural alternativo para alimentos

Betalains from prickly-pear fruit: An alternative natural coloring for food

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Abstract

Food coloring are additives that are usually incorporated into foods to make them more attractive to people. However, some mineral and synthetic dyes used in the food industry are related to harmful effects on human health. Natural dyes, such as betalains extracted from prickly-pear fruit, have fewer restrictions on use and represent a healthier alternative to enhance the appearance of food. In this work, a process to extract betalains from the pulp and peel of Cardona prickly-pear fruit was implemented and optimized. The extracted pigment was encapsulated in cornstarch. Then, it was analyzed the effect of the extract/encapsulant ratio on the amount of encapsulated betalains. It was found that the peel of this variety of prickly-pear fruit represents about 48% of its total weight. It was also demonstrated that concentrations of betalains in the peel (12.0 mg/g) and in the pulp (16.5 mg/g) are alike. For these reasons, we consider that the peel of red prickly-pear fruit is an ideal material for the extraction of betalains because it is a waste material with high content of red pigments.

Food coloring, Betalains, Prickly-pear fruit

Evaluación de parámetros productivos y económicos de cerdos en la etapa de finalización, con tres programas de alimentación

Evaluation of productive and economic parameters of pigs in the final stage, with three feeding programs

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Abstract

The objective was to evaluate the productive and economic parameters of pigs in the final stage with three commercial feeding programs. 240 pigs with homogeneous characteristics were used, assigning 40 females and 40 males completely random to the treatments. The animals were fed with 3 diets in flour containing different level of protein: T0 (16 %), T1 (16.42 %) and T2 (17.51). For the analysis of the information, a completely randomized design was used, the means were contrasted with the Tukey test. There were no significant differences ($P > 0.05$) for the evaluated variables, with the highest consumption of dry matter (CDM) recorded in the T1 (2,065), followed by T2 (2,063) and T0 (1,931 kg.). The daily weight gain (DWG) was for T2 of 0.863 grs., T1 with (0.858) and for T0 of 0.826 grs. With a food conversion (FC) for the proposal T0 of 2,562, T1 (2,671) and T2 3,027 kg. The pigs fed with T1 recorded a cost of 16,869 / Kg. of live weight, followed by T2 with \$ 14,556 and obtaining more profitability with T0 when obtaining a cost of \$ 13,248. The productive behavior between treatments was similar, but the best profitability is obtained with the T0.

Pigs, Fattening, Behavior, Profitability

Producción de siete variedades de jitomate (*Lycopersicon esculentum* Mill) conducido a uno y dos tallos bajo invernadero

Production of seven varieties of tomato (*Lycopersicon esculentum* Mill) pruned to one and two stems under greenhouse

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Abstract

The experiment was conducted from May to August 2018 at the Technological University of the Southwest of Guanajuato (UTSOE) in a randomized complete block design with three repetitions, in greenhouse 1 of 700 m² of the Sustainable and Protected Agriculture Career; with the purpose of evaluating the effect of pruning at one and two stems per plant, on yield, fruit weight and plant variables in seven varieties of saladette tomato produced under greenhouse and in hydroponics. The varieties evaluated were: Natalie, USATX 12227, USATX 9934, Juan Pablo, USATX 24019, USATX 16117, USATX 15538, all established at a density of 31,250 plants or stems per hectare. Pruning at two stems per plant produced the highest yield in the USATX 16117, USATX 9934 and Natalie varieties, producing more than 2.3 kg per plant after six weeks of harvest. For the fruit weight, the USATX 9934 variety with two stems, was the one that produced fruits of greater caliber, being one of the three varieties with the highest yield. For the plant height, the USATX 24019 variety with one stem was the one with the highest height three months after the transplant.

***Lycopersicon esculentum*, Stem pruning, Yield**

Efectividad de los ácidos húmicos, fúlvicos y extracto de lechuguilla (*agave lechuguilla*), como agentes biosurfactantes en la remediación de suelos contaminados con hidrocarburos

Effectiveness of humic acids, fulvic acids and lechuguilla extract (*agave lechuguilla*), as biosurfactants in the remediation of soils contaminated with hydrocarbons

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Abstract

The environmental pollution caused by oil and its derivatives is recognized as one of the most serious problems. Once spilled on the ground, most aliphatic compounds volatilize, while other hydrocarbons such as polycyclics persist on the surface causing an impact on the environment and living beings. There are a variety of techniques for treatment, but they have the disadvantage of being expensive, so viable alternatives have been sought such as bioremediation, which consist of making use of microorganisms and constitutes a very competitive technology, capable of achieving the biodegradation of hydrocarbons contained in the soils. Depending on the characteristics of the soil and the content of organic matter, the hydrocarbons of higher molecular weight and lower solubility can adsorb in the micropores of the soil particles, resulting in this being inaccessible as carbon and energy sources for the microorganisms. Therefore, surfactant agents that act by increasing bioavailability through the parallel action of the desorption and solubilization of the contaminant are required. This article compares 3 surfactant agents of natural origin, which analyze and discuss the effectiveness of each of them for the treatment of soils contaminated with hydrocarbons. Once the lechuguilla extract is obtained in cold and hot, the soil is washed, fats and oils are determined by soxhlet method and the Chemical Oxygen Demand (COD) is determined, finding a marked effectiveness of the cold lechuguilla extract (*Agave lechuguilla*).

Bioremediation, Hydrocarbons, Surfactant Agent

Composición florística del Bosque tropical caducifolio al oeste de Irapuato, Guanajuato

Floristic composition in deciduous tropical forest to west of Irapuato, Guanajuato

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Abstract

The flora of Irapuato has been poorly explored, because it is an area dedicated to agriculture and there are few strains of tropical deciduous forest and subtropical scrubland. The objectives of the study were to know the floristic composition in Cerro del Veinte, compare the richness of species with other locations that have the same type of vegetation and determine the conservation status of the species according to NOM-059 SEMARNAT-2010. The sampling was through free transects of approximately 1 km in the Barrancas La Escondida and El Paiste. A total of 59 families, 137 genera, 171 species and four varieties were obtained. The best represented families are Asteraceae, Fabaceae and Pteridaceae. According to the Chao 2 estimator, the sampling effort in the study area was 87%. Floristic affinity in Cerro del Veinte was greater with the Hoya de Rincón de Parangueo (38%) and Sierra de Pénjamo (32%). In addition, there are three new species reported for Guanajuato, *Govenia lagenophora* and *Sacoila lanceolata* (Orchidaceae) and *Solanum edmundoi* (Solanaceae). The taxa *Cedrela odorata* and *Erythrina coralloides* are included in NOM-059-SEMARNAT-2010.

Cerro del Veinte, Chao 2 estimator, Orchidaceae

Estructura, composición y diversidad arbórea en un bosque templado bajo manejo

Structure, composition and tree diversity in a temperate forest under management

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Abstract

In order to study both diversity indices and structure of forests, which are an essential tool for decision-making in forest management, which show natural successional processes and effects for its management. So the objective of this study was to evaluate structure and diversity of arboreal species in a temperate forest of southern Jalisco state. Five permanent forestry research sites 50 x 50 (2.500 m²) were established, and a census of all tree species was carried out, with normal diameter greater than 7.5 cm. Each individual was measured: height and normal diameter, placing an aluminum plate for identification. We obtained the importance value index (IVI), indices of diversity, richness, and dasometric parameters. There were 17 species, 9 genera and 9 botanical families; the Fagaceae was dominant. *Pinus douglasiana* presented the highest IVI (57.93%); The Shannon index had a value of 2.0; the index of Margalef was 2.4; the forest has a density of 688 trees ha⁻¹, being the most abundant *Styrax ramirezii*; *Pinus herrerae* obtained the highest values in basal area and volume with 30.77 m² ha⁻¹ and 357,325 m³ ha⁻¹ respectively. The values of diversity are influenced by elements of the cloud forest

Dasometric parameters, Diversity indices and permanent plots

Crecimiento *in vitro* de *Oncidium sphacelatum* (Orchidaceae) en diferentes concentraciones de sacarosa y nutrientes

***In vitro* growth of *Oncidium sphacelatum* (Orchidaceae) in different concentrations of sucrose and nutrients**

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Abstract

The objective of the present work was to offer an *in vitro* propagation alternative for the *Oncidium sphacelatum* orchid through the evaluation of the response to the crop in different concentrations of sucrose and the nutrient medium of Murashige and Skoog. Initially the seeds were sown in this culture medium at 100% of their concentration with the addition of 3.0% sucrose, once formed the protocorms the response to the application of different sucrose concentrations was evaluated (3.0, 2.25, 1.5, 0.75 and 0%) and of the nutrients of the culture medium (100, 75, 50, 25 and 0%) under a completely randomized experimental design of eight treatments with four repetitions. The analysis of variance showed statistical differences between treatments for the formation of buds in the protocorms, number of leaves per bud, plant height, root length and formation of pseudobulbs in the shoots. The highest outbreak formation in the protoorms was observed in treatments with 3.0% sucrose and nutrient concentrations at 50 or 25%. For the growth of the leaves and the root the concentration of 3.0% of sucrose was required combined with the concentrations of nutrients at 25, 50 and 100%. The formation of pseudobulbs in the outbreaks only occurred in the treatment with 3.0% sucrose combined with the 25% nutrient concentration.

Orchid, *In vitro* nutrition, Sucrose

Evaluación del efecto inhibidor del desarrollo micelial en *Fusarium oxysporum*, y *F. solani*, bajo tres dosis de extracto crudo de epazote (*Chenopodium ambrosioides* L.)

Evaluation of inhibitor effect on micelium development on *Fusarium oxysporum*, y *F. solani*, using three dosis of epazote epazote (*Chenopodium ambrosioides* L.)

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Abstract

Using natural extract of epazote (*Chenopodium ambrosioides* L.), has shown to control phytopathogenic fungi (P. Aguilar *et al.*, 2013; y J. Black Solis *et al.*, 2017). One mililiter of ethanolic extract at concentrations of 25%, 50%, 100% diluted on sterile distilled water (V:V) has been used to inhibit micelial developement of *Fusarium oxysporum*, and *Fusarium solani*, added to PDA Petri dish under a completely randomized experimental design, a statistical analysis was carried out by means of an ANOVA and comparison test of means with Tukey's multiple range. After eight days of incubation, the outstanding inhibit effect has been observed with 100% and the average diameter of colonies was 62 mm., has been measured on both fungi species. In contrast, 62 mm., and 61 mm., was observed on *F. oxysporum* and *F. solani* respectively, and a statistical effect was observed ($p \leq 0.05$). With 25% and 50%, micelial inhibit developement has been measured, but no statistical differences between concentrations has been calculated ($p \geq 0.05$) for both fungi. The results suggest that ethanolic extract of epazote could be used to control both phytopathogenic fungi.

Epazote, Extract, Phytopathogenic fungi

Estudio comparativo entre polinización natural, entomófila y manual en guanábana (*Annona muricata* L.)

Comparative study between natural, entomophilic and manual pollination in soursop (*Annona muricata* L.)

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Abstract

This research was carried out in the communities of Tonino and Divisadero municipality of Compostela, Nayarit, Mexico with the objective of studying the effect of natural, entomophilic and manual pollination of soursop fruits. Pollinations were carried out during the June-July period of 2017 (summer flowering). Which treatments consisted of the natural pollination that only perforated bagging was placed, The variables were: peduncle diameter, brush or strawberry diameter, percentage of yield, percentage of fruit fall, dynamics or general kinetics of growth variables and general behavior of loss and fruit fall. Percentage yield as it was low from 6 to 21% and this decreased as the evaluation time elapsed due to the fall in fruit. The fall of the fruit of the three treatments was considered to have a very important factor whereby they fell, the lack of coverage with fungicides or insecticides.

Pollination, Types of pollination, Soursop, Insects

Rizobacterias antagónicas al hongo *Sclerotium cepivorum* (Berk.t) en plantas de cebolla (*Allium cepa* L.)

Rhizobacteria antagonistic to the fungus *Sclerotium cepivorum* (Berk.t) in onion plants (*Allium cepa* L.)

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Abstract

Rhizobacteria are microorganisms attached to the roots of plants that colonize the rhizosphere, there is a great diversity with beneficial effects on crop development and they used in biological control. In this study, the antagonistic effect of rhizobacteria as biocontrollers of *Sclerotium cepivorum* Berk fungus, which cause white onion rot in large economic losses, was determined. Soil samples collected from onion plants on the farm located in Santa Anita, municipality of Tlaquepaque, Jalisco; for isolation of rhizobacteria and *S. cepivorum* from infected white rot bulbs. Rhizobacteria that showed antagonism against the fungus, were selected 14 treatments formed with onion plants in conditions of humidity, temperature and photoperiod constant in growth chamber for 36 weeks. Growth promotion variables were evaluated and the data analyzed by ANOVA. Rhizobacteria showed an antagonistic effect against the fungus and stimulated fresh weight, root length, stem and bulb in onion plants. Therefore, this PGPR is an alternative as a biofertilizer potential, thus avoiding degradation and contamination of the soil and yield of product quality and profitability for the producer.

Rhizobacteria, White rot, *Sclerotium cepivorum*

Características fisicoquímicas y antioxidantes de diferentes germinados

Physicochemical and antioxidant characteristics of different sprouts

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Abstract

In the germination of seeds an increase in their nutritional value has been observed, such as the increase in protein and micronutrients. It has been found that continuous intake of some types of sprouts helps prevent certain chronic diseases, such as colon cancer, Alzheimer's, among others. The objective is to evaluate the physicochemical and antioxidant characteristics of alfalfa, chia, lentil and broccoli sprouts. For the seed germination process a container was placed with water and covered with a cloth so that a firm surface remained and on this the seeds were placed. The seeds were sprayed with water twice a day until favorable growth was noted. Broccoli sprouts obtained the highest values of DPPH radical inhibition and polyphenol content. The physicochemical and antioxidant characteristics vary according to germination days.

Sprouts, Health, Antioxidants

Caracterización varietal de fenotipos de sorgo con fines de registro

Varietal description of sorghum phenotypes for registration

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Abstract

The goal of a plant breeding is the generation of new varieties that become agricultural inputs for farmers. For this, it is necessary to verify the genetic identity of the materials and have the breeder's registration and title. The University of Guadalajara has generated varieties and quality sorghum hybrids that must be released to the public. This work was developed to establish the methodology of varietal characterization, an essential requirement for obtaining a breeder's title before the National Seed Inspection and Certification Service (SNICS). For this, 2 andro-sterile lines (A) and a fertility restoration line (R) were described, in two locations and two production cycles. By establishing according to ranges of variation and stability, the appropriate sample size and differential phenotypic characters that facilitated identification.

Sorghum, Genetic identity, Varietal description

Ganancia de peso en corderos, suplementados con un alimento comercial al 12% de proteína

Weight gain in lambs, supplemented with a commercial food al 12% protein

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Abstract

The objective of this work was to determine the weight gain in sheep meat, under an intensive feeding system in lambs of the Dorper breed. Thirteen lambs with an initial average live weight of 11.25 ± 5 kg were used. The food was offered ad libitum throughout the day. Systematic measurements of the weight gain of the sheep were carried out. The results obtained for the corresponding variable of the voluntary consumption of dry matter, shows that at the beginning of the experiment the animals had a dry matter consumption of 206.25 g / ovine; However, as they were growing their dry matter consumption was 292 g / ovine, with a linear increase until the sixth week. The highest weight gain per day was obtained between month 1 and month 2, with the best feed conversion rates observed here. With the obtained results it is concluded that the voluntary consumption of dry matter was 206.5 g / ovine-1, with an average daily weight gain of 470 g. and with acceptable conversion rates and food efficiency.

Weight gain, Dry matter, Food efficiency

Acondicionamiento inteligente para la producción intensiva de tilapia en la zona Sur del Estado de México

Intelligent conditioning for the intensive production of tilapia in the southern zone of the State of Mexico

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Abstract

Fish farming is a fundamental sector of the economy for several communities. Traditionally, the processes inherent to this activity, such as the feeding of the fish, the replacement of water, the control of temperature, the level of ammonium, are carried out manually and empirically; However, in recent years they have begun to incorporate technological tools for their automation. In the present work we seek to integrate intelligent and separate control systems that exist in the market to generate a single intelligent control system, with the ability to control temperature, ammonia, water clarity, food, in such a way that is presented as a flexible and integrated production process, that meets the requirements of aquaculture health, this system should provide, to small producers in the southern area of the State of Mexico, the certainty that your product meets specifications and standards for human consumption. With this study new opportunities for the application of technologies, especially those of low cost, are envisaged, so that they are accessible to the greatest number of fish farmers and their use guarantees the improvement in the processes carried out. It also highlights the importance that the use of alternative energies can have, to make the most of natural resources and minimize the environmental impact.

Intelligent system, Systems automation, Fish farming

Exitoso e inesperado potencial del entomopatógeno *Bacillus thuringiensis* como rizobacteria promotora del crecimiento de las plantas

Successful and unexpected potential of entomopathogen *Bacillus thuringiensis* as plant growth promoting rhizobacterium

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Abstract

The microbiology of the rhizosphere has been investigated since 1904, revealing innumerable rhizomic microorganisms that promote growth in swamps (RPCPs), which have attracted a special interest to improve agroecological practices, crop productivity and protect soils from environmental contamination under a agricultural sustainability approach. This review addresses a topic as extensive as it is fascinating, beginning with the characteristics of soil microbiology. It also describes how RPCPs associated with plant roots offer greater crop growth through direct and indirect strategies. Also mention the complexity of plant growth and how it is done simultaneously through numerous metabolic activities. The bacterial genera of RPCP, the metabolic characteristics and the potential of entomopathogenic bacteria *Bacillus thuringiensis* (Bt) to be considered as RPCP are mentioned. Finally, the little known properties of Bt are exposed to benefit the growth of plants, their effectiveness in biocontrol of phytopathogens, as biofertilizers and / or biostimulants in crops. New perspectives are proposed to develop Bt products as a growth promoter in the near future. It is important to recognize that applied research of rhizosphere crops can be one of the key factors in achieving the sustainable yield of agriculture.

Rhizosphere, PGPRs, *Bacillus thuringiensis*

Evaluación de la actividad antibacteriana de *Artemisia ludoviciana* subsp. Mexicana contra tres enterobacterias

Evaluación de la actividad antibacteriana de *Artemisia ludoviciana* subsp. Mexicana contra tres enterobacterias

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Abstract

Fractionated extraction of the leaves of *Artemisia ludoviciana* subsp. mexicana was performed, using hexane, dichloromethane and methanol, to obtain compounds of different polarity. Essential oils, aqueous decoction and hydroalcoholic extract were also obtained. Phytochemical profile was determined for each extract based on coloration and precipitation tests. Extracts were evaluated against three enterobacteria using the plate microdilution method. Chemical analysis revealed that dichloromethane fraction has a greater variety of compounds than hexane and methanolic fractions. The content of compounds of dichloromethane fraction correlates with the highest antimicrobial activity observed, suggesting that metabolites responsible for antimicrobial effect are intermediate polarity. Regarding extracts, ethanolic extract exerts a better effect than the decoction, while the essential oil shows the same antibacterial effect at low concentrations. Results demonstrate that *A. ludoviciana* subsp. mexicana has a great variety of compounds, which, according to their nature, can be eluted with solvents of different polarity. These compounds contribute to the antibacterial effect attributed to this plant.

Medicinal plants, Extract, Antimicrobial

Evaluación fisicoquímica de tres variedades de tejocote (*Crataegus mexicana*)

Physico-chemical evaluation of three varieties of tejocote (*Crataegus mexicana*)

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Abstract

Tejocote has been used traditionally in Mexico since Pre-Hispanic times and currently its cultivation it is considered of lesser economic importance, is distributed mainly in the States of Mexico, Puebla, Tlaxcala, Chiapas, Michoacán, Hidalgo and Morelos. The tejocote groups together more than 150 species around the world, these 93 types are in Mexico, further studies in this species are scarce. Therefore this research was the analysis of physical and chemical strains of tejocote at the Universidad Politécnica de Francisco I. Madero. The results show that the criolla variety possesses a 65.64% humidity, on the other hand the highest percentage of protein was obtained in Calpan gold variety (3.80%), for the ether extract the criolla variety has a 41.11% fiber, criolla variety was the one that obtained the highest percentage (16.71%), °Brix criolla variety presented the higher value, which present greater weight was the Chapeado variety. This results will be a contribution to the added value given to these.

Tecojote, Fruit, Analysis

Evaluación de productos comerciales para protección y un arranque vigoroso de semilla de maíz

Evaluación de productos comerciales para protección y un arranque vigoroso de semilla de maíz

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Abstract

The objective of this research was to evaluate six commercial products used for the protection of seeds against pests and diseases. The products were Poncho, Nipsit Inside, Allectus 150, Allectus 722, Regent Ultra and Cruiser 350 FS. The experiment was established in the town of Puerta del Monte, belonging to the municipality of Salvatierra, Guanajuato, in a random block design with seven repetitions. The evaluated variables were plant height, stem diameter, root length, present populations of fall armyworm, cutworms, thrips, diabrotica and blind hens. The most efficient treatment on the protection of pests in the cultivation of maize in its stage V4-V6 (most vulnerable stage) was the Nipsit Inside, this according to the results that were obtained in the four weeks of evaluation and according to the statistic analysis. Nipsit Inside is an insecticide that showed a wide range of protection in addition to presenting superior yields and better quality in the ears. Poncho is the second alternative to be used because it has very similar characteristics to Nipsit Inside in most of the variables evaluated.

Pest, *Fusarium oxysporum*

Caracterización morfológica de semillas y germinación de *Pseudotsuga menziesii* (Mirb.) Franco (Pinaceae)

Morphological characterization of seeds and germination of *Pseudotsuga menziesii* (Mirb.) Franco (Pinaceae)

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Abstract

Pseudotsuga menziesii (Mirb.) Franco is a species of economic and ecological importance for Mexico. Several actions have been implemented for its ex situ conservation. However, the lack of characterization data is a limiting factor in genebanks. In this study, morphological characteristics and seed germination traits were evaluated in 12 accessions of *P. menziesii* from Tlaxcala and Puebla. Fifteen seed variables, germination percentage (PG), days to germination (DG) and radicle growth (CR) were measured in 100 seeds (four replicas of 25 seeds each) per accession. A principal component analysis, a cluster analysis and the estimation of the relationship between seed variables and germination traits were performed. The variables that had largest influence on the distribution of morphological variation were: LA, ASC, AS and AA/AS. The accessions were distributed in five general groups according mainly to their geographical origin. For some accessions, PG and CR had a direct relationship with seed size variables. These results showed the presence of variation and the influence of seed morphology on the germination of the evaluated accessions.

***Pseudotsuga menziesii*, Diversity, Conservation**

Establecimiento de semilla en condiciones de *in vitro* de *Swietenia macrophylla* para obtención de plántulas asépticas

Establishment of seed *in vitro* conditions of *Swietenia macrophylla* to obtain aseptic seedlings

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Abstract

The mahogany, *Swietenia macrophylla*, due to its economic importance, occupies an important place within the regional flora of southern and southeastern Mexico. The objective of this work is to obtain a mahogany seed disinfection protocol for its establishment *in vitro*. The seeds were left in imbibition for 24 hours, then the seed was washed with running water and soap for 3 minutes. Subsequently, within the laminar flow hood, different treatments were carried out, the control 30 min in captan, treatment 1: 30 min in capture 1.5 min in 70% ethanol and 3 min in 30% chlorine. Treatment 2: 30 min in captan 1.5 in 70% ethanol and 4 min in 30% chlorine. Treatment 3: 30 min in captan, 1.5 min in 70% ethanol and 9 min in 30% sodium hypochlorite. The data were subjected to analysis of variance and comparison test of Tukey means (Tukey, $\alpha = 0.05$). The variables that were evaluated were germination and contamination in the environment. It was observed that there were no significant differences in seed germination. Regarding contamination, treatment three presented the least contamination.

Aseptic, Forestry, *In vitro*

Fenología y patrones de distribución de biomasa en dos variedades de frijol

Phenology and biomass distribution pattern in two varieties of common bean

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Abstract

In Mexico, bean crop is one of the most important agricultural resources to provide food also for its economic value as product. However, there is a lack of research related with *Phaseolus vulgaris* varieties, specifically for plants cultivated for human consumption as common bean pods. It was characterized the main phenological events and the biomass distribution in two different varieties “Black Valentine” (BV, green pod) y “Black Wax” (BW, yellow pod) of common bean. For each variety it was chosen 4 plants and every 10 days after planting (DAP) from each organ emerged the fresh and dry weight and the leaf area were recorded. Then, at 7, 14, 21, 28 and 35 days after anthesis (DAA) the growth, fresh and dry weight and nitrogen content were evaluated from pods (n=10) of each variety of common bean. During the first 30 DAP the dry weight accumulation in both varieties was correlated with leaf area. The beginning of flowering and fruit growth was an important factor in the source-sink relationship. Differences were not noted in the final fresh and dry weight of the pods between “BV” and “BW” varieties.

Phaseolus vulgaris, Pods, Carbon partitioning

Raleo de fruto en siete variedades de jitomate (*Lycopersicon esculentum* Mill.) Bajo invernadero

Fruit thinning in seven tomato varieties (*Lycopersicon esculentum* Mill.) Under greenhouse

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Abstract

The experiment was conducted from May to August 2018 at the Technological University of the Southwest of Guanajuato (UTSOE) in a randomized complete block design with three repetitions, in greenhouse 1 of 700 m² of the Sustainable and Protected Agriculture Career; with the purpose of evaluating the effect of three levels of thinning of fruits, with four, five fruits and without thinning, in the yield and plant variables in seven varieties of saladette tomato produced under greenhouse and in hydroponic substrate. The varieties evaluated were: Natalie, USATX 12227, USATX 9934, Juan Pablo, USATX 24019, USATX 16117, USATX 15538, all established at a density of 31,250 plants per hectare. The thinning levels of four and five fruits per cluster had a positive influence on tomato yield, on treatments without thinning, the Natalie and Juan Pablo varieties being the ones with the highest yield, after three weeks of harvest. Regarding the number of leaves, despite finding statistical differences ($p \leq 0.01$), the thinning of fruits did not necessarily influence the development of leaves, but rather was due to the genetics of each variety, the USATX 24019 variety being the that more leaves developed.

***Lycopersicon esculentum*, Thinning of fruits, Yield**

7 Ingeniería

Desarrollo del Programa C utilizado para localizar la mejor opción de aplicación de soldadura en el desarrollo técnico de materiales

Development of C Program used to locate the best option of application of Weld in the technical develop of materials

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Abstract

Technology is present in industrial life and increasingly the use of programming within processes or in search of solutions that come in support of decision making is becoming more frequent. Programming in C language, will be the basic tool to develop a material technologically applying the welding process, where the base metal is mechanically resistant as steel A36, and apply it in a matrix of strategic points welding with high hardness to make them more wear ; However, the thermal cycles generated when welding is applied produce deformation that affects the plane. Through the program developed in the present study, the sequence that must be followed in a welding process for three 10x10 matrix plates is established. Once established the criteria in the program, and taking into account the formula of the furthest point, the deformations generated in the plates with the established sequences were 0.016, 0.008, and 0.020 inches, for maximum temperatures of 620 ° C, 575.6 ° C and 354.2 ° C respectively, which indicates that the deformation is not a function of the final temperature, but in the distribution of the applied welding points

Materials, Optimal Route, Technology

El empleo de las TIC's en educación primaria y las competencias docentes

The use of ICTs in primary education and teaching skills

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Abstract

Current education is having pedagogical changes, the use of ICTs in the daily life of society has developed new demands for teachers, which requires knowing their students, as well as their interests and the practices they develop. On the other hand, the learning strategies applied by teachers are not the same, since the demands of new learning environments require the acquisition of teaching competencies, ICTs are already immersed in primary schools, although not in their Total position to carry it out, requires economic and pedagogical administrative investments among others. Goals. Identify the impact of the implementation of ICTs in primary education to favor the skills of students. Methodology. In the present investigation the methodology used was mixed, exploratory where the use of ICTs is contrasted with the impact developed in the competences. Contribution. The generational adjustment must occur both in the classroom with both the students and the teachers, since more training is required in accordance with the social, technological dynamics and with the respective adjustments of the public education policies, generating a change in the use that is given to ICT and its use.

Pedagogy Wheel, ICTs, Education

Redes Sociales como estrategia de comercialización en las empresas de manufactura automotriz

Social Networks as a marketing strategies in automotive manufacturing companies

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Abstract

The present work addresses current issues, such as the use of Information Technology and its incorporation into the business plan of organizations in the automotive sector. Therefore, a quantitative analysis and data collection was carried out, which made it possible to establish the use of social networks as a marketing tool, to help improve the traditional means dissemination of effective communication strategies in the markets, as well as impacting on the development of successful digital campaigns that allow the positioning of their brands and services. Therefore, it was detected that 68% of the total sample shows that they are willing to use social networks for the dissemination and promotion of digital campaigns, and it was 95% the positive answers in the surveys yielded positive data, regarding the use of social networks of each organization, being the most common Facebook, Instagram and YouTube. Therefore, it was determined that the use of social networks for their coverage is considered effective as a tool in the use of marketing design processes.

Marketing, Social Networks, Information Technologies

Implementación de TIC'S para la gestión de visitas de divulgación de la científica

Implementation of TIC'S for the management of science outreach visits

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Abstract

The Irapuato Higher Technological Institute has the "Itinerant Laboratory" program, a project that carries out various scientific dissemination activities that are offered to educational institutions in the state of Guanajuato; However, poor communication between Responsible led to various problems that prevented the provision of the services of this itinerant laboratory; In 2017, a total of 32 applications were made by primary and secondary schools, of which only 12 were met, due to the lack of organization and the time it took to complete the process. In order to mitigate these delays and increase the number of visits, it was decided to use IT by designing a **web system** through which educational institutions can request visits. The methodology followed for software development is based on the **cascade** life cycle; It culminated with a web system that manages the requests for visits as well as the existing recreational activities in addition to providing reports of attention and number of people benefited, resulting in an increase in requests received by 30% and attention to them with a 40% increase compared to the previous year.

El recurso humano capacitado y la estructura organizacional influyen en la adopción de tecnologías de información de las pequeñas y medianas empresas de software en Sonora

Trained human resources and the organizational structure influence the adoption of information technologies of small and medium software companies in Sonora

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Abstract

Adoption of information technologies is determined by several factors, trained human resource and the organizational structure are one of them. The aim of this research is to examine whether the human resources and the organizational structure influence on adoption of information technologies between owners and managers of SMEs dedicated to the distribution and sale of software services of the most important cities in Sonora. The methodology used was: Causal - correlational, cross section, not experimental and quantitative. The collection of information was through a survey designed by researchers with a Likert scale of five levels; the sample was represented by 35 SMEs. The data were analyzed through the Modeling of Structural Equations with Smart PLS software. The research evidence reveals that having trained personnel with a well-defined organizational structure influence on adoption of information technologies and contributes to the knowledge of academics and researchers who develop research in SMEs.

Adoption of Information Technology, Trained human resources, Organizational structural

Representaciones docentes sobre las modalidades educativas sustentadas en las Tecnologías de la Información y la Comunicación (TIC), en el Centro Universitario del Norte

Representaciones docentes sobre las modalidades educativas sustentadas en las Tecnologías de la Información y la Comunicación (TIC), en el Centro Universitario del Norte

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Abstract

The integration of Information and Communication Technologies (ICT) in the learning processes, have radically transformed the content approach in educational programs, as well as a change of role in the actors; Students become more self-managing and teachers become guides or advisors in the generation of knowledge and skills. The objective of the work is to know in depth the representations of teachers on educational modalities supported by ICTs, what are the possible advantages and disadvantages, as well as some of their reflections on their implementation in the CUNorte. The approach to the object of study is carried out through a qualitative investigation of descriptive type, in which four units of analysis based on the theory of social representations are considered. The paper rescues the experience of how the role of the actors in the performance of their academic activities has been transformed with the implementation of educational modalities based on ICT.

Technologies, Educational modalities and representations

Propuesta didáctica para el estudio de la derivada y la integral mediante la resolución de problemas contextualizados y la integración de las tecnologías de la información y las comunicaciones

Didactic proposal for the study of the derivative and the integral by means of the resolution of contextualized problems and the integration of the technologies of the information and the communications

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Abstract

The work deals with the study of the derivative and the integral based on the introduction of contextualized problems and the integration of ICT. The objective is to present a didactic proposal focused on the resolution of contextualized problems and the integration of mathematical assistants for the improvement of the teaching-learning process of Differential and Integral Calculation. The novelty presented by this didactic proposal is based on the work with contextualized problems and the integration of ICTs into the teaching-learning process, creatively applied in the study of the derivative and the integral for the training of engineers. The practical significance is manifested in the didactic proposal, since through its application the teaching-learning process was developed in a way that allowed the students to appropriate the contents taking advantage of the resolution of contextualized problems, and the integration of mathematical assistants what promoted a participatory, reflective and contextualized process improving student results.

Derived, Integral, Contextualized Problems

Diagnóstico de ti en las MPYMES de la región Huasteca Hidalguense

Diagnóstico de ti en las MPYMES de la región Huasteca Hidalguense

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Abstract

The objective of this study is to identify the areas of opportunity for micro, small and medium enterprises (MPyMES) in the Huasteca region of Hidalgo, which can be optimized through the use of IT. An exploratory and descriptive investigation was carried out, with a quantitative approach through the Malhotra methodology. Three ways were raised with respect to the use of ITs, the MPyMES. Why don't they use IT? If they use IT, in what processes do they use them? What other processes through IT can be strengthened?, the research results reveal that some of the MPyMES do not incorporate IT, because they consider that its implementation is expensive, additionally there is no experience to implement it. This study intends on the one hand, identifies all areas of opportunity in the area of ITs presented by MPyMES and on the other hand serves this information as an element of entry to the CATI Academic Body, for the management of their movements that have those aspects that impact on microenterprises, thus fulfilling the social commitment that as a group of researchers has with society.

ICT Diagnosis, MPyMES, Malhotra

Identificación de los atributos del servicio en un centro de transformación de información digital y contable

Identification of the attributes of the service in a digital and accounting information processing center

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Abstract

A Digital and Accounting Information Transformation Center (CTICD) is a physical space that has services such as: loan of computer equipment, accessories and / or digital tools (software, technical support, etc.). Each CTICD has tangible and intangible attributes in the service that distinguishes them and makes them attractive to the user. The objective of the work was to identify the attributes that the user of a CTICD considers of greater influence for its existence. The data collection instrument was validated through Pearson's correlation and the dependence between the tangible and intangible attributes of a CTICD was calculated. The result obtained was generated with the chi-square statistical independence test. Theoretical chi-square of a couple of variables was plotted. The contribution of this research is the identification and importance of intangible attributes in the perception and differentiation of the service of a CTICD for users, highlighting the humanistic part through attention to them, putting it before any tangible attribute.

Center for Transformation of Digital and Accounting Information, Tangible attributes and intangible attribute

Diagnóstico sobre desarrollo de competencias informacionales y digitales en posgrados del Centro Universitario del Norte

Diagnosis on development of informational and digital competencies in postgraduate courses at the University Center of the North

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Abstract

The purpose of this study is to present a diagnosis of the level of development of the informational and digital competencies that the postgraduate students of the University Center of the North (CUNorte) possess. These two variables of Information Literacy are evaluated through a questionnaire organized in five dimensions: capacity, access, evaluation and use of information; and basic notions in the use of Information and Communication Technologies (ICT). The results show evidence of some of the competencies acquired by students and graduates of postgraduate courses, however there are opportunities to strengthen their disciplinary development and facilitate their research processes. The answers provided by the students and their consecutive analysis highlight the need to complement the diagnosis using other techniques to assess the knowledge and skills that make up the informational and digital competencies whose development is evaluated. Regarding the contribution of the study, considering the factor analysis of the component matrix rotated in the instrument, it is summarized that it is feasible to develop a diploma that provides the necessary tools to enrich the aforementioned competencies.

Informational competencies, Digital competencies, Diagnosis

Diseño de un sitio web dinámico para institución educativa

Design of a dynamic website for educational institution

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Abstract

The objective of this article is to design a website for an educational institution with a dynamic data model that allows you to easily add, edit and update information. In the methodology, systems engineering concepts will be used during the system development process, documenting each stage. Carrying out the stages of requirements analysis and data model design, considering the parties involved. The Entity Relationship model was designed with the purpose of confirming the logical needs of the information. In addition, the relational model was created, where the attributes of each entity are detailed. MySQL was used as the database management system. Part of the design of the data model includes the way in which it interacts with it, for this the CRUD system is used. With the design of the data models: logical and database models, the script for the creation of the dynamic database was created, which will be used to store all the information relevant to the educational institution. As a result, the correct functionality of the database was guaranteed on the website.

Dynamic data model, Website, Data model

Desarrollo de recursos didácticos con el uso de las tecnologías de la información y comunicación disponibles en una plataforma virtual

Development of didactic resources with the use of information and communication technologies available on a virtual platform

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Abstract

Develop didactic resources with the use of ICT'S (Information Communication Tecnologies) to strengthen mathematics teaching with students of the Technological University of Huasteca Hidalguense it was the purpose of this study. The results of the diagnostic evaluation applied to a sample of 856 new students indicate that the performance is regular (6.1 points) in Arithmetic and insufficient (4.4) in Algebra (UTHH Academy of Mathematics, 2018); shows the following problems: failing rates, dropping out, mathematical fear calculations and problems solving related to their field of application, so that proposes the development of teaching resources available on an accessible platform. According to (CONOCER, 2016) the learning resources are instruments used in the educational context through their manipulation, observation, or reading, opportunities to learn are offered or with their use they intervene in the development of some teaching function; (Spiegel, 2006), It indicates they are necessary to promote the autonomy of students, future workers in the profile we teach. This work is based on the Methodology for the development of educational applications in multimedia environments (Bianchini, 1992) with the phases: a) Research and Analysis; b) Logical, functional and physical design; c) development; d) Implementation and production. As a result, educational resources were obtained (videos, infographics and digital evaluations) these support the teaching-learning process through organized information that complements, expands and details solution processes for teachers and students available on an institutional virtual platform.

Mathematics, Resources, Virtual environments, Multimedia

El impacto de las redes sociales en el proceso de enseñanza aprendizaje de la termodinámica

The impact of social networks in the teaching process of thermodynamics

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Abstract

The development and use of social networks in the teaching-learning process that students develop, makes it an important and almost essential tool in the educational process. This entails changes, of various absolutely inevitable characteristics when it comes to launching innovative proposals in the teaching of thermodynamics. Hence the training processes in universities demand new models of pedagogical strategy capable of responding to the needs of the new society. However, in practice, during the teaching process of thermodynamics, it has been detected that traditionalist teaching approaches are still assumed, which does not meet the expectations demanded by the new training models. The research carried out is aimed at studying the evaluation of the teaching-learning process in its formative and meaningful training, with the objective of promoting formative evaluation through the use of virtual training environments.

Thermodynamics, Social Networks, Virtual Training Environments

Investigación con un enfoque cuantitativo a través de un diseño transversal-descriptivo de las TIC's e innovación tecnológica con respecto al aumento de sus ventas en las Mypes de San Pedro Cholula, y Xicotepec de Juárez

Research with a quantitative approach through a cross-descriptive design of ICTs and technological innovation regarding the increase in sales in the Mypes of San Pedro Cholula, and Xicotepec de Juárez

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Abstract

The purpose of this work is to investigate the influence and impact on its sales that have Micro and small companies (Mypes) in the Cholula and Xicotepec de Juárez region of the State of Puebla, Mexico, regarding their patterns of adoption of technologies of information and communications (ICTs), taking into account the dimensions and benefits of them, in this sense, the research examines the nature and extent of the adoption of these technologies by micro and small businesses, as well as digital divisions that have emerged, analyzing the barriers to the adoption of electronic commerce technologies and techniques, together with factors that promote successful adoption and the main role that human capital plays, for this purpose data on these aspects of ICTs were collected. s of 630 Mypes through a survey instrument carrying out research with a quantitative approach, through a tran design sversal-descriptive

Mypes, Tics, Electronic Commerce, Information Technology

Usos y abusos del celular en adolescentes

Uses and abuses of the cell phone in adolescents

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Abstract

Since the beginning of the 21st century, the cell phone has become an essential element for daily life because thanks to its various functions, applications and updates, they have made our day-to-day activities become simple to carry out, since carry out an agenda, until you find information quickly saving a trip to the nearest library. This article has as main objective to expose the uses, whether personal or academic, of the cell phone, how this can give way to excessive abuse of the same and the consequences that can cause the abuse of it, of which there is excessive dependence on said device, causing anxiety and / or despair when performing tasks or when the cell phone is not at hand. In Zacatecas, Mexico, it has been proven that 80% of car accidents are caused by using the cell phone while driving a car, thus displacing the use of alcohol and other massive substances for health, in addition, it is proven that Talking on a mobile phone when driving, increases the chances of causing a road accident up to five times and absorbs from eight to thirteen seconds of distraction on average answers a call or writes a message through the cell phone. In conclusion, the use of the cell phone has benefits, both personal and academic or work, although it is also important to instill road education in adolescents, from home and even in the same institutions that are more likely to be victims of an accident to Cause of excessive cell phone abuse.

Use of cell phones, Abuse of cell phones, Smart phones, New technologies, Procrastination

ZonaTIC: Sitio web para la divulgación de la ciencia de las TIC en pro de la inclusión digital

ZonaTIC: Website for the outreach of ICT science for digital inclusion

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Abstract

Objective. Implement a website that allows the outreach of the science of Information and Communication Technologies to the staff of the university community of the UTNG to facilitate digital inclusion, taking advantage of the current infrastructure that the university has, as well as its human capital. **Methodology.** The adopted development model was a concurrent model: For the Frontend development the spiral model was used, which facilitates its design through the stages of prototyping, analysis and design. On the other hand, for the development of the Backend, the waterfall model was used, given the nature of the project, where the requirements are pre-established and with few changes. The phases of this model are:

- Requirements. Survey of requirements.
- Design. Development of the database and class diagrams.
- Implementation Coding.
- Check. Tests.
- Maintenance. Correct errors in functionality.

Contribution. Implementation of project-based learning (PBL) as a motivational teaching strategy in the development of web applications.

Use of robust development tools used today by software factories, such as: Java, Spring, HTML5, CSS3, and Apache Maven; all this under a Model View Controller architecture

Project-based learning, ICT, Web development

Diseño de JIGS para el Area de Pintura mediante Solidworks

Design JIGS for the Paint Area using Solidworks

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Abstract

Drawing is a language or half of Communication that allows you to make known ideas or messages by using images, figures or symbols; for this reason, it is also called graphic representation. Today, computers have greatly simplified the way we design and manufacture parts or mechanical components. The term Computer Aided design (CAD) refers to a set of technologies based on the use of computers to create, analyse, and optimize the design in the field of engineering. CAD programs provide a graphical user interface (GUI) that allows the user to enter and manipulate geometric objects in 2 and 3 dimensions, create engineering drawings, do basic analysis as the calculation of Mass properties, as well as visualizing and manipulating individual components or assemblies that represent mechanisms or machinery that are increasingly complex. The development of CAD systems in the last 50 years has been parallel to computer technology (Jensen, 2004), and we find various applications in all fields of science, the automotive industry and aerospace its main Propellers. The present work It deals with the use of Solidworks ® for the elaboration of JIGS (frames) for different automotive plastic components that will have to move to the painting area and then to a baking process, without these deforming.

CAD, CAM, JIGS, Engineering sheet

Ciclos del viento como condicionante de diseño bioclimático y urbano para Ciudad Valles, S.L.P.

Wind cycle as a bioclimatic and urban design conditioner for Ciudad Valles, S.L.P.

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Abstract

Objective: Identify and analyze the wind's origin for seasons and periods of the day in the urban area of Ciudad Valles, San Luis Potosí, Mexico, officially with temperatures higher than 113°F. Establish the bases of wind urban planning and sustainable architecture to formally and functionally adapt the obstructions and wind's guides in pedestrian traffic spaces and living place. Methodology: Descriptive and quantitative approach. Review of documentary sources, processing and analysis of statistical information CONAGUA with Excel software support, learning in the management of software WRPLOT See for the elaboration of graphs of roses of the winds. Contribution: Strengthen and support decisions about project development, programs and improvement for urban spaces, with a bioclimatic and sustainable vision. Clarify by graphs and compass roses the wind's direction in the urban area of Ciudad Valles, S.L.P.

Wind urbanism. Compass rose of Ciudad Valles

Elaboración de ladrillos con merma de una empresa que fabrica espumas reticuladas

Elaboration of bricks with merma from a company that manufactures reticulated foams

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Abstract

A proposal was developed to make bricks based on ground shrinkage of a company that is dedicated to the manufacture of cross-linked foams, the process consisted of first establishing the dimensions according to what is currently in the market, a reference target was determined with concentrations similar to an artisanal brick, immediately replacing the white concentrations for test A were 40% of tepojal, 30% of cement, 20% of sand and 10% of shrinkage and test B of 45% of Tepojal, 35% sand, 20% depletion, to evaluate the technical feasibility in the elaboration of the specifications of NMX-C-441-ONNCCE, such as compressive strength, water absorption and dimensions, as well as The density of the elaborated bricks, which was obtained as a result of that of test B is very viable for non-structural use, that is to say dividing walls, since it supports a load of 1000 kg, they are efficient to place them at weathering since the percentage of water absorption is 4%, as well as the economic feasibility, with a cost of \$ 13.1.

Brick, Shrinkage, Resistance

Efecto de la adición de materiales compuestos de estireno-butadieno/plumas de pollo en la modificación de asfaltos

Effect of the addition of styrene-butadiene / chicken feather composites on asphalt modification

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Abstract

Asphalt is an important material for road construction and other applications. That is why it is done the search for materials that in combination with the asphalt generate a product of better quality, lower environmental impacts and low costs, thus allowing to be reflected greater resistance of the asphalt to the extreme climatic conditions and traffic. To cover these different needs, asphalts with a better performance must be counted, having to modify their chemical, physical and rheological properties, in order to improve their behavior to the shearing, deformation, fatigue, ageing, elasticity, etc. In this work, studied the effect of adding composite materials with polymer of the type SBS lineal (Styrene-butadiene-styrene) and the feather of chicken, taking concentrations of 1, 3 and 5 PHR (parts per hundred of rubber) in ratios of 2, 4 and 6% in relation to the weight of asphalt. Techniques were applied to characterize such as dynamic viscosity, softening point, phase separation characterization, penetration index and fluorescent microscopy. As a result, using a polymer of the linear SBS type incorporating keratin from the chicken plume as reinforcement for the asphalt does not present interesting results for application areas such as where high fluidity is required.

Asphalt, Feather of chicken, Polymer SBS lineal

Diseño de interfaz gráfica basada en Big Data para cálculo de sistemas de tubería de Clase III

Design of graphical interface based in Big Data for calculus of systems of pipelines Class III

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Abstract

The current requirements of the industry present challenges that must be faced daily in the different productive sectors. The use of cutting-edge technology and the efficient handling of large volumes of information allow the development of new computational tools that improve accuracy and optimize calculation's times in pipe design. In this work the application is presented of the Piping Systems Analysis Program (PSAP), same that was developed as a graphical interface in the computer language MATLAB®; this computational application determines the size of the commercial pipe based on the pressure difference, elevation, water temperature and volume flow as critical design parameters. The algorithm of solution uses skills of Big Data for the precise handling of large volumes of information, getting accurate results at reduced times without compromising the reliability of pipe systems; this way optimizes the design process compared to traditional analytical methods.

Pipeline, Big Data, PSAP

Optimización del proceso de recuperación de minerales valiosos mediante la implementación del sistema de flotación

Optimization of the recovery process of valuable minerals through the implementation of the flotation system

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Abstract

The principal objective is the Optimization of the flotation process of minerals with valuable metallic content (gold and silver). The project was divided into: design and preparation of materials and equipment, size reduction, smelting, copellation, separation and flotation. Two Processes were practiced to determine which is the most optimal in obtaining valuable metals from mineral samples. The processes used were: dilution of values and flotation; the last one was the most effective, thus fulfilling the project objective of Optimizing the process in obtaining valuable minerals, as a result of the implementation of this method, 1 kilo of ore (andesite) was floated from which 117 g of ore concentrate were obtained, 30 g of concentrate were melted and 0.3061 g of silver was obtained. By the principle of electronegativity a sample of mineral was treated being this very effective for the recovery of values. This project arose from the need that some people in the state of Guerrero in exploiting valuable minerals to meet their basic needs, 60% of the territory of Mexico have owner, for that reason the microentrepreneurs seek advice to extract mineral and we help with the exploitation of their land.

Optimization, Flotation, Mineral recovery

Evaluación del recurso hidrocínético en las partes bajas de la región hidrológica 29Ba de la Cuenca del Río Coatzacoalcos

Hydrokinetic resource assessments in the lower parts of the 29Ba hydrological region of the Coatzacoalcos River Basin

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Abstract

Hydrokinetic energy is induced by the velocity in the natural causes of rivers and is used for electric generation. Human settlements have always been established on the margins of the rivers, therefore it is very useful to evaluate the hydrokinetic resource in the places where there are populations on the banks of the rivers, mainly in places where there is no service available electric power. In this work, the hydrokinetic potential along the river in different sites of the flat parts of the hydrological region 29Ba is determined. The flows in the rivers are calculated taking into account the use of soil, the precipitation of different meteorological stations, which are processed in a Geographic Information System (GIS). The calculated flows are compared with the observed data of the hydrometric station Las Perlas of CONAGUA. The velocities along the river are calculated with the numeric model Hec-Ras, later the minimum, maximum and average monthly hydrokinetic potential is estimated with some turbine models designed for this purpose.

Hydrokinetic energy, SIG, Hec-Ras

Diseño de un sistema perfilador de bajo costo y efectivo para la determinación de rugosidad en vías terrestres asfaltadas

Cost-Effective system design for an asphalted-highway roughness profiler

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Abstract

The constant transit of trucks with large loads or too heavy vehicles circulating on the roadways of the national territory, causes premature deterioration of the asphalted freeways and roads, which keep country connected. All of this, in addition to the damage caused by the climatic conditions of the area or region where such communication roads are built. This work is focused on the design and construction a system capable of calculating and estimating the deterioration suffered on a road, avenue, street or road that are built with asphalted surfaces, which require periodic maintenance and occasionally their physical condition needs to be known in a quantitative manner. This equipment makes the measurements by means of a sensor that measures the flight time of the light (laser), as a mobile moves at constant speed on the study surface, opposite to the estimation with commercial equipments that require a mechanical or physical measurement by using the technique of half-car attached to a vehicle or the expensive optics profilers. The contribution of this project consists in the design of the electronic stage for data acquisition and the use of an economical but effective optical sensor, which is employed to calculate the roughness index with great precision, without the need for a mechanical device that has physical contact on the surface. With the methodology involving the equations of design, form of operation and validation.

Profilometer, IRI, Roughness estimation

Elaboración de bloques de construcción a partir de residuos de arena sílica proveniente del proceso de fundición aluminio en una empresa automotriz

Preparation of construction blocks from silicone sand waste from the aluminum foundation process in an automotive company

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Abstract

The objective of the project was to develop a procedure for the construction of building blocks with silica sand residues, from an aluminum smelting process of an automotive spinning company. The blocks obtained were evaluated in accordance with NMX-C-404-1997-ONNCCE standards for the design and formulations of the block, and NMX-C-036-ONNCCE for tests and compression calculations. Initially these arenas are used for the elaboration of the molds of the mechanical parts that are manufactured in the company, however, once the utility of these arenas for molding is fulfilled, they are sent to final disposal sites. For the elaboration of the blocks, the physical characteristics and chemical properties of the silica sand were initially determined (grain size, pH, structure, grain shape, humidity, specific gravity, bulk and bulk density). The mold was then designed and two formulations based on the residues of silica sand, cement, water and lime were tested. The product quality assessment included tests for drying, moisture absorption, design resistance to compression. Finally, the manufacturing costs were compared with the costs of existing commercial blocks in the market.

Block, Residue, Silica sand

Captación de agua pluvial en un plantel educativo de nivel medio superior del valle de Toluca, México

Catchment of pluvial water in a higher middle educational plants in the valley of Toluca, Mexico

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Abstract

The objective of this project was to design a rainwater collection and treatment system at the Center for Industrial and Service Technological Studies No. 23 “Cetis23” as a corrective measure to prevent the flooding of gardens in the rainy season and increase the endowment of water to the population of the campus. The design began through a field study of the surfaces of the buildings to determine which are the ones with greater area and better surface, in this case were the buildings with gable roofs. Using the Sweet Home 3D software, the system was simulated in each building and a cost study was carried out, budgeting materials and labor. The pre-storage system for rainwater storage was proposed, consisting mainly of a sand and gravel filter. Finally, a ferrocement storage tank was designed. This system is an uncomplicated, economical and ecological technological option to provide water, in quantity and quality, to the population of CETis 23 (1354 people with an expense of 10 L per person per day).

Catchment, Rainwater, Design

Prototipo IaaS para el estudio del almacenamiento en bloque basado en Cinder

IaaS prototype for the study of block storage based on Cinder

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Abstract

The evolution of technology towards a new era of agile and dynamic workflows in the topic of cloud computing has resulted in professionals in Information Technology deepening in the study of tools or mechanisms that optimize the storage and data security; on the other hand, for companies that increasingly handle a larger volume of data to develop their activity, having these tools has become a key factor today. In this work is present the study of the Cinder component of the OpenStack platform, as a block storage tool that is associated with virtual machines or instances; is presented the deployment of a cloud platform of the IaaS model (Infrastructure as a Service) in a test environment, following the first four phases of the PDIOO methodology proposed by Cisco Systems; and the results that demonstrate the persistent storage of information through the use of said component are presented.

Infrastructure as a Service, Storage, Cinder

Diagnóstico del estado de deterioro de un techo tipo reticular de concreto armado mediante técnicas no destructivas y semi-destructivas

Diagnosis of the deterioration state of a reticular reinforced concrete roof using non-destructive and semi-destructive techniques

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Abstract

In the present article, an investigation carried out to diagnose the state of deterioration of a reticular type slab, located in the Historic Center of Oaxaca city Mexico, using non-destructive (TND) and semi-destructive (TSD) techniques, is described. The roof was built with an unconventional structural system, which consisted of the use of reticular beams, missing hollow block cases and a compression slab. During the visual inspection, various signs of deterioration in the structure were observed, such as: leaks, salt leaching, shedding of the rebar cover and corrosion of the reinforcing steel. Accordingly, the TND and TSD selected to perform the diagnosis of the state of deterioration of the structure were the following: estimation of the compressive strength ($f'c$), by means of sclerometry test and compression test in concrete cores, determination of the effects of salts leaching on the pH of the concrete, estimation of the amount and location of the reinforcing steel with a digital pacometer and estimation of the corrosion state in selected rebars by electrochemical testing. The results obtained revealed the feasibility of using NDT and SDT to reliably diagnose the state of deterioration of a reticular slab of reinforced concrete in a non-invasive manner.

Diagnosis, Deterioration, Non-destructive, Semi-destructive techniques, Structural safety

Estudio sistemático de las propiedades mecánicas de las micropartículas de magnetita embebidas en una matriz de concreto polimérico

Systematic study about the mechanic properties of the magnetite microparticles embedded in a polymeric concrete matrix

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Abstract

In this paper, we present the synthesis and characterization of magnetic polymeric concrete with microparticles of magnetite embedded in a polymeric concrete matrix. Including the systematic study of the mechanic properties varying the concentration of concrete and magnetite microparticles like the reinforcement of the polymeric matrix. This sampling has been made varying the concentration of the reactive in the process of synthesis to analyze by a detailed way the change of physic properties. This characterization has been made by tension and compression tests, such as the optic microscopic, scanning electronics and XRD. The obtained results contribute to the systematic control of the physics properties about the polymeric magnetic sintered with microparticles of magnetite (Fe₃O₄) and microparticles of concrete. According to the minimum concentration of oleophilic substances, the mechanic the behavior of the probes is stiffer (plastic). Instead when there has a high concentration of oleophilic substance the behavior is more elastic (elastomer) because the probe presents more displacement. The behavior plastic-elastic is presented in a medium concentration of oleophilic substance.

Microparticles, Magnetite, Polymeric concrete

Análisis de la soldadura aplicada en el ZSB Trager VW SUV Tiguan (soporte zsb)**Análisis de la soldadura aplicada en el ZSB Trager VW SUV Tiguan (soporte zsb)**

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Abstract

Welding is an important process because it provides a permanent bond and the welded parts become a single unit. When joining two metals a joint (welded joint) is created where they will have certain characteristics, as well as if it is not the application of the correct form possibly discontinuities will remain. In any welding process, defects may occur, the main thing is to ensure that the penetration depth of the weld is correct and the accuracy of the performance of the functions to be performed. A company from Aguascalientes dedicated to the manufacture of die-cut, machined and welded parts has requested that an analysis to the welding applied to a piece that has sectioned it into 8 parts which contain the welding points required to form the structure of an armrest support. The study was carried out by means of a macro metallography where the main characteristic that was requested was exposed and that is the depth of the weld. The results reflect that the welding process is very dispersed and requires control of its parameters. 62% of the measured data complies with what is specified in VW 01106-1 edition 2015 - 04 with a minimum depth of 1.0 mm. The detail of this data can be reviewed within this report

Welding, Metallography, Welding penetration

Análisis y diseño de un sistema informático para administrar el plan de trabajo del profesor de tiempo completo

Analysis and design of a computer system to manage the full-time teacher's work plan

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Abstract

At the Higher Technology Institute of San Martín Texmelucan the Research Department is responsible for monitoring the development of Research and/or Technological Development Projects, which are mostly performed by Full-Time Teachers. A six-monthly Work Plan is currently requested from project managers that is filled in a format made in a text editor, which indicates each of the activities to be developed for the Project, as well as the corresponding deliverable products, among other data, it is physically delivered to the controller. Sometimes it is misplaced by human error, therefore, you do not have the evidence to be able to follow up in time and form. Therefore, a system is being developed to manage these and other activities, following the Agile Methodology of Extreme Programming software development for the analysis and design of the computer system, which includes the phases: Exploration, Planning, Iterations, Production and Maintenance. The use of the system will allow to have in time and form the projects and thus increase the institutional indicators research projects, development and innovation and students involved in research projects.

Computer System, Work Plan, Full-Time Teacher

Metodologías de desarrollo de objetos de aprendizaje para el aula virtual de la UTXJ

Metodologías de desarrollo de objetos de aprendizaje para el aula virtual de la UTXJ

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Abstract

It is known that each human being is unrepeatable, a factor to take into account for the teaching of classes, therefore it is essential to adapt methodologies for an optimal learning of each student, the teacher can be very good as a professional, but as a teacher, not Throughout the education in Mexico the student usually has problems, with the different subjects, to avoid desertions it is necessary to look for learning objects so that the student can acquire the desired competence, the LMS are learning management systems, within which there are learning objects that allow constructing educational contents from pieces that can be assembled, the creations of those objects take as a guide the self-containment, usability, reusability, effectiveness, accessibility, portability, and the source of where the information, Important points in the creation of the elements are the design which should be based on the psychology of learning seeking to improve the understanding and teaching methods, for meaningful learning, the detection of the student's learning style should be taken into account, as well like these elements texts, images, videos, conceptual maps, diagrams etc. To develop learning object methodologies.

LSM = learning management systems, Didact = expert in teaching, learning = Acquisition of knowledge

Estrategias de aprendizaje mediadas por tecnología para el aprendizaje significativo en la asignatura de Biología

Technology-mediated learning strategies for meaningful learning in the Biology subject

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Abstract

Currently there is a fairly large number of educational platforms; therefore, it is crucial to enter that virtual universe and use it as a tool to develop learning strategies that contribute to the appropriation of knowledge. This research aims to identify technology-mediated learning strategies that promote previous concept and meaningful learning in the subject of Biology at the high school level. To analyze the object of this study, a quantitative methodology of exploratory-descriptive type was used to know the strategies mediated by technology that develop the appropriation of knowledge of Biology content. There was an experimental group and a controlled one to apply a pre-diagnosis, treatment and post-diagnosis. From these data, the results were: Significant difference in the experimental group after the didactic intervention, since the subjects showed mastery of basic concepts of Biology and considered that the application of this type of strategies are fundamental for the understanding and organization of main ideas in the construction of meaningful learning. Besides, they affirmed that the assimilation and appropriation of knowledge depend on the strategies mediated by technology.

Technology-mediated learning strategies, Previous concept, Meaningful learning and teaching

Aplicación de dispositivos electrónicos para el ahorro de energía eléctrica, en la materia de Instrumentación apoyando la docencia y aprendizaje

Applying electronical devices to save electrical energy in the subject of Instrumentation, supporting teaching and learning

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Abstract

The industrial and didactics background, in which we can find the educational institutions, has the necessity to improve control electronical devices which permit , on one hand, a proactive and productive integral formation of creation and innovation among students, and on the the hand, a flexible electronic device in which they can develop alined projects with up to date requirements,as in the case of automatized systems alined to get an efficient use of electricity.For this case, it is proposed that using these electronical devices, as the Arduino, to create a control systems that permit to turn on and off the lights or air conditioning systems in a building in an autonomus way to make efficient the electrical consumption.Through an estructurization applied on teaching and learning that improves the asimilation of basical concept's, and to get knowledge on the focus of electromechanical systems that permit a better analysis for taking decisions, searching alternatives and opportunities; redefined and solved problems establishing an armonic relationship with the environment that encompasses inputs,outputs, characteristics and interrelationships among elements permitting to model an interesting electronical system to get a viable solution on scale devices.

Arduino, Electricity, Electronic

Aplicación GPS para administración de servicios

Aplicación GPS para administración de servicios

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Abstract

The continuous technological development to which we are currently exposed, advances an unprecedented speed, changing many aspects of our daily life. Within these advances is the use of geolocation systems. With which it is possible to know the exact location of static or mobile elements, the programming of trips, the calculation of distances and times of routes, the control of where objects and people are all times, and even SOS calls for help. This type of geolocation software systems provide very useful data and information for numerous functions and applications in society. With this project, the aim is to improve the productivity of the employees of the company CFE Aguascalientes central station, by implementing a GPS software that shows the employee the exact location and the type of service that will be carried out, by visualizing the a map that indicates the route to follow to find the exact point of the service to be developed, in addition to register the data of the service provided for its better control and administration.

GPS, Geolocation, NoniGPSPlot

Modelado estadístico de pronóstico de esfuerzo de construcción de Software

Modelado estadístico de pronóstico de esfuerzo de construcción de Software

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Abstract

This work focuses on the estimation of software construction effort based on programmer performance. This estimate is of great importance for the organization, since improvements are required of processes that use good practices, such as CMMI (Capability Maturity Model Integration). Therefore, a descriptive investigation was carried out for characterize the construction performance of software. Software products are requirements that respond to the specific needs of a customer and their technical dependencies not explicitly required by the customer, but necessary for the fulfillment of an explicit requirement. Characterized performances allow an organization to know if its processes are under control, as well as to produce models to estimate efforts and costs that are reliable.

Software, Effort, Estimation

Modelo de repositorio para gestionar reglas electorales generadas mediante técnicas de minería de datos

Repository model to manage electoral rules generated through data mining techniques

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Abstract

Having information on electoral behaviors at hand is very important for the different actors involved in an electoral process, since these, the behaviors, play a relevant media role during political campaigns. In this sense, in this article, it is proposed a repository model or meta-model for storing models and electoral rules generated through data mining techniques from databases that contain results of recent electoral processes, particularly, of the federal elections held last year in Mexico for the presidential election and this year's election in different states of the country to elect governors, municipal presidents and local deputies. The proposed meta-model includes a set of structures and a series of processes that allow the models and rules generated to be stored, based on ad-hoc phrases, so that this information can be retrieved through phrase aliases, emulating in a certain way the execution of queries in natural language. Thus, this work has double contribution, on the one hand, the electoral knowledge generated through data mining and, on the other, the meta-model for the management of this knowledge.

Meta-model, Electoral rules, Data mining

Producción de semilla de tomate de cáscara en hidroponía

Shell tomato seed production in hydroponics

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Abstract

Fruit and seed productive capacity and physiological seed quality of 2 varieties of husk tomato were estimated: Jojutla and CHF1. The study was conducted in hydroponics under greenhouse, in the CUCBA-UDG, Zapopan, Jalisco. Red volcanic rock (/Tezontle) of 0.5 to 2 cm in diameter was used in 19 L polyethylene bags and Steiner's universal nutrient solution of 0.3 to 0.7 atm, depending on the stage of the plant. The production of fruit and seed and the physiological quality of the seed were estimated. The varieties Jojutla and CHF1 showed a similar behavior in the production of fruit and seed, with lower fruit yields than expected (30 ton / ha in the field) because only 3 harvests were made, looking to produce husk tomato in winter when it reaches attractive prices. The weight of the fruit was greater as cuts were made while the seed production improved by cutting, associated with a greater number of fruits, while the weight of the fruit was not related to the seed yield. The physiological quality of the seed was affected by cutting the fruit to commercial maturity even when it was left to mature in the shade.

Physalis ixorcapa, Physalis philadelphica, Husk tomato, Soilless culture

Efecto del tiempo de electrodepósito de la fase sensibilizadora en DSSC empleando TiO₂ como semiconductor

Effect of the electrodeposition time of the sensitizing phase in DSSC using TiO₂ as a semiconductor

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Abstract

In this work, a solar cell sensitized with dye (DSSC) was developed using Titanium Dioxide as semiconductor metal oxide; the dye used was amaranth, this dye can be used for this purpose due to the chromophoric groups present in the molecule and the anchor groups related to TiO₂. The tests carried out were the measurement of photovoltaic response (current and voltage) in cells where the electrodeposition time of the dye was varied at a voltage of 1 V; the results show that the efficiencies vary according to time, registering values of: 0.014% for a time of 15 s, 0.009% at 25 s, 0.18% at 35 s, 0.02% at 45 s and 0.083% at 55 s, the above shows that the best electro-deposit time is 35 s due to in this parameter, the system showed the best efficiency and energy stability.

Solar cell sensitized with dye, Semiconductor, Efficiency

Estudio del proceso de lavado de contenedores para eliminar tiempos y movimientos innecesarios, caso: Wash containers S.A de C.V.

Study of the container washing process to eliminate unnecessary time and movements, case: Wash containers S.A de C.V.

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Abstract

In the value chain it is important to keep in mind the core business of the company, since it depends largely on the competitiveness of the company and its overall performance, bearing in mind that all business indicators depend on it. In this work we will study the washing process within the company WASH CONTAINERS SA DE CV, to improve the washing processes and in this way reduce times and movements in the process leading the company to reduce costs considerably within the operations company daily, having a more competitive operation and with greater profit margin in its business process. Goals. It Improve the logistics of the movement of containers for washing and with it the core business of the company. Methodology The action research will be applied applying Business Process Management for the improvement of processes in situ, it will be developed in a certain period of time and with that it will establish an improvement projection. Contribution The improvement of the times for the disposal of the containers and their subsequent use, allows a better competitiveness and with it the income of the company, on the other hand, the transport companies improve in performance in quantity, quality of disposition and with it their income.

Logistics, Competitiveness, BPM

Evolución del diseño de un sistema de recolección de basura utilizando manufactura aditiva en un robot limpiador de playa

Evolution of the design of a garbage collection system using additive manufacturing in a beach cleaner robot

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Abstract

Beach cleaning robots have been proposed as an option in reducing the pollution of beaches in Mexico, through garbage collection. To collect waste the robot must have a mechanism that can take the waste and deposit it in a container where they can remain without generating pollution. In our institute various mechanisms have been implemented that allow waste to be collected and this article shows the description of some of them showing the application of additive manufacturing in their design. The objective is to show the design, implementation and application of each collection system designed, showing the improvement by applying additive manufacturing. The basic contribution of this work is to show different design options and the parameters to consider in the design of each of them.

Beach Cleaner Robot, Garbage collection system, Additive manufacturing

Tecnologías de mantenimiento industrial en la industria 4.0

Industrial maintenance technologies in industry 4.0

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Abstract

Industry 4.0 is the incorporation of digital technologies in factories such as: artificial intelligence, machine learning, 3D printing, drones, robotics, IOT, big data, virtual reality, automation, among others, which aim to digitalize processes productive in the factories, these are also called smart factories. The objective of this article is to identify the technologies applicable to industrial maintenance in Industry 4.0, the final result of this research determine the teaching practices that must be carried out in the Industrial Maintenance Engineering career at the Technological University of Chihuahua, and how the students must be prepared with the competences and skills necessary to face this challenge, at the same time the new teaching practices and strategies that a teacher in the technical area of Industrial Maintenance must apply in laboratory practices with a focus on Industry 4.0.

Industry 4.0, Maintenance, Techniques

Diseño de reingeniería del sistema de puesta a tierra de un transformador de 300 KVA

Re-engineering desing of the grounding system of a 300 KVA transformer

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Abstract

Re-engineering design of grounding system (GS) is presented of a 300 KVA transformer from the Universidad Veracruzana, as a background measurements were made to transformer with an power quality analyzer, from the measured and analyzed data high values were detected of harmonics in the neutral, we deduce that the problem is in the GS, to verify the above, measurements were made with a grounding electrode tester, obtaining high resistance in the rods of GS, this value fail with respect to norm NOM -001-SEDE-2012, also, the contact and step potentials were simulated with the help of ETAP Software showing a dangerous potential difference for the human being, a methodology is proposed for the design and re-engineering of SG of the transformer through actual system analysis, calculations and simulations using ETAP software, obtaining values that comply with the normative and most importantly that provide security to people and equipment's .

Grounding, Harmonics, Neutral

Diseño de una placa de entrenamiento de microcontroladores pic16f877a para la asignatura de control de procesos con microcontroladores de la carrera de ingeniería en mecatrónica en la Universidad Tecnológica Fidel Velázquez

Design of a training board of microcontrollers pic16f877a for the process control with microcontrollers subject of the mechatronics engineering degree at Fidel Velázquez University

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Abstract

This paper presents the design of a training plate with the microcontroller PIC16F877A of the Microchip brand, which will support the internship, mainly, in the subject of Process Control with Microcontrollers of the Mechatronics Engineering career of the Industrial Maintenance and Mechatronics Academic Division from Fidel Velázquez University (UTFV). With the design of this plaque and its future construction, students and professors of the aforementioned academic area career will have a more accessible tool so that they can carry out the practices of each of the subjects covered by the signature. The board is basically composed of a direct current (CD) voltage source, the socket that mounts the PIC16F877A microcontroller, a programming and debugging module, the RS-232 and I²C serial communication interface, eight LED indicators, a matrix keypad 3x4, a buzzer, two modules with three displays of seven segments each, a 16x2 LCD screen, an H bridge, for motor control and an eight relay module.

PIC16F877A, Microcontrollers and Microchip

Medidor de agua para sistema inteligente de control de agua potable

Water meter for intelligent drinking water control system

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Abstract

Objectives

- Develop an electronic prototype that respects the environment, through the use of microcontroller cards such as Arduino, Nodemcu, IoT concept and cloud for the control and measurement of water consumption.

Objectives specific

- Process the data provided by sensors and meters distributed in the main water supplies of the university, as well as the public and private sectors and combine them with information, such as consumption patterns, to build a sophisticated image of how the water network is behaving . through the concept of IoT, data mining, big data and cloud.
- Measure and evaluate the impacts of the results obtained by the smart meter and that provide the applications for the correct decision making.

Objectives Methodologycs

- Strengthen the research line of the work team, which sets the standard for us as part of an academic body, of proposing projects based on Internet of Things, Big-Data and data mining technologies, using as a platform the potential of the microcontroller boards (Photon, Arduino, etc.), to enter the new industrial model 4.0 - environment.
- Create an academic body that carries out research activities through the use of different research methods for the solution to different problems within the institution.

Contribution

The water resource is essential for life, however, society rarely thinks about the different ways of use that is generally given, or the many activities of daily life in which it is present, and how our life It would change if its availability were near the end of its life cycle. The present project arises from the need to have a better control in the water consumption registers mainly in the Technological University of the North of Guanajuato which is the place where this research originates and from these registers allow an analysis of the data of consumption with greater accuracy and the best decision making.

Smart meter, Consumption, Water, Academic body, Prototypes, Internet of things

Sílice mesoporosa como encapsulador de materiales de cambio de fase (PCM)

Mesoporous silica as a phase change material (PCM) encapsulator

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Abstract

Today, the effective renewable energy sources are research topics, with direct solar radiation being one of the best sources of energy. However, the use of this form of energy is optimized with the development of technologies for storage (TES). One of the proposed techniques for solar energy storage is the application of phase change materials (PCMs). Several candidates of phase change materials such as organic and inorganic and their mixtures have been proposed as energy storage because they have a high latent heat. However, a disadvantage of these materials is their decomposition during storage and energy release cycles, therefore, in this project it is proposed to encapsulate PCMs in mesoporous silica networks in order to increase thermal stability.

PCM, Mesoporous silica, Parafin, DSC

Potencial de producción de energía eléctrica en México empleando la circulación del parque vehicular

Potential of electricity production in Mexico using the circulation of the vehicle fleet

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Abstract

The production of electricity is a necessity of modern life and Mexico does not escape it. Mexico ranks 51st in the Global Electricity Competitiveness Index, according to World Economic Forum studies. Where the following sources of energy production are used. Conventional Technology: Combined Cycle, Conventional Thermoelectric, Carb, Turbo Gas, Internal Combustion, Nuclear Power. Clean and Renewable Energy: Hydroelectric, Wind, Geothermal, Solar Photovoltaic and Solar Thermal. Electrical power is also imported from the United States. The objective of this research is to make known other possibilities of generating electricity that have not been explored in Mexico or contemplated in the Program for the Development of the National Electrical System (PRODESEN, 2018-2032). The hypothesis put forward as a proposal is that the 38 million motor vehicles that exist and circulate on the country's roads and highways can be used to generate electricity through piezoelectric generators and wind turbines. Based on the planning scenario estimates, the maximum integrated demand of the National Interconnected System (SIN) projects an average annual growth of 3.2% between 2018 and 2032. To achieve this growth, it is necessary to consider all the possibilities of energy production and its profitability.

Piezoelectric effect, Wind turbines, Clean energy

Caracterización de celdas peltier para acondicionamiento del aire

Peltier cells for air conditioning characterization

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Abstract

The present work seeks to answer some questions about the need to find a low operation cost air conditioning system adapted for small spaces, considering the efficiency. Under this scheme and by analysing the systems currently used, we find the Peltier cells; in spite of being a phenomenon discovered already several years ago, there exist neither concrete studies that demonstrate the real efficiency of the cells, or analysis that adequate to our needs. In addition, the cooling results obtained due the Peltier cells implementation as an air conditioning system can be observed. Also it is included the behavior of the applied values of current and voltage in the process. In order to obtain and save the values with a major precision and quality in the presentation of the samplings, a virtual instrument was used for the acquisition and processing the information using LabVIEW Software and DAQ cards. The results show the opportunity areas for using the Peltier Cells in order to find new applications to this technology

Peltier cells, Thermo cells, Seebeck effect

Monitoreo de nodos de sensores para el almacenamiento de datos a través de RS485

Monitoring of sensor nodes for data storage by RS485

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Abstract

Xicotepec de Juárez is characterized by having fertile lands, which generates the existence of agricultural producers. Nowadays, producers are affected in the production of their crops mainly due to climate change, and this is because the decision making process to obtain a better product is not always done in the best way. So the proposed solution will influence decision making to generate good quality products and thus have efficient productions that avoid unnecessary losses. This research aims to develop sensor modules and their monitoring for agricultural crops in the region carried out in greenhouses, with the benefit of improving the environment and the cultivation process that is currently available, and this will be achieved with the storage of the reading of the data generated by mobile devices, using as development cards such as Arduino and Raspberry Pi

Arduino, Raspberry PI, Sensor nodes

Brindar soluciones tecnológicas personales y empresariales como una necesidad para incrementar la cultura de seguridad informática

Provide personal and business technology solutions as a need to increase the information security culture

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Abstract

Currently, the number of cyber-attacks is increasing because of the lack of culture of computer security. This is the main cause of this problem. Apart from this, there is a difficulty of finding centralized, clear and practical information for the staff, thus it generates the risk of access controls and vulnerabilities so personal data and company's information is exposed. That is why it is important to have a place where support is provided, the information is concentrated and offers answers to increase computer security, using a format that is clear enough for all people who access to such information. This is also a business tool that detects vulnerabilities and threats, offering proposals for technological solutions. Objectives. To reduce the risks of insecurity through a Culture of Information Security to guarantee the confidentiality, integrity, speed and availability of information. To analyze security vulnerabilities that may exist in the management of information and systems that affect personally or professionally. To establish awareness mechanisms for staff on IT security issues. To centralize information on the topic of computer security through a website that serves to disseminate attack prevention techniques and possible solutions to computer security vulnerabilities. To streamline the application of surveys through an app that serves to provide technological solutions to the institutions that are surveyed. Methodology. The project is based on comprehensive research, since it explains the vulnerabilities and threats that may occur, predicting the risk and impact that it might generate as well as proposing a solution to increase the degree of computer security. Carrying out a hypothetical-deductive research describing the processes performed and those that are planned in the objective of study, it is pretended to demonstrate that a computer culture can reduce the risks of security in a company and in the society. The type of research techniques used are questionnaires, for this reason series of questions are designed to determine the computer security at the user level. Contribution. A mobile application is developed to carry out the surveys showing statistics in graphs in order to provide technological solutions for the companies. Therefore, the statistical data is reflected on one of the sections of the website developed, where also shows tips, techniques and methodologies to increase security in homes and businesses.

Computer security, Computer Culture, Technologies

Estructura de la planeación normativa como un proceso para la consolidación del comité de seguridad informática en Chihuahua, Chih.

Structure of the normative planning as a process of consolidation of the information security committee in Chihuahua, Chih.

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Abstract

Nowadays there is a need to fortify the Information Security of organizations, which increase the interest of the private sector to work collaboratively with researchers and educators to structure an organism that allows to asses those who require advice in this area. This is how the Information Security Committee emerges and that is how results the need to create the sense of how it will act. Objectives. Make a diagnostic of the perception of the Information Security Committee about the elements that form the normative planning of organizations. Create the mission, vision and define of the Information Security Committee. Methodology. The project is based on a qualitative research, in which five members of the Information Security Committee a fill an semi structured interview to link the processed knowledge with the context where the professional activity is developed. Contribution. Making the normative planning for the Information Security Committee, creation of the mission, vision and the definition of the values that will provide a guide for the establishment of the objectives and strategies.

Normative planning, Mission, Vision and values

Sincronización de datos en el contexto de procesos terapéuticos de rehabilitación física

Synchronization of data in the context of therapeutic physical rehabilitation processes

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Abstract

In the development of an information platform focused on the daily operations of a physical rehabilitation clinic, two main software components are currently being worked on for their interaction with users. A web application focused on the operations of labor personnel (specialists and training professionals) and a native mobile application focused on the actions of patients, each of them has the need to interact with the same information repository, analyzing the side of the Patient problems arise from permanent connectivity to the main data through the Internet or some other data transmission protocol, the requirement arises to be able to interact with the generated personal information, which could be achieved by synchronizing data between client-server.

Data synchronization, Web application, Mobile application

Desarrollo y programación de señales de conmutación para inversor trifásico basadas en técnicas SPWM e implantadas en una FPGA

Development and programming of switching signals for three-phase inverters based on SPWM techniques and implemented in an FPGA

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Abstract

The inverters allow us to convert direct current into alternating current with a sine waveform. This work uses the Matlab-Simulink program to develop from a graphic and block environment a SPWM (Sinusoidal Pulse Width Modulation) modulation technique that allows generating the switching pulses of a three-phase inverter based on bridges H, a simulation of the pulses applied to the inverter is also performed to record the voltage at the output of the inverter. Finally, a programming method based on the Icestudio environment is shown to integrate and be able to physically generate the pulses from an FPGA (Field-programmable gate array). The value of this work lies in the detailed description of the procedures necessary to develop the programming of the SPWM modulation that generates the switching pulses and their integration into the FPGA.

Inverters, FPGA and SPWM

Espacios emergentes para la producción audiovisual. Las unidades de vinculación docente y su aplicación en televisión

Emerging spaces for audiovisual production. The teaching link units and their application in television

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Abstract

Objective.Generate emerging audiovisual production spaces for social projects that make vulnerable groups or citizens visible, encouraging a critical approach to their community in the Communication student.**Methodology.**The application and execution of the project was worked from a connectivist paradigm (Obando Freire, 2013). The production of knowledge was rhizomatic and multidisciplinary.The base methodology is disruptive (Acaso, 2013). The classroom is modified and becomes an area of production in which all the generated material is socialized, in order to encourage creativity and care in the choice of images, sound, writing questions and scripts. The teacher works as a facilitator and assumes a horizontal position in the process.

Audiovisual communication, Teaching Linking Units, Emerging spaces, Television

Método de cálculo de subredes de las direcciones IP v4 para la asignación y administración dentro de una red corporativa

Subnet calculation method of IP addresses v4 for assignment and administration within a corporate network

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Abstract

The purpose of this document is to develop a method for assigning IP v4 addressing subnets within a simulated network scenario, using the binary-decimal numbering systems according to the ICN 1 CNACO CCNA curriculum, which will make it possible to streamline times in the allocation of IPs as well as the correct administration of them, The above will allow students of the Higher University Technical Degree in Information Technology in the area of Digital Network Infrastructure at the Fidel Velázquez Technological University to understand the theoretical concepts that They should be used in this area and they are used correctly for their professional performance, this will help them to fulfill the professional competences that are the skills and attitudes that allow the student to develop activities in their professional area, specific competencies such as developing media technology solutions nte the application of network fundamentals, which meet the needs of organizations and the generic competences that their professional profile requires.

IPv4, Subnets, Classes

Evaluación y mejora a tarjeta USB de adquisición de datos para LabVIEW

Evaluación y mejora a tarjeta USB de adquisición de datos para LabVIEW

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Abstract

The acquisition of data will become the main factor for the growth of the I4.0 and the IOT, so an evaluation and proposals for improvement to the USB data acquisition card for LabVIEW, reported in the journal of Computational Systems and ICT's in March 2016, are presented. The use of Arduino for the acquisition of data is popular, but its hardware architecture and programming structures already resolved, prevents its users from developing their own knowledge. The previously reported card has the disadvantage of being centered on a single SubVI that hinders the interconnection of elements and the generation of complex programming schemes. Looking for ease of use, a redesign of the PCB functional in Windows 10 and that allows its direct connection to protoboard has been done; in addition, individual SubVI's were developed for data acquisition tasks, which can be used repeatedly in LabVIEW and which can be integrated into their libraries. A web page has been created where files are shared in free code, diagrams, examples and other tutorials. The new card and its libraries are simpler to use, have greater versatility and allows interaction with peripheral hardware.

Data acquisition card, SubVI, PCB

Impacto e interpretación de estados financieros en MYPIMES en la región

Impact and interpretation of financial statements in MIPYMES in the region

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Abstract

Over the years the tax check in Mexico has had a great evolution. A distinct change that starts making digital documents and leave behind the Bills in a Notepad of sheets. For electronic invoices, is a requirement until today is needed, electronic signatures and certificates digital stamps, and having a system that allows issue and post the invoice in XML language, (is a language used for the) (reading, without any interference from a person). In addition to these new dissipation, is today present a new form, fulfil its obligations regardless of the regime that is taxed. All taxpayers know the term invoice or proof of income, had to go to a print shop authorized by the Secretary of the Treasury and request the printing of invoices in a block, it is writing data of the customer and the concept for which was delivering the Bill to be able to deduct taxes. The information which should have the invoice is: Folio (provided by SAT), data of the printer, authorization number, date the recipient information, until bills evolved including validity for official disposal. Taking into account the annex 20 issued by the SAT and later became the search of the key to the product or service in the catalog of accounts issued by it, in order to carry out a system configuration that allows you to generate invoices 3.3 according to the new guidelines. By 2014, in effect electronic invoicing, document it became mandatory for all taxpayers, turning to second term to printers and performing an important development for our country. A change in the accounting department, for all companies and individuals, the Treasury has very firm and clear where want, with this digital process of electronic billing, electronic accounting, suppliers that process and verify declarations by electronic means. Part of the objectives is to identify the benefits of electronic invoicing are more specific. Provide security to the exchange of information, with the electronic signature and digital label and avoid the falsification of information in specific will be a descriptive, quantitative analysis of invoices, where you analyze the basis and part of the administrative simplification that with leads, to apply new billing system.

What is a Digital invoice?

Who is obliged to issue a digital invoice?

Invoices electronic, Systems, Administration and accounting information

Realización de un termostato inteligente utilizando la plataforma raspberry como proyecto integrador de la materia de programación avanzada

Realización de un termostato inteligente utilizando la plataforma raspberry como proyecto integrador de la materia de programación avanzada

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Abstract

Project Oriented Learning (POL) is a teaching methodology, where students have their own learning, they developed a product that allows them to apply and show the acquired knowledge. POL as an educational tool allows the student to develop skills such as interdisciplinary work and problem solving to tackle current scientific and social demands while creating an innovative transformation in the educational process. This article presents the process of developing an intelligent thermostat using the Raspberry PI platform, and Internet of Things IoT technologies, aimed at training students at the level of a Technical College, enrolled in the ninth quarter of the Mechatronics degree curriculum. The creation of this project allows the fulfillment of the specific competence of the degree, which is "Develop automation and control projects, through the design, administration and application of new technologies to meet the needs of the productive sector".

Project-based learning, Educational skills, Interdisciplinary

App para la distribución y entrega de tortilla en Ixhuatlan del Sureste, Veracruz

App or the distribution and delivery of tortillas in Ixhuatlán del Surest, Veracruz

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Abstract

Tortilla is the food with more presence in Mexican homes, according to reports from the Ministry of Economy and the Regulatory Council of the Mass, in Mexico the consumption per person is approximately 90 kilograms of tortillas per year, so, that there is a potential market dedicated to producing this food. Currently many tortillerías have home delivery service through distributors, however, it is deficient, derived from the lack of coordination and planning on fixed routes and schedules in the service of the tortilleros, being able to observe an opportunity to improve services of sale and delivery, through Information Technology. The objective of the project is to develop a mobile application that, based on a tortilla application, makes it possible to facilitate its distribution and home delivery in the community of Ixhuatlán del Sureste, Veracruz. Likewise, manage tortillerías from a website, providing security and ease of use.

Mobile application, Web application, Tortilla

Museo de aeronáutica a través de realidad virtual

Aeronautical museum across virtual reality

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Abstract

Museum of Aeronautics across Virtual Reality” is an educational approach project, aimed at the general public, whose main contribution is the research of aeronautics reflected on a 3D virtual museum. The virtual museum has a room of biographies of prominent figures of the history of aeronautics and a 3D aircraft room. The methodology used is that of Mora Virtual Reality, which is a variation of the waterfall method, consisting of: Analysis, 3D Modeling, Virtual Terrain Setting, Interaction and Navigability in the virtual world, as well as tests: modular, integration and usability tests, finally corrections. The full use of the methodology led us to obtain satisfactory results.

Virtual Reality, Aeronautics, Museum

Uso del procesamiento digital de imágenes para la extracción de datos de medidas experimentales publicados en formato gráfico

Use of digital image processing for the extraction of experimental measurement data published in graphic format

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Abstract

In this article, we propose a method as an alternative to obtain experimental measurement data, in the absence of laboratory equipment to perform tests, in a suitable format to perform mathematical operations in order to use them as information to validate: hypotheses, models constitutive and / or research theories focused on technological development. The proposed method uses as a main tool the image segmentation technique by region growth by pixel grouping and the normalization of the coordinates of the positions of the pixels extracted to the axis scale in the corresponding figure. The segmentation of the image separates the coordinates of the pixels that form the axes and the curves, the coordinates of the pixels of the curves are normalized to the scale of the axes. The method is tested with images of the result of experimental tests of stress-strain behavior recovered from [1]. The results of the data extraction are plotted and the averages of each curve extracted as well as the standard deviation are obtained. It is verified that the data obtained can be used to corroborate or support hypotheses in a wide range of investigations.

Segmentation, Extraction, Normalization

Identificación de figuras geométricas en un sistema de visión basándose en el entrenamiento de una red neuronal artificial convolucional utilizando Python

Identification of geometric figures in a vision system based on the training of a convolutional artificial neural network using Python

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Abstract

The image processing projects through vision systems, are a great didactic support point in the mechatronics career, since they have wide application in the industry in the process lines primarily to perform assembly, inspection, selection and component placement. One of the methods used is to apply artificial neural networks for the identification of images and a factor to analyze is the evaluation of the learning capacities of these networks in the identification of geometric figures. In this article, the training of a convolutional artificial neural network using Python is presented. This type of work is focused on joining projects based on industry 4.0 that may contain link options with process systems based on these technologies. In this work, a vision system based on python programming was made and has its contribution in the libraries that were designed and can be linked to different types of applications within a manufacturing process.

Convolutional neural network, Vision system, Training

Aplicación de voz, como asistente virtual para el manejo de las emociones en alumnos de la UT Tehuacán

Voice application, as a virtual assistant for managing emotions in UT Tehuacán students

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Abstract

The research has to main objectives: design a voice app (to work with emotional intelligence using a spoken test), as an alternative tool (as a help to a psychologist), that offers the possibility to have a better approach to students from “UT Tehuacán”; using Alexa skill kit to develop the tool. This voice app will ask a series questions to students as part of different psychologist test to detect early emotional patterns. The main goal is to understand how emotions work within students during day, and how to process them in a better way; this way the student can have information to deal to their feelings more efficiently and fulfil their personal goals. This information, will be stored by the app in Amazon Web Service AWS, and it also will be analysed by a backend service; this service will get data to make charts. The research design is transversal, because the data will be obtained in a single moment; it is also applicative due to it seeks to apply acquired knowledge to solve a situation, because it has as objective to find one or more variables in a population; in this case (detect early emotional patterns). In order to support the pedagogy department and the different educative programs to know possible problems students may have, and find if those problems can be a reason to quit school. For this reason this project can be use as a tool to make decisions.

Alexa, Amazon, AWS

Desarrollo de un sistema antisequestros implementado con tecnología electrónica vestible y conectividad a redes sociales

Development of an anti-kidnapping system implemented with wereable electronic technology and social network connectivity

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Abstract

The National Commission to Prevent and Eradicate Violence Against Women reports that gender violence alerts in Mexico have been declared in 19 states and 4 states are waiting to be declared in 2019. The crime incidence rate published by INEGI shows that for every 100 thousand inhabitants, more than 11 thousand have been victims of robbery or assault on the street or public transport. Various systems have been developed whose objective is to reduce insecurity rates through the use of applications on mobile devices, however it is not considered a natural activation, since everything is done through virtual user interfaces. The developed system consists of an App on the mobile device and a hardware with wireless communication via Bluetooth 4.0 (Bluetooth low energy consumption) and a panic button using wearable technology. The activation is carried out through a panic button located on the smart garment, which allows the location to be sent through social networks, so their impact in emergency situations is explored.

Anti-kidnapping, Wearable device, Social network

Desarrollo de una plataforma de evaluación de estudiantes de nuevo ingreso en educación superior

Development of a student entrance examination platform in higher education

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Abstract

This article shows the process of design, development, and implementation of a platform created to form an environment for identification and timely characterization of knowledge, skills, and profiles of new students, through the treatment of data and information technologies, during the process of institutional admission exams in higher education. For its construction, work has been done through a methodology based on best software engineering practices, developing various modules that integrated achieve the functionality required to function as information management and analysis platform. The antecedents found allowed to determine that before the approach of this platform, there was only generalized software, adaptable with some difficulties, destined to the application of exams, distant from the raised vision of a platform for data exploration. This work aims to provide the host institution and all public and / or private higher education institutions with a tool that allows them to have bases for timely decision making and the taking of relevant actions that contribute to the proper training of professionals from its initial stages, through an early identification of skills and profiles of its applicants.

Examination, Applicants, Software

Uso de herramientas digitales como estrategia para el desarrollo habilidades de análisis y razonamiento en los estudiantes de TIC

Use of digital tools as a strategy for the development of analysis and reasoning skills in ICT students

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Abstract

The generic competences that the career of Information and Communication Technologies require that the student can have the analysis and reasoning skills to be able to integrate and manage information and communications technologies, which contribute to productivity and the achievement of objectives Strategic organizations. So, through digital tools in the teaching-learning process, the teacher will contribute to develop those skills. Those that will contribute to the objective under the ADDIE model are analyzed and proposed (which represents a descriptive guide for the construction of training and support tools thanks to the development of its five phases that come from the initials of each of them) as first phase; to continue with the creation of different activities and strategies that will be applied with the students and then measure the impact towards their development. The analysis and reasoning skills contribute to analytical thinking, being important because it constitutes one of the bases for critical thinking, as well as helping to solve problems that arise in everyday life.

Tool, Analysis, Reasoning

Utilización de classroom en la Universidad Tecnológica de Tehuacán (UTTeh)

Use of classroom at the Technological University of Tehuacán (UTTeh)

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Abstract

This research aims to identify the impact of Information Technology through the use of Google Classroom Platform in the teaching-learning process, it also aims to strengthen and develop digital skills in students of the different Educational Programs (EP), both at the undergraduate level and at engineering level of the Technological University of Tehuacán (UTT), in addition, it is sought to identify how Classroom Platform supports teaching tasks such as: speeding the delivery, reception and grading of various activities generated by the teacher with every group. For this purpose, two measuring instruments were digitally applied (Google Forms survey). This one is applied to students, taking a representative sample of the groups of each EP (seven) in both educational levels (undergraduate and engineering level). Another instrument was applied to a representative sample of teachers of the school. The results show that the 92.9% of the students and the 80% of the teachers that were interviewed have used Google Classroom, revealing a wide range of applications and opinions regarding the use and benefits of Google Classroom at UTT

Information Technology, Google Classroom, Digital skills, Teacher, Student

Análisis de concordancia de atributos en color de piezas galvanizadas

Color attribute agreement analysis of galvanized pieces

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Abstract

The objective of this work is to establish the reliability of the measurement system by attributes in the color characteristic for the galvanized parts as final product. Six operators were evaluated with 30 samples of galvanized metal parts cold and hot rolled in a proportion of 50% of accepted parts and 50% rejected by the quality staff of the Techengineering plant in the city of Aguascalientes, Aguascalientes, under a criterion of passes-does not pass. To carry out the study, the attribute agreement analysis tool of Minitab®16 was used. According to the Fleiss Kappa coefficient and confidence intervals generated in the report, it was established that the accuracy of the system is valued between excellent and good and the accuracy as good marginally, with this information it was possible to establish strategies to improve the measurement system.

Tags MSA, Fleiss Kappa coefficient

Método de obtención de hongos entomopatógenos para producción de biopesticidas orgánicos que no posean persistencia nociva en hábitats naturales

Method of obtaining fungi entomopathogenic for production of biopesticides organic that do not possess persistence harmful in natural habitats

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Abstract

This article describes the entomopathogenic fungi of greater use for the biological control of pests, in this case the production methodology for *Beauveria Bassiana* in the laboratory the in vitro behavior of this fungus of greater use for the control of certain insects and for the development of organic biopesticides.

Fungus, Entomopathogen, Biopesticide

Procesamiento de imágenes digitales aplicado al análisis de color y textura del piloncillo de la Huasteca Potosina

Digital image processing applied to piloncillo color and texture analysis of the Huasteca Potosina

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Abstract

The present work demonstrates the implementation of image processing techniques to analyze the color and texture of agroindustrial products, in this case, of the piloncillo or panela in its granular and cone variety. A technological tool based on software was developed, capable of quantifying color and texture and thus implementing quality controls to support the commercialization of this product made in Huasteca Potosina towards global markets. An unsupervised classification method (clustering) is proposed to define the color or colors of the piloncillo, called K-means. In the case of texture analysis, second-order statistical methods derived from the co-occurrence matrix and six Haralick textural descriptors are used: contrast, homogeneity, energy, ASM, correlation and dissimilarity. The developed prototype was validated in 24 producing communities of granulated and cone-shaped piloncillo belonging to the municipalities of Tanlajas and Tancanhuitz, S.L.P. The results of the analysis of color and texture have been related to the manufacturing methods that are currently used, to identify improvements that help standardize the production process.

Piloncillo, K-means, Haralick

Diagnóstico de la calidad en los servicios de alimentos y bebidas en Tequisquiapan

Diagnostic in the quality of catering services in Tequisquiapan

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Abstract

The purpose of this research was to do a measuring of the catering services quality through the opinion of local, national and foreign visitors, in the Magic Town of Tequisquiapan, Qro., in order to determine some actions that helped improve their services and the touristic impact in the zone. The methodology used was mixed, using the quantitative method based on literature about the topic, where there were shown several analysis as in the World Economic Forum, published on the Tourism notebooks in the University of Murcia. Likewise, a qualitative analysis was done when it was applied a survey where it is asked about the quality in the catering services visited by consumers and it was also done a revision of the certifications given by the Mexican official government. After that, the results obtained let us know the high level of acceptance that the caterers have. Nevertheless, the certificates of quality are not common among the businessmen. It was considered to give the proposals that could help to the Bureau of Restaurants, the County City, the Local Ministry of Tourism and to private companies who want to know about them to continue solving and fulfill with quality in the touristic caterers.

Diagnostic, Quality, Catering-services

Tratamiento biológico de aguas residuales en reactor anaerobio de flujo ascendente de empresa productora de grenetina

Biological treatment of wastewater in an upflow anaerobic sludge blanket reactor of flavorless jelly facility

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Abstract

The anaerobic reactors of a flavorless jelly producing company; had a low efficiency in the treatment of their wastewater, with approximately 12% of COD removal. For this reason, it's operation was evaluated, in a pilot scale reactor, using as inoculum, sludge from the wastewater treatment of a similar facility, with an average Specific Methanogenic Activity of 0.115 g COD/gSSV.d. We worked with an initial concentration of 35 kgSSV/m³ of the inoculum, an average organic load of 2.6843 kgCOD/m³d and wastewater with COD of 6797 mg/L and total nitrogen of 1213 mg/L. The feed flow was 0.264 L/h, in order to obtain an hydraulic retention time of 27.14 h, equal to the value of the reactor of the company. An average COD removal of 65.24% was achieved. The results showed sulphide concentrations of 461.4 mg/L and ammonium nitrogen of 1054.4 mg/L; that were not inhibitory. Objectives. Evaluate the treatment of wastewater from a flavorless jelly facility in an upflow anaerobic sludge blanket reactor

Methodology

- 1.Design and fit the experimental part.
- 2.Start and stabilize the pilot reactor.
- 3.Develop the treatability tests in the pilot reactor.
- 4.Analyze results.
- 5.Develop proposals of Operation

Contribution

This study, showed that it is necessary to inoculate with biomass the upflow anaerobic reactors of the flavorless jelly facility, as well as know optimum operating conditions. We knew also, problems of operation related.

Anaerobic treatment, Suspended solids, Biological

Sincronización de sistemas activos en procesos de clasificación de objetos por tamaño

Synchronization of active systems in object classification processes by size

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Abstract

In this work, a study of control systems in discrete events is carried out through their representation using finite state machines, with the particularity of being applied in the management of a prototype that has been developed to performance tasks like handling and object classification by size. The present analysis gives continuity to a previous work, in which automaton theory totally based on mathematical formalism is approached, for its use in the control of a material handling process, whose active elements are a robot in angular configuration and a conveyor belt. Therefore, it is described the addition, to the test system, of sensors that allow the discernment of each piece entered into this process, of the own programming algorithms that lead to fulfill the established task, as well as of the graphic interface for management and presentation of process condition, through a computer. Results confirm the proper functioning of active elements used, as well as their appropriate synchronization in the assurance of the proposed object classification task, under analysis of the size characteristic.

Synchronization, Size classification, Finite state machine

Implementación de herramientas de calidad en una empresa textil del Bajío

Implementation of quality tools in a textile company in Bajío

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Abstract

The objective of the research is to implement quality tools in a low-year textile company; such research is mixed, as data are obtained through observation, interviews and graphs are made to analyze the information. He began knowing the process of fabric production, the machines involved in the process, the stages that make up it and the variables to control. Subsequently, the process variables were recorded in the Minitab software, to predict through the control charts the variation presented by the process. With respect to the results obtained, the type of tools implemented was determined. The quality tools applied were the control charts X – R and X – S to know the capacity of the process. Pareto diagram for frequent quality defects. Analysis of the mode and failure effect (AMEF), to visualize the defects at each stage of production, the causes that cause them and identify what type of control should be applied. It helped to identify critical points and improve the quality in production processes, which allow customers to offer high quality products and face competition at the local, national and international levels.

Quality, Defects and AMEFF

Implementación de aplicaciones informáticas en la industria agrícola del aguacate

Implementation of computer applications in the avocado agriculture industry

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Abstract

Agriculture 4.0, conceived as a kind of industry, is built by integrating a set of digital technologies such as the Internet of things, Artificial Intelligence, and the management of large databases (or Big Data). This industry implies a transformation of the production infrastructure that allows increasing the agricultural productivity and the quality of the products efficiently and sustainably. These changes require the implementation of digital technologies for the collection, analysis and communication of information, allowing timely decision making. This article deals with the implementation of a platform that includes both desktop, Web and mobile applications and Internet of things tools for the control of production and marketing in avocado orchards. The development of a prototype of the platform is described under agile methodologies and following an iterative and incremental strategy. Finally, the tests that determine the integral functionality of the platform prototype and experimental results are presented.

Agriculture 4.0, Connectivity, Database

Metodología para programar procesos con relevadores inteligentes

Methodology to program processes with intelligent relays

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Abstract

Objective: Design of a methodology based on problem based learning, to program intelligent relays and solve process automation problems. Methodology that will allow students and engineers interested in acquiring theoretical, heuristic and axiological skills on intelligent relay programming. The methodology will allow to acquire the proposed competences and process automation problems can be solved. **Contribution:** The methodology is designed with solved exercises in electrical, civil and mechanical engineering, which allow us to visualize the importance of learning to program processes with intelligent relays. The methodology helps the programmer acquire a critical thinking considering aspects such as the environment, integral health and safety. There is transversality to relate Educational programs of different disciplines and enrich the knowledge of intelligent relays from the programming and interpretation of block diagrams, ladder diagrams and time diagrams, familiarize yourself with the use of technical language and digital language (combinational and sequential circuits Follow the safety instructions and parameters to be manipulated for the correct operation of the electrical and electronic devices and establish the operation of the process.

Methodology, Programming, Intelligent Relays

Desarrollo de películas comestibles para la conservación de hongos

Development of edible films for fungal preservation

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Abstract

The Development of edible films for the conservation of fungi (*Pleurotus* sp) emerged with the purpose of increasing the shelf life of food through the development and application of films based on candelilla wax. Five formulas were experimented, which were developed according to the proposed by Oregel et al. In 2016 with some modifications, the formula F1 (Guar Gum 0.8%, Candelilla Wax 0.2%, Glycerol 0.3%), F2 (Guar Gum 0.8%, Candelilla Wax 0.4%, Glycerol 0.2%), F3 (Guar Gum 1.2%, Wax 0.2% candelilla, 0.2% glycerol) and F4 (1.2% guar gum, 0.4% candelilla wax, Glycerol 0.3%) and F5 with the same proportion of F4 ingredients but with the addition of the three preservatives. The elaboration of the films was carried out in 2 stages of experimentation at T = 4 ° C and T = 30 ° C for 15 days. Characteristics such as texture, color and appearance were evaluated, the best evaluated formula was FB5 with a lifespan of ten days at T = 4 ° C, which allowed to increase the shelf life of the fresh product by a 100%.

Edible films, Life shelf, Candelilla

Análisis de las características corriente-voltaje (I-V) en barreras schottky de silicio (p)-oro

Analysis of the current-voltage (I-V) characteristics of silicon (p)-gold schottky barriers

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Abstract

The bandwidth, low cost, great storage capacity and performance are characteristics of the random Access Memories (RAM). Some kinds of RAM include ferro-random access memory (FRAM) and magnetoresistive random access memory (MRAM), the latter being of great interest to the scientific community since storage is achieved via magnetic orientation rather than electric orientation. In this paper, we analyze the effect of the application of an external magnetic field on the current-voltage (I-V) characteristics of Schottky barriers made of silicon-gold, to show the effects of magnetoresistance in dispositive semiconductors suited for use as memory storage.

MRAM, Schottky Barriers, Magnetic Field

Uso del procesamiento digital de imágenes para la extracción de datos de medidas experimentales publicados en formato gráfico

Use of digital image processing for the extraction of experimental measurement data published in graphic format

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Abstract

In this article, we propose a method as an alternative to obtain experimental measurement data, in the absence of laboratory equipment to perform tests, in a suitable format to perform mathematical operations in order to use them as information to validate: hypotheses, models constitutive and / or research theories focused on technological development. The proposed method uses as a main tool the image segmentation technique by region growth by pixel grouping and the normalization of the coordinates of the positions of the pixels extracted to the axis scale in the corresponding figure. The segmentation of the image separates the coordinates of the pixels that form the axes and the curves, the coordinates of the pixels of the curves are normalized to the scale of the axes. The method is tested with images of the result of experimental tests of stress-strain behavior recovered from [1]. The results of the data extraction are plotted and the averages of each curve extracted as well as the standard deviation are obtained. It is verified that the data obtained can be used to corroborate or support hypotheses in a wide range of investigations.

Segmentation, Extraction, Normalization

Invernadero utiliza energía solar para el control de temperatura

Greenhouse uses solar energy for temperature control

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Abstract

A company dedicated to the branch of vegetables in Jiménez city, Chihuahua, MX. Through a project with the National Council of Science and Technology (CONACyT) linked to the Technological University of Chihuahua, they develop a prototype of a greenhouse based on the use of solar energy in order to reduce the use of LP gas for heating the greenhouse and the implementation of chimneys worked under the Venturi principle, which is estimated to reduce the use of electric fans and extractors. The greenhouse construction is 60 x 70 meters. The electronic greenhouse system allows measuring, controlling, automating and monitoring the temperature and humidity parameters. Climate control of the greenhouse is possible thanks to the use of sensors of different climatic variables such as temperature, humidity, wind speed and carbon dioxide. The implementation of the solar thermal and photovoltaic system, with the synergy of electronics and automation achieves an efficient saving of electric energy through the designed prototype. Objectives: Develop a greenhouse prototype with the operation based on the use of solar energy for the conditioning of its facilities (cooling and heating), allowing a significant reduction in its operating costs by reducing the use of fuels such as gas and electricity and consequently a decrease in atmospheric emissions

Solar Thermal Energy, Photovoltaic System, Greenhouse

El método gráfico y analítico en la teoría de mecanismos

The graphical and analytical method in the theory of mechanisms

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Abstract

The theory of mechanisms is one of the fundamental branches of study and development in the theory of machinery, current technological developments such as mechatronics or robotics require that engineers and researchers have solid basic knowledge in applied mechanics; this will allow reliable and efficient research. The traditional teaching in the engineering fields uses bibliography that presents in an isolated way, either the graphic or the analytical method, without establishing a clear correlation between both methodologies, which misses the opportunity for these methodologies to mutually support each other. When two methodologies complement each other, a level of security is obtained in the domain of problem solving techniques, in turn, opens the possibility of extending solutions when looking for the representation of one of the methodologies, based on the other, in this paper presents the solution of problems of the theory of mechanisms by both methodologies, explaining and justifying the results obtained, as well as the sequence of steps in the solution of problems, beyond a procedure.

Education, Mechanisms, Kinematics

Efecto del sustrato hidropónico sobre los atributos de calidad fisicoquímica y fisiológica de frutos de jitomate

Hydroponic substrate effects on the physicochemical and physiological attributes of tomato fruit

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Abstract

Objectives, methodology: In this paper we evaluate the effect of the substrate type on the physicochemical and physiological parameters of tomato fruits (*Solanum lycopersicum*) type hydroponic saladette. Fourteen hydroponic substrates of mineral origin were evaluated, and mixtures of the same with the aim of selecting substrates that can satisfy the needs or objectives desired by the producer and allowing the consumer to know a fruit with a better quality reflected by its physicochemical properties such as yield, size, colour, total soluble solids (°Brix), titrated acidity, firmness, ethylene and CO₂ production. **Contribution** Substrates such as tezontle, tepezil and coffee husk are favorable in the cultivation of tomato (*Solanum lycopersicum*) type hydroponic saladette benefiting some of its quality parameters being the most feasible options for the producer and the consumer. Substrates such as the tezontle with compost, tepezil with vermicompost, sugarcane bagasse with compost, coffee husk with vermicompost and coffee husk with compost are other options to consider for cultivation; while the vermicompost, sugarcane bagasse, tepezil with vermicompost, tepezil with compost and sugarcane bagasse with vermicompost, were the least efficient treatments, reducing the fruit quality parameters.

Hydroponic tomato, Hydroponic substrates, Postharvest quality of fruits

Sistema de seguridad e higiene laboral para una destination management company. Como resultado de los proyectos integradores implementados en el IT Mario Molina, Unidad Académica Puerto Vallarta

Occupational health and safety system for a destination management company. As a result of the integration projects implemented in the IT Mario Molina, Puerto Vallarta Academic Unit

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Abstract

This paper exposes the results of integrative projects developed as a strategy that promotes linkages among Technological Institute of Puerto Vallarta and business organizations. Integrative projects respond to various situations to the touristic business, such as the case of Destination Management Company, mainly about labor security and hygiene issues. The labor security and hygiene systems are vital to touristic companies due to the kind of activities that are implied, since preventions and amendment of working risks has direct influence on economical, legal and social factors. In the other hand, the lack of labor security systems implies several costs, such as economic loss and, in the worst cases, human casualties. In general, labor security a hygiene system represents a requirement to quality improvement that can be applied on administrative and service process, as well as labor conditions of the work environment. These issues constitute an antecedent to generate integral wellness to all employees and organizational growth.

Integrative Projects, Labor Security & Hygiene Systems, Destination Management Compani

Propuestas para la mejora continua del área de producción de una empresa productora de carne de cerdo, mediante herramientas de manufactura esbelta

Proposals for the continuous improvement of the production area of a pork production company, using lean manufacturing tools

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Abstract

The present project took place in a pork production company, which wants to reduce the waste of the products of the slicing area, specifically in the products Belly Slice, Kataroso Slice 120 gr and Belly Slice (3cm), aiming to identify activities that do not add value, through lean manufacturing tools, to propose improvement actions in the slicing process in the production area. The procedure used was to describe the activities of the process, generate specifications table of products, determine cycle time and productive capacity, determine sample size, prepare Value Stream Map (VSM) of the current process, identify activities that generate waste, perform VSM of the future situation and, finally, generate proposals for improvement. As a result, was obtained a program to monitor production, adapt the production line as a manufacturing cell and create a format for preventive maintenance of machinery and equipment; as well as the information that will lay the foundations for the products under study. With these actions, the intention is to contribute to the continuous improvement of performance, productivity and efficiency indicators.

Waste, Lean manufacturing, Continuous improvement

Prototipo de un sistema para monitoreo de niveles de cauces

Prototype of a system for monitoring river levels

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Abstract

It's presented the prototype of a monitoring system to measure the increase in the level of course of rivers for the timely prevention before a contingency of flooding. Are used hardware and software open platforms, which allow the integration and exchange of sensor modules to increase the functionality and scope, they also employ standard communication protocols that facilitate the scalability and reconfigurability of the nodes. It's considered a solar system cells to supply energy ensuring continuous operation, also includes a real-time data transmission using wireless technology. As an Early warning System its main function is to reduce or prevent the damage caused by threats of floods. The Huasteca area has a large amount of rivers, which tend to be near populated areas or settlements, in times of rain, the majority are likely to grow suddenly and exponentially. The functional tests of the prototype were conducted in a controlled environment, identifying the appropriate process for the collection, reading and transfer of data, as well as their interpretation. The technology presented is feasible for their deployment, it allows the integration of more sensors that could form a monitoring network of larger scope.

Monitoring, Automation, Sensor network

Evolución química del agua subterránea a través del acuífero del Valle de Mexicali

Chemical evolution of groundwater through the Mexicali Valley aquifer

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Abstract

The water quality of the Mexicali Valley aquifer was evaluated in order to estimate the geochemical processes involved with the increase of its salinity and the subsequent subsoil mineralization. The study area is located in the municipality of Mexicali, Baja California, Mexico in a section where the riparian corridor of the Colorado River converges with an agricultural area. The water of this river contains less than 1000 ppm of dissolved solids on average, but as the water is channeled and used in the crop's irrigation, it undergoes a solute enrichment process until 2400 ppm in the upper aquifer. According to chemical analyzes the water salinization is mainly caused by sodium, sulfate and chlorine ions, while the geochemical modeling carried out with the PHREEQC program indicates that the processes related to calcite precipitation, dolomite and gypsum dissolution and water evaporation are primarily responsible for the water chemical evolution in the area.

PHREEQC, Geochemical modeling, Mineralization process

Análisis de control de inventarios en la microempresa Muelles Melecio

Inventory control analysis at the Muelles Melecio microenterprise

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Abstract

The administration of an inventory implies saying how much material is needed and when to place orders, receive, store and keep the record, since the main objective is to keep costs low and keep enough finished products for sales. The inventory represents one of the most important investments of the companies in relation to the rest of their assets, since they are fundamental for the sales and indispensable for the optimization of the utilities. The research "Analysis of inventory control in the Muelles Melecio microenterprise" is intended to analyze the management of inventories in the Muelles Melecio microenterprise. To know the procedures used by the organization, the application of the instrument is carried out, consisting of questions related to inventory management and comprehensive cost-benefit analysis. and finally the descriptive analysis of inventory control in the microenterprise. The type of research that follows this project is non-experimental and descriptive. The design that will be used corresponds to the transectional, consisting of collecting data in a single moment, in a single time. Its purpose is to obtain an analysis of the management and control of the inventory at the Muelles Melecio microenterprise.

Inventory Management, Microenterprise, Cost

Cálculo de la generación de entropía a partir del proceso de temperatura promedio en un sistema de refrigeración por compresión mecánica de vapor con R-134a

Calculation of entropy generation from the average temperature process in a mechanical vapor compression refrigeration system with R-134a

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Abstract

The Average Temperature Process (PAT) is modeled by an equation that is used to calculate the increase in energy needed for the refrigeration cycle, which is equivalent to the energy degradation that corresponds to the production of entropy. This work shows experimentally that the increase in entropy, taking into account the processes of heat transfer that occur in the condensation temperature and in the evaporation temperature between the mechanical vapor compression refrigeration system and the environment, is directly related to the falls of pressure presented in the suction pipe and in the compression process, as well as the heat losses that exist between the main components (evaporator, compressor, condenser and expansion throttling) and the environment. From this development, the behavior of the refrigeration cycle is evaluated in order to obtain a minimum entropy generation criterion in the main components. Analytical as well as experimental results are shown using R-134a refrigerant.

Average Temperature Process, Entropy, Heat Transfer

Incremento en disponibilidad y control de almacén mediante un análisis del historial de mantenimiento

Increase the availability and control of storage through the analysis of the history of maintenance

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Abstract

The lack of maintenance management in the companies brings with it a decrease in the availability of the equipment and high levels of inventory that affect some of the waste. When performing an analysis of the maintenance history, some trends are observed that indicate some deviations in the incidence of failures in some equipment and the high consumption or requirement of spare parts or parts to perform maintenance tasks. The integrated vision of the concepts of reliability (ability to run continuously for a certain period of time), maintainability (ability to be maintained preventively and correctly), availability (ability to operate at a given time) and the establishment of an inventory control that manages the optimum levels for the maintenance assurance and the productive capacity of the company. This allows to obtain a correct programming and execution of maintenance activities and inventory planning and thus increase the competitiveness of the company.

Availability, Inventory, Analysis

Evaluación de los factores de riesgo ergonómico en puestos de trabajo

Evaluation of ergonomic risk factors in workstations

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Abstract

The present research is intended to evaluate the level of risk of ergonomic factors in workstations through the use of software and analysis methods to adopt preventive measures that mitigate risk in the workers and comply with current applicable regulations. To carry out such research, the project was relied on the DMAIC methodology, starting with a diagnosis at workstations to identify possible present risk factors and collecting the necessary information to simulate the activities through Digital Human Modeling in CATIA® V5 (student version) with the RULA method or in the OCRA CheckList online software of Ergonautas¹. Finally, the results obtained showed the evidence of the level of risk in each workstation, identifying possible areas of opportunity. As soon as the areas of opportunity were identified, these contributed to set up the possible improvements that gave guidelines to establish prevention and redesign measures, that could mitigate the inherent risk exposed to workers in stations, allowing ergonomically to adjust the area and the activities to the worker and in turn, aligning manufacturing practices to current legislation.

Dmaic, Rula, Ocra

Alcances de la regulación de los activos virtuales en México

Scope of the regulation of virtual assets in Mexico

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Abstract

The technological advance has given greater growth towards the new digital platforms that facilitate or allow accessibility to assets. The following research work aims to analyze the scope of the regulation of the virtual asset market in Mexico. The methodology used for this research was the qualitative, which consists of reviewing international and national sources of studies in this area and analyzing the scope of the Fintech Law on the regulation of said assets. The investment in cryptocurrencies and their operation are very important for people, but they have their negative side for the global economy and can affect financial systems due to the inherent risks of the market. Once analyzed from different perspectives, it's concluded that Mexico is a reference in Latin America in the regulation of said market, however, the Bank of Mexico does not recognize this type of assets as legal tender and that they lack the characteristics of value deposit, medium of exchange and unit of account. In addition, the law only regulates the internal operations of financial technology companies and does not support the operations carried out by the general public.

Virtual assets; Fintech Law; Cryptocurrencies

Análisis de la calidad de energía eléctrica en una subestación de 300 kVA

Analysis of the quality of electrical energy in a 300 kVA substation

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Abstract

In this research are presented the results of the measurements of the electrical parameters obtained by the three phase analyzer of electrical energy, there was used a methodology based on the own manual of the analyzer equipment, well as the national and international standards as well the IEEE Institute, the CFE company, and books of the subject, in which are established the limits and requirements for a good quality of the electrical energy necessary for the user of the electrical service. The contribution covers from the connection of the entry of the analyzer equipment until the installation to the exit of low tension in the transformer, verifying in the equipment the vectorial diagrams and senoidals for corroborate that their connection be adequate, also were considered the measurements of the security in the installation of the measurement equipment, throughout the document are mentioned the characteristics and the interpretation of each electrical parameter analyzed

Power Quality, Unbalance, Parameters

Definición del KPi Porcentaje de sacos con defecto y Takt Time

Definition of KPi Percentage of bags with defect and Takt Time

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Abstract

In the defining phase of the LEAN SIX SIGMA METHODOLOGY, opportunities for improvement must be identified, determined and interpreted the client's voice to define the objectives with the work team that applies the tools, skills and knowledge so that the company is productive and competitive. This recent work shows how to obtain an objective that is specific, realistic, measurable and on time, being the key to a successful execution of improvement, the KPi that was worked was the percentage of bags with defect in the first section of a Manufacturer, identifying the average of defective bags, specifying to lower said average by 90% to be significant and quantifiable, so that the company can continue with the Measure, Analyze, Improve and Control phases, two of the critical operations identified with the parameters of quality required by the client as well as the calculation of the Takt Time of the process of the first section of the Manufacturer in order to observe the bottlenecks in the different operations that make up the area.

Lean Six Sigma, Objective, Takt Time

Implementación de la manufactura esbelta en una línea de arneses eléctricos automotrices

Implementation of lean manufacturing in an automotive electric harness line

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Abstract

This research analyzes the implementation of the Lean Manufacturing philosophy through a case study in the final assembly line in an electric automotive harness manufacturing company and intends to demonstrate that the current waste from the production process under study will be eliminated through the sustainable application of The Theory of Lean Manufacturing. The methodology used was carried out with the help of the Deming circle: Plan objectives, model line, equipment, training, Execute: design stations, Recognize waste, Establish flow, create mixed lots, calculate Tak-time, Determine matching operations, Determine pull system, Verify: launch and Act: determine verification and monitoring. Subsequently, the programs applied and the activities used for the development of the lean manufacturing philosophy were analyzed. The main contribution is to share the results of a successful case in the implementation of the lean manufacturing philosophy when analyzing the effectiveness of the programs and support activities in its development.

Philosophy, Lean Manufacturing, Kaizen

Algoritmo de seguimiento y planeación de trayectorias para un robot fertilizador en invernaderos

Tracking algorithm and trajectory planning for a greenhouse fertilizer robot

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Abstract

The use of algorithms is a necessary activity for the design and construction, of any mobile robot. This study proposes an algorithm for future farm applications. Fertilization is an aspect that represents a third of the production costs. Robotics applied to agriculture, although in Mexico it is in the early stages of its development, the productive greenhouses are progressively automatized. Therefore, it is necessary to propose new automation strategies in the sector. As part of a stage of design and modeling of a virtual robot, this project proposes an algorithm of a 3D virtual robot prototype that allows visualizing and positioning in the 2D plane and thus having preliminary simulations for the subsequent construction of the Robot prototype.

Robots, Fertilization, Mechanization of agricultura

Prototipo: Sistema de geolocalización para vehículos de carga mediante smartphone

Prototype: Geolocation system for cargo vehicles using smartphone

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Abstract

This project proposes an alternative location for freight vehicles. It is proposed to use a technique that consists of the reuse of GPS technology integrated in a mobile device, which will have the advantage of using phones with Android operating system - the most common in the market - with prices within reach of the different segments of customers. Helping to reduce losses in different PYMES is one of the objectives of the project, as well as saving on expenses, to improve the level of status that each of the companies has in relation to the commercial market. From this, it is intended that the service to be developed adapts to the different business contexts, to comply with the resolution of the problems of lost vehicles with merchandise found in the potential market. Regarding the development of the system, it was decided that Open Source technology, better known as open source languages, will be used, which will reduce the cost of the service. This project applies applied research and will be developed using the waterfall methodology.

WEB Application Development, Mobile App Development, Geolocation, GPS

Desarrollo de prototipo de estación de maquinado CNC

Development of CNC machining station prototype

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Abstract

In this paper a CNC machining station (Computerized Numerical Control) is developed for its later integration into a manufacturing cell prototype, considered as a mechatronic system. For this, it is assumed the task of carrying out the mechanical and control design of a CNC vertical machining center, with the sole objective of machining parts with specific characteristics from material removal method. The development and design of a CNC machining station began with the manufacture of mechanical structure from rigid and suitable materials for its feasible construction; 3D printing of parts was necessary for fastening stepper motors used and its respective control was achieved by using Arduino software and hardware platform and Universal Gcode Sender, in conjunction with a stepper motor control module. Subsequently, necessary adjustments and programming are made to carry out corresponding functional tests and to ensure adequate machining of required parts, which marks continuity of integration process of this station to a manufacturing cell prototype.

Machining station, CNC, Universal Gcode Sender

Sitio web y aplicación móvil de control de uso del suelo a través del mapa interactivo de la región norte del estado de Guerrero, segunda fase

Website and mobile application for land use control through the interactive map of the northern region of the state of Guerrero, second phase

DE LEÓN-CASTREJÓN, Andrés, OCHOA-LÓPEZ, Ana Laura, NORIEGA-CANTÚ, David Heriberto y SALGADO-MORA, Gabriela

ERP de software

Software ERP

HUERTA-MASCOTTE, Eduardo, RICO-MORENO, José Luis, AGUIRRE-PUENTE, José Alfredo y MATA-CHÁVEZ, Ruth Ivonne

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Abstract

This article presents information on the implementation of a customized ERP system. Based on the fact that a company already has a functioning ERP system to which it is intended to add a new module, in order to rescue certain resources, to avoid the generation of repeated data and obtain a more robust and secure system. This software was made under the technology of C #, as programming language and SQL Server, as a database server. establishing efficiency and agility in the payroll generation process.

ERP System, Software, Robust, Safe, Optimize, Resources

Hololens el nuevo perfil de realidad aumentada para la competencia educativa

Hololens the new augmented reality profile for educational competition

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Abstract

Currently, in education there are challenges that place the teacher in the need to acquire new knowledge for the development of new skills and didactic skills that can foster attitudes in students with a positive assessment of divergent, creative and critical thinking, as well as work Multidisciplinary, orderly and responsible, in adapting to change. The augmented reality Hololens is the direct or indirect vision of a real-world physical environment. If it is a technology that helps enrich the vision of our real environment complete with information from the digital world, it allows to create images and animations with total interactivity with the user in real time within a three-dimensional environment. The research focuses on the use of a new technology that allows to display three-dimensional images and interact with large volumes of data, which can be implemented in the different sector including education, due to the advancement of this technology and thanks to mobile devices It has greater processing capacity and includes digital cameras, state-of-the-art sensors and global location systems, possible development of more precise systems with augmented reality, since this technology allows something that until recently was unthinkable, mixing digital information with situations real three-dimensional, having an impact on the new academic profiles of higher level students.

Technology, Three-dimensional Images, Holo Lens, Augmented Reality

Implementación de la realidad aumentada en un sistema opto mecatrónico de grabado láser

Augmented reality implementaction into an opto mechatronic laser engraver system

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Abstract

The main objective of this work is to develop an interactive mobile application for monitoring, description and training in the operation of a laser engraving machine using augmented reality technology. The CAD design of the machine is used, generating a visualization of each of the elements that make it up with a description of its main characteristics. Also, an option is included where you can observe the 3D animation of the engraving process. All of the above is generated through the use of open source software (Unity, Vuforia and C #) thus creating a practical option for training in the handling of this type of machinery. This type of technology can be implemented in different educational and industrial environments. For the convenience of use, the generated application has a user-friendly virtual environment and is developed for the main digital platforms (Android, iOS, Windows).

Augmented reality, Training, Laser engraving system

Experiencia en la formación y operación del cuerpo académico ITESI CA-017 ingeniería de software

Experience in training and operation of the research group ITESI CA-017 software engineering

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Abstract

The purpose of this article is to present the experiences obtained in the formation of the Research Group ITESI CA-017 of Software Engineering, which is formed with professors of the Computer Engineering and Computer Systems Engineering from the Instituto Tecnológico Superior de Irapuato. Largely, the path taken by the members of the academic body has been based on the sense of responsibility and commitment that each one has adopted; this has allowed the creation of an environment of trust suitable for collaboration and teamwork. As part of the experience that is shared in this work, is mentioned from the integration, the procedure for obtaining recognition as a Research Group in Training by PRODEP, the incorporation of new members; finishing in the distribution of work and collaboration in research projects and generation of publications for participation in national and international forums. The purpose of the presented experience is to help other professors integrate as research groups and collaborate with each other; and even with the Research Group ITESI CA-017 Software Engineering.

Research Group, Research, Collaboration

Simulación de mecanismos

Mechanism simulation

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Abstract

Objectives: In this work we show different simulated mechanisms virtually, their objective is to facilitate the qualitative and quantitative analysis of their kinematics; allowing to determine degrees of freedom, relation of times, mechanical advantage, mobility, positions, speeds and accelerations. Such an objective is achieved by simulating them for different positions using discretization and variable timing. **Methodology:** It consists of files of mechanisms with the corresponding files of links and electronic spreadsheets. The student must modify the dimensional, geometric and kinematic restrictions; remove them and install new ones; to observe the behavior of the mechanism as a system or of the links as integral parts. **Contribution:** Simplify the cognitive process of the kinematics of the mechanisms. It facilitates the understanding of the Euler and the Lagrange approaches. It allows to understand and evaluate the positions, speeds and accelerations; absolute, relative and apparent. The files of mechanisms and links are virtual, three-dimensional and allow their animation. Electronic spreadsheets control the restrictions of both the mechanisms and their links.

Simulation, Mechanisms, Analysis

Diseño e implementación de un sistema de visión por computadora para el reconocimiento de objetos en movimiento

Design and implementation of a computer vision system for object recognition in movement

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Abstract

In this work we developed a computer vision system that allow the geometric figures recognition in real time using a web camera, also the identification of the objects size using a known object. To make this possible we used several techniques of the digital image processing as gray scale filters because that's the first step to start the image processing, threshold to make the image transformation in binary form where 1 is the white color and 0 the black color, edge detection to detect the edges of the figures therefore an important parameter is the noise cancelation of the obtained signals, that's the reason of the using of digital filters because those allow the oscillation cancelation in the signals. The possible application can be the microorganism detection in controlled environments accord of its morphology also the change of its area in real time.

Vision, Computer, Processing

Implementación de un laboratorio de cómputo con software y hardware libres

Implementation of a computer lab with free software and hardware

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Abstract

Objetives: To implement a low cost computer laboratory, using free hardware such as Raspberry PI and free software such as Linux, for the support of primary schools that do not have the economic capacity to solve the purchase of a conventional computer laboratory, in order to increase the interest of students from first to 6th grade of the use of ICT in daily life. **Methodology:** An analysis of the different existing linux distributions for the raspberry PI was carried out, as well as the different free software programs that would be used in the classrooms, such as mathematics, history, reading, science and programming principles. **Contribution:** The use of free software tools in the classroom, is not only a matter of economy, but also the teaching of the 4 freedoms of free software, use, share, distribute, and the possibility of improving it knowing the source code. It also promotes collaborative work, and the use of free hardware has the advantage of technological independence.

Free Software, Free Hardware, Raspberry P

La incorporación de tecnologías emergentes en la formación de alumnos del área económico-administrativo

The emerging technologies integrated into the training of students in the economic-administrative area

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Abstract

The present work is focused on proposing the incorporation of Emerging Technologies (ET) in the Economic-Administrative area (EAA), specifically for students of the Bachelor's Degree in Accounting (LCN, Spanish acronym) and the Bachelor's Degree in Administrative Informatics (LIA, Spanish acronym), of the Chalco Valley University Center of the UAEMex, because they are focused on the development and creation of businesses, starting with the use of mobile phones, augmented reality and virtual supports. An instrument with a Likert scale elaborated, applied to a sample of 238 students of LIA and LCN, taking the total of students as population (408) and a convenience sampling was carried out. Also, there was an interview with 12 professors of both bachelor's degrees. The focus considered in the research was qualitative, transversal, and field. The questionnaire validated with Cronbach's alpha (0.81) and its score applying the mean and standard deviation, coding each of the items according to the characteristics of the study population. Among the results, teachers agreed to incorporate emerging technologies and to design how they will implement them in the classroom so that the proposed strategies contribute to the learning of students in the economic-administrative area.

New technologies, Learning strategy, Higher education

Sistema web para gestión de estadías profesionales para TSU e Ingeniería

Web System for managing professional stays for TSU and Engineering

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Abstract

Professional stays allow students to enter the workplace quickly and acquire knowledge to improve their professional experience. A software tool was developed that allows to manage the process of professional stays of the students of the TSU career and engineering of Information and Communication Universidad Tecnológica del Valle de Toluca, which allows to help improve the care of the academic advisors towards the students to be able to take control of:

- . 1st and 2nd stay evaluations by academic advisor and external advisor
- To be able to upload the stay memories to the online platform
- Keep statistical reports on official formats of agreements between school-company-student
- Statisticians of the skills that students perform in professional stays to be able to know what is the field where there is more demand and what technologies are currently being used in the industry.
- Keep track of the activities that students perform in companies.

All of the above with the purpose of seeing the needs of organizations and adapting the knowledge taught in class so that students remain competitive and can enter the world of work

Tool, Analysis, Tracing

Aplicación web para niños con problemas de dicción

Web application for children with diction problems

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Abstract

The web application for children with diction problems, seeks to contribute to the reduction of a pronunciation problem known as dyslalia. The application can be used on any device connected to the internet, its main purpose is through exercises and dynamics integrated in it, improve the diction that children present in the range of 4 to 6 years of age. The methodology used is the development of iterations that allows reducing the risk that arises between the needs of the user and the final product due to misunderstandings during the requirements collection stage; having the advantage of carrying out the development in small cycles, allowing to better manage risks and deliveries. The web application for children with diction problems, in its first version, has had good results, highlighting its functionality and application, which has shown great acceptance by children, educators, experts and even parents, but about all because in the period of use of a month have begun to have improvements in the pronunciation of users (boys and girls).

Web application, Dyslalia, Diction problems

Tecnología móvil en el ambiente académico y su uso en videojuegos

Mobile technology in the academic environment and its use in video games

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Abstract

The use of mobile devices among the young population has become widespread, to read newspapers, books or magazines, find information for school assignments, and communicate with their peers for student activities, which can be used to motivate better academic performance. New applications and platforms for learning management, related to new technologies, increasingly accessible such as mobile, with smartphones or tablets in the classroom, forces teachers to use these advantages in their teaching and learning strategies. This paper presents a study, at the National Technological Institute of Mexico, on how the use of this mobile technology is correlated with better results in academic performance for engineering students in mathematics and written language, not so for physics. So also, how the widespread use of social networks and applications for leisure, such as video games, can become a strategic motivational element for learning. The study also shows the need to strengthen the commitment of teachers to link these technologies effectively in the classroom, and not leave it in an intentionality.

Mobile devices, Engineering students, Video games

Aplicación de microorganismos benéficos para la producción de flor de cempasúchil

Application of beneficial microorganisms for the production of mexican marigold flower

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Abstract

The Mexican marigold flower (*Tagetes erecta*) is a plant native to Mexico, the uses are: pigments, flavoring, perfumery, ornamental, insecticides, nematicides and medicinal. In the soil there is a great richness of microorganisms mycorrhizal fungi and plant growth promoting rhizobacteria with an important role in the processes that affect the transformation of nutrients in the soil and their availability for plants and protection against phytopathogenic microorganisms. The objective of this work was to evaluate the effect of the use of beneficial microorganisms in the development of the cempasúchil flower compared with the application of a fertilizer. The bacterial strains were identified as 225, 254, 302 and an inoculum of mycorrhizal fungi. The Blue Garden fertilizer. Fresh weight, dry weight, number of flowers, root size were determined. A completely randomized experimental design and Tukey test were used. According to the results obtained, the best treatments that could have a potential use were the following treatments: fertilizer, strain 254, strain 302 and strain 254 and mycorrhiza. The use of beneficial microorganisms for the production of Mexican marigold flowers was shown to be effective and comparable with the application of fertilizer, therefore reducing its use and even eliminating it.

Soil, Rhizobacteria, Mexican marigold flower

Efecto de la somatotropina bovina recombinante (bst) al momento del destete sobre la productividad de ovejas

Effect of recombinant bovine somatotropin (bst) at weaning on the productivity of ewes

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Abstract

This research was conducted to know the effect of 125 mg of recombinant bovine somatotropin (bST) administered at weaning, on the productivity of sheep Pelibuey. 60 clinically healthy ewes with a body condition of 2.5 to 3 were used. The animals were divided into two groups, the treated (30) and the control (30), at the same time both were subdivided into two groups, the flock that had one parturition (15), and with more than two (15). All females were synchronized under the same scheme of 12 days with an intravaginal sponge, 20 mg of medroxyprogesterone acetate (MPA), and support of 15 mg of PGF2a administered two days before the removal of the sponge. The bST was administered to the treated group the seventh day of synchronization, subcutaneously. Females were mating by the ram, after detection of estrus synchrony. At 45 days the pregnancy diagnosis was performed by ultrasound and prolificacy was confirmed at the birth moment. It is concluded that under the conditions in which the experiment was performed bST showed no significant statistical effect in newly weaned females, but it showed minimal gains in the indicators of prolificacy and multiple births in animals treated with Somatotropin.

Somatotropin (Bst), Fertility, Prolificacy, Parturition

Composición y biomasa fitoplanctónica en zona riparia y lagunar-estuarina del Río San Pedro, Nayarit (2008-2009)

Composition and phytoplankton biomass in the riparian and lagoon-estuarine zone of the San Pedro River, Nayarit (2008-2009)

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Abstract

Biomass (Cl-a) and phytoplankton composition were estimated in the lower part of the San Pedro, Nayarit and lagoon-estuarine areas (December 2008 - July 2009). Nine stations were sampled to evaluate phytoplankton biomass (Cl-a) on the surface. The samples were protected from light and filtered to freeze them and subsequently analyzed in the laboratory using the technique of Srickland and Parsons (1972). Environmental parameters (temperature, salinity and dissolved oxygen) were determined with a YSI 55 multimeter, Secchi depth, cloudiness percentage and wind direction and speed. Phytoplankton trawls were carried out with a mesh network of 34 μm , registering 19 families and 39 species. The Crysophytas presented 16 species, *Fragilaria* sp. and *Ephitemia zebra*, Chlorophytas: 9 families and 10 species - *Closterium aciculare*, *Oocystis lacustris* and *Spirogyra* sp., Cyanophytas: 3 families and 9 species - *Microcystis-aeruginosa*, *M. flos-aquae*, *Anabaena flos-aquae* and *Phormidium tenue* and Euglenophytas: 1 family and 4 species. Cl-a values were low (0.002 - 0.71 mgCl.a.m-3) compared to nearby sites. Most of the stations presented a high degree of dissolved organic matter that prevents the entry of light, essential for phytoplankton to perform photosynthesis.

Chlorophyll-A, Phytoplankton, San Pedro River

Análisis del comportamiento productivo de cerdas al parto en granja semiintensiva

Analysis of the productive behavior of sows at delivery in semi-intensive farm

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Abstract

El propósito de este trabajo fue evaluar el comportamiento productivo de cerdas en una granja semitecnificada. Se utilizaron cerdas F1 York x Landrace como línea materna y fueron inseminadas con semen Pietrain como línea paterna. Se consideraron 13 camadas contemporáneas. Se registró tamaño de camada al nacimiento, pesos al nacimiento y al destete, así como lechones destetados y la información se registró en el programa pigchamp©. Considerando la información de todas las cerdas de este estudio, el tamaño de la camada al nacimiento y del peso al nacimiento pueden considerarse relativamente buenos comparados con los obtenidos en otros estudios. Los resultados en las correlaciones de acuerdo al número de parto de las cerdas, indicaron la existencia de una correlación alta y positiva con todas las variables de estudio, similar al obtenido por Murillo *et al.* (2007), lo que resalta el uso de estas variables como indicadores de la productividad materna de las cerdas la cual incrementa en cada parto.

Producción, Lechones, Temperatura

Efectividad de rayos X en el análisis de calidad de semilla de 5 especies forestales

X-ray effectiveness in the seed quality analysis of 5 forest species

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Abstract

Digital images were obtained with the faxitron x-ray equipment in seed of: *Pinus douglasiana*, *Pinus devoniana*, *Caesalpinia platyloba*, *Lisyloma divaricatum* and *Swetenia humilis*. The correlation between morphological patterns of structures and the physiological development measured by EP germination analysis (ISTA), determination of pH of the exudate and electrical conductivity was established. The X-ray test turned out to be appropriate to analyze the development of embryos, internal physical damage, integuments damage, embryonic cavity filling, embryo alterations and insect attack. *Pinus douglasiana* showed correlation (-.88 *) between rudimentary embryos (ER) and normal seedlings (PN) and (.94 *) between embryo severe damage and abnormal seedlings; in *Pinus devoniana*, (-.75 *) for ER and PN; *Caesalpinia platyloba* and *Lisyloma divaricatum* They presented higher percentage of internal fissures and correlation (.89 **) of embryo with severe damage and dead seeds. *Swetenia humilis* in percentage of rudimentary embryos with dead seeds (.87 *). Regarding the external tonality, the electrical conductivity of the species *P. devoniana*, *P. douglasiana* *S. humilis* and *C. platyloba*, was higher on average in their seeds of dark testa than those of light tone suggesting a greater degree of deterioration.

Pinus, Caesalpinia platyloba, Lisyloma divaricatum

Determinación de aflatoxina M1 en hatos lecheros del Estado de México

Aflatoxin M1 determination in milk herds from Mexico State

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Abstract

Aiming to determine the presence of aflatoxin M1 (AFM1) in milk, 84 samples were collected in different milk production units from Mexico State; in different seasons (dry and rainy). The analyte was determined by ELISA test, with the RIDASCREEN Aflatoxin M1® kit, results were expressed descriptively and compared with reference values. From the analyzed samples, 45% were positive. When establishing different concentration ranges, four samples were observed with a level of $0.001 < 0.002$; forty-two in the range of $0.003 > 0.044$; and, thirty-eight in the range of $0.50 > 0.080$. When obtaining 42 samples per season, 37 (0.075 ± 0.010 ppt) were positive for AFM1 in the period from August to February 2017, while from March to October 2018, only one sample was positive (with a level of 0.060 ppt). The AFM1 present in milk is a risk factor for consumers and livestock as well, therefore, measures in the production and storage of fodder and grains should be assessed before, during and after feeding the cattle.

Aflatoxin M1, Milk, ELISA

Evaluación del contenido de ácido carmínico con respecto al sacrificio y secado de *Dactylopius coccus* Costa en Nopaltepec, Estado de México

Evaluation of the content of carminic acid with respect to the slaughter and drying of *Dactylopius coccus* Costa in Nopaltepec, State of Mexico

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Abstract

The postharvest management of cochineal insects *Dactylopius coccus* Costa, it is known like one of the most important processes within cochineal insect's production system, because it is necessary to maintain the higher percentage of carminic acid that the insect acquired during its development on the cactus. In this project, the principal objective was to compare the influence between three sacrifice methods and two ways of drying in the content of carminic acid, it was used the next methodology: three methods of sacrifice were selected (freezer, suffocation and hot water); and the two drying technics were, let the insect exposed to the sun and under the shadow. When then cochineal insects were dried, the content of carminic acid was measured in the laboratory by a spectrophotometric method. As a result, it was observed that, of the three sacrifice methods, that of suffocation ($17.47\% \pm 0.5$) and that of freezing ($17.36\% \pm 0.5$), obtained the highest content of carminic acid, and with respect to the drying technique, the Grana dehydrated in the sun had a higher value of carminic acid ($17.05\% \pm 0.5$), compared to that found in shade ($16.89\% \pm 0.5$).

Cochineal, Insect, Postharvest

Tamaño de partícula de pumita y tezontle en el crecimiento de plantas de *Ocimum basilicum* L.

Size of pumice and tezontle particles in the growth OF *Ocimum basilicum* L. plants

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Abstract

There are few reports about the effect of pumice in the production of basil (*Ocimum basilicum* L.), an economically significant plant. The size of pumice particles can influence basil production. The objective of this study was to compare the growth and production of basil plants cultivated using pumice and tezontle particles of various sizes. Pumice (*jal*) and tezontle were mined in Xalisco, Nayarit. Five particle sizes per material were used —size 0 = $0.1 \geq \leq 12$ (material without particle separation); size 1 = $7.5 \geq \leq 12$; size 2 = $5.0 \geq < 7.5$; size 3 = $3.0 \geq < 5.0$; size 4 = $0.8 \geq < 3.0$; size 5 = $0.1 \geq < 0.8$ — and their physical properties were determined. The basil was transplanted into pots which had been filled with particles of each size. The following variables from the above-ground part of the plants were evaluated: plant height, stem diameter, and leaves, stem, inflorescence, and total dry mass; root variables were also evaluated. Size-4 particles recorded the highest values for height, stem diameter, and total dry biomass; this result was attributed to physical properties. The highest value was obtained for every variable aboveground when pumice substrate was used.

Physical Properties, Water Retention Capacity, Air Capacity

Alineación láser para experimentación con fotografía digital de speckle (DSP)

Laser alignment for experimentation with digital speckle photography (DSP)

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Abstract

Non-contact techniques have returned to optical metrology one of the most booming branches of science, making digital speckle photography (DSP) one of the most used in the measurement of structural changes in surfaces. This technique uses a laser as a measurement system and compares the changes in the speckle pattern obtained by irradiating the surface that is subjected to deformations; however, the alignment of these systems plays an important role in the results obtained. In this work, the alignment errors of an optical system are estimated based on the analysis of the Fraunhofer diffraction pattern, as well as the statistical properties of the speckle pattern for field near and far. The results indicate that the alignment of the light beam can be determine by a fringes quantification system when passing through a pinhole and that the highly developed speckle pattern is more similar to the intensity distribution shown in the literature.

Optical alignment, Speckle pattern, Digital speckle photography

Análisis de las propiedades del sistema CaO – FeO – SiO₂ para su aplicación en escorias

Analysis of the properties of the CaO – FeO – SiO₂ system for its application in slags

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Abstract

The study of ternary phases systems in pyrometallurgy is used for the adequate formation of slags, because they are an important foundation in establishing the conditions of operation in the separation of undesired elements. In this area, the CaO - FeO - SiO₂ system is generally used for the determination of liquidus temperature and other properties mainly in the metallurgy of Pb and Fe. In this article we review the main properties of this system, such as density, surface tension and electrical conductivity. In addition, a compilation is carried out on the values obtained from the viscosity made by different authors at different compositions and temperatures, in order to verify the interaction that each component delivers to the equilibrium of the system. Through this research, the aim is to obtain the knowledge to predict the behavior of the slag that leads to making the decisions that improves the processes and this is only through reliable and consistent information.

Viscosity, Slags, Ternary phases system

Implementación del OEE en el proceso de fabricación de vidrio templado

OEE implementation in the tempered glass manufacturing process

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Abstract

Objective: Implement the OEE as an indicator that allows evaluating and improving the manufacturing process of tempered glass. **Methodology:** Production lines are analyzed to determine the indexes: availability, pace and quality. A first evaluation is obtained, with an overall yield of 35% for the month of October 2018, this result places the production lines in a range of “unacceptable” on the global scale of said index, which implies that the organization It has a high potential for improvement. It is at this point that strategies are determined that will improve said performance. Firstly, the process flows of both lines are analyzed, identifying areas for improvement and simplifying manufacturing stages, which allows to optimize production times and equipment availability, a second action was the modification of the cutting equipment, allowing three processes to be processed Part types, without the need to make changes to the tool, which reduces preparation times. Finally, the lighting conditions were evaluated and improved, with this we reduce the inspection times in the quality of the product. **Contribution:** The actions implemented allowed obtaining an increase of 5% of the OEE, in relation to the previous measurement.

OEE, Performance, Process

Medidor de grados brix en uvas

Grape brix meter

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Abstract

Grape Brix Meter.Contribution: The brix degree meter has the purpose of using it in the field and in the laboratory to collect the information corresponding to this parameter (brix degrees) to sample the crops of vegetables, fruit trees and mainly grapes that are held in the vineyards of the Technological University of North of Aguascalientes, being able to monitor the ripeness of the grapes as well as the grapevines of these vineyards through data collection and analysis, and even decide based on the results of brix grades taken and analyzed by the meter to harvest this product at the best time.Objectives: To develop a brix degree meter for both didactic and professional use, which allows us to sample this parameter in the field in the plants and mainly in the fruit of the vineyards of the Technological University of the North of Aguascalientes and in the surrounding region of the same for monitor the degree of maturity of the crops and thus determine the best seasonality of harvesting the grapes based on data analysis trying to obtain the best product for the production of table wines.Methodology: The light refraction method and also for conductivity should be considered to develop the device to measure the brix degrees, since they are a simple and commonly used methods, the electronic processing of the sample in the same device will be done a comparison of parameters according to the scale determined for the different types of grapes that you want to monitor, the data of a number of samples will be stored and the necessary statistical calculations will be made that will yield the result and will suggest inbased on these the ideal time of harvest, said data may be downloaded in a database for its history and laboratory monitoring.

Meter, Brix, Grape

Evaluación de los extractos acuosos de ruda (*ruta graveolens*) y epazote (*chenopodium ambrosioides*) en el control de mosquita blanca (*bemisia tabaci*) en laboratorio

Evaluation of aqueous extracts of ruda (*ruta graveolens*) and epazote (*chenopodium ambrosioides*) in the control of white fly (*bemisia tabaci*) in the laboratory

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Abstract

In recent years, the use of natural extracts has been an alternative in the control of pest insects in the search for a balance between the environment, production and the human being (Molina 2001). In the present work the objective was to conduct a study of the effectiveness of two aqueous extracts of the aromatic plants ruda and epazote as well as a combination of both for the control of white flies. The trial was done under a completely randomized experimental design with three treatments and ten laboratory repetitions. The tests were carried out on bean leaves infested with white flies and placed in Petri dishes covered with anti-aphids mesh, which were sprayed with undiluted extracts. Subsequently, a statistical analysis was carried out by means of an ANOVA and comparison test of means with the data thrown based on the number of dead flies. The study showed that the treatment developed by the combination of ruda and epazote extracts was the most effective. This study was carried out with the purpose of making contributions as an alternative for the natural control of *bemisia tabaci*.

Plague, Extracts, Control

Efecto del acondicionamiento osmótico con soluciones de KNO₃ en la germinación de semillas de *Amaranthus hypochondriacus* L.

Effect of osmotic conditioning with KNO₃ solutions in the germination of *Amaranthus hypochondriacus* L. Seeds

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Abstract

Amaranth can help to decrease the problems of food, malnutrition and health of the human population, as it provides energy, protein, vitamins and minerals and is also a natural source of lysine, a rare amino acid in other cereals. However, when stored for use as seeds, they suffer a relatively rapid deterioration, which is mainly reflected in low germination. Osmotic conditioning or "priming" is a treatment that can improve the germination capacity of the seeds, once they have been subjected to deterioration. In this work, an osmotic conditioning experiment was carried out with the objective of increasing the germination percentage in amaranth seeds accessions that are conserved at the National Center of Genetic Resources (CNRG) of INIFAP. The seeds of four amaranth genotypes were hydrated in five KNO₃ solutions for 2 h, followed by a 24 h drying period at 25 °C. Subsequently, these seeds were tested for germination. The results showed that the germination was increased with osmotic conditioning using KNO₃ solutions, thereby the seed deterioration was reverted. Also, the genotype had an effect on the germinative behavior of the seeds.

Amaranth, Priming, Seed deterioration

Optimización de la resistencia del cuero automotriz en operaciones de ensamble empleando un diseño experimental 3^k

Optimization of the resistance of leather for automotive use in assembly operations using a 3^k experimental design

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Abstract

Within the automotive industry one of the most used materials for user comfort is animal skin, this material is used to coat pieces that will have contact with the consumer. One of the most important problems that arise with the handling of the skin in operations of coating and assembly within plants of the automotive sector is the lack of resistance. A treatment that must be applied to the skin to improve its conditions of resistance to mechanical tension, is in function of two factors: percentage of moisture in the skin and amount of surfactant applied. In the present investigation, optimal operating conditions are established for the handling of the skin used in processes of the automotive sector based on a 3^k factorial experimental design. The application case was carried out in a company dedicated to manufacture armrests for high-end cars. The results of the investigation show an improvement of 97% in operations where the resistance of the skin is required to meet the quality standards established in the automotive industry.

Experimental design, Leather, Automotive industry

Efecto de la aplicación de pre-tratamientos físicos y químicos en la digestión anaerobia de pulpa de café

Effect of the application of physical and chemical pre-treatments on anaerobic digestion of coffee pulp

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Abstract

The present study aims to evaluate the effect of thermal pre-treatment (50, 70 Y 90 °C during 1 h) and acid pre-treatment (2.5%, 5% y 10% v/v during 1 h) in anaerobic digestion process of coffee pulp. The methodology consisted of three stages where the waste was obtained and characterized, applied pre-treatments to evaluate the solubilization degree and biogas production. The residue presented a % VS of 91.80, pH of 5.04, total COD 24.26 g/L and soluble COD 14.88 g/L. The solubilization values obtained by applying thermal pre-treatment increased to 0.92-4.98%, while applying acids pre-treatments of 2.6-18.86%. Subsequently, in the anaerobic digestion process, retention time decreased from 23 up to 14 days. The results obtained in this study demonstrate that, pretreatment is significant to increase the percentage of hydrolysis rate, however, the hydrolysis rate percentage cannot be directly related to biogas production in anaerobic digestion.

Coffee pulp, Thermal and acid pre-treatment, Anaerobic digestion

Distribución estomática en maíz a diferentes dosis de humus

Stomatic distribution in corn to different dose of humus

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Abstract

Corn is the most important crop in Mexico, is the center of origin and diversity, as well as being an important part of its diet and culture, representing a deep relationship with its economy. Climatic and soil erosion projections force the study of the behavior of the crop in the face of possible changes, nowadays the modification of agroecological practices is important, one of them is the use of organic biofertilizers. Recent studies that determine the regulation of stomata development in grasses could be determined to improve plant efficiency and agricultural yield. The objective of the present work was to evaluate the effect of the use of organic fertilizers at different doses of humus in the stomatic distribution in corn plants. In this work the number of stomata in both the abaxial and the adaxial of the leaves was evaluated, as well as the length of stomata of corn plants grown with doses of 10, 20 and 30 ton/ha of humus.

Humus, Corn, Biofertilizer

Fuente didáctica de voltaje lineal

Linear voltage teaching source

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Abstract

A voltage source is a very useful and necessary tool in prototype testing of electronics projects, especially when they need to be tested in a controlled and safe environment both for the circuit being tested and for the user who is Operating the voltage source. The following article presents a new innovation of this type of tool, it is a linear voltage source with self-protection system for both the user and the circuit under test, it consists of level detecting circuits placed in each voltage regulator which will notify the user if any type of short circuit occurs during the testing stage of their prototype. The user will be notified by the same voltage source by means of a light that will indicate the status of the test, all this in order to avoid short circuit damage and its serious consequences.

Voltage source, Short circuit, Self-protection, Prototype

Características de vigor y susceptibilidad a salinidad de árboles de aguacate en las condiciones subtropicales de Jalisco, Mex.

Tree growth and salinity characteristics of avocado trees under subtropical conditions of Jalisco, Mex.

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Abstract

Objectives: This work was carried out to determine the tree size and susceptibility to salinity and tristeza of avocado trees on a high density orchard established under subtropical conditions of Sayula Jalisco, with grafted plants introduced from Michoacan. **Methodology:** Trees of Hass and Mendez varieties grafted on native Mexican monoembryonic rootstocks planted at 5 x 3 m, on a sandy loam soil, pH 7.3, were used. During 5 months 10,500 trees were evaluated to register the size (scale: < 2.0, 2.1-3.5 , and > 3.5 m height) and susceptibility to salinity (scale: 1,3 and 5; 1=no damage, and 5=severe damage on leaves). **Contribution:** A high variability was observed on size of trees. 20.0 % of trees showed a small size, less than 2 m. 30.0% reached more than 3.5 m height. Salinity expression on leaves was very evident. Most trees showed salinity symptoms with a indices of 3 to 7. Only 28 % of trees were free of salinity. The use of monoembryonic rootstocks and water salinity were the main factors inducing tree avocado variability in this region.

Persea Americana, Cultivar Hass, Monoembryonic, Rootstocks, Phytophthora

Estimación de máximas densidades para mitigar el impacto de la enfermedad hlb en plantaciones de naranja valencia

Estimated high density plantations to mitigate the impact of hlb disease on valencia orange trees

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Abstract

Objectives: This work was carried out to estimate the optimal plant density for 4 Valencia orange varieties and to determine the highest yield potential as a strategic to overlap the yield reduction by citrus HLB disease. **Methodology:** Tree growth data of nine years [(height, diameter and canopy volume (CV); area of soil covered by canopy (ASC)] and yield in kg/tree (Y) of four varieties were analyzed first by correlation analysis and then submitted to a lineal and multiple regression analysis. **Contribution:** Correlation values of 0.8 and 0.85 were observed for ASC and CV with Y, respectively. Based on these variables the optimal calculated tree densities by regression for “Pineapple”, “Queen”, “Cutter” and “Campbell” varieties were 900-1000 trees/ha, which can yield 30 to 60 ton/ha/year, from 4th to 9th year.

C. Sinensis, Regression Analysis, Growth, Huanglongbing

Diseño de un modelo de innovación para incremento de la competitividad en la producción de nochebuena (*Euphorbia Pulcherrima*) bajo invernadero

Design of an innovation model to increase competitiveness in the production of poinsettia (*euphorbia pulcherrima*) under greenhouse

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Abstract

Design a theoretical model of innovation focused on the agribusiness sector A review of the scientific literature on the topic of agribusiness innovation was carried out in the main scientific platforms stories such as Thomson Reuters Web of Science, etc., the following variables were detected; business cooperation, technological capacity, knowledge creation, government programs, agribusiness groups and productive diversification, a questionnaire was applied to the producers of *Euphorbia Pulcherrima*, the data affected are as follows; business cooperation, government programs, knowledge creation, technological capacity and agribusiness clusters exposed to a correlation coefficient (Spearman) of 0.625 to 0.805, however the variable productive diversification shows low correlation level of 0.313 to 0.327. The original contribution of this proposal is based on the statistical support of the variables and the unification of variables through a theoretical model.

Model, Innovación, Competitive

Uso no-convencional del mucílago de avena en fotoprotección

Unconventional use of oat mucilage in photoprotection

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Abstract

In this work, some spectral characteristics of oat mucilage were studied to obtain a deep and detailed knowledge about the possible application of this material in the absorption of dangerous ultraviolet radiation for human skin. For this purpose, the mucilage of oat was extracted and purified by adapting a previously reported method. Then, several aqueous solutions with different known concentrations of this extract were prepared. These solutions were analyzed with a spectrophotometer to determine their absorbance between 200 and 1000 nm. Through the absorbance spectra, the photoprotective capacity of the mucilage of oat in aqueous solution was evaluated. The extinction coefficient of this material was also calculated through spectrophotometric measurements and the Lambert-Beer Law. In addition, a cream with natural ingredients and oat mucilage as active compound was prepared to evaluate its sun protection factor and compare it with that of the aqueous mucilage. Finally, the feasibility of using the mucilage of oat as active ingredient in effective and safe sunscreens for people and the environment was analyzed.

Sun protection, Mucilage, Oat

Manufactura de bicicleta de bambú con transmisión de engranes

Manufacture of bamboo bicycle with gear transmission

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Abstract

The present project deals with the construction of a bicycle with a Bamboo structure, a cultivation plant preferably in the southwest of Mexico, however a bamboo cultivated in the Mexican Bajío was used. A transmission based on helical gears was also included, replacing the traditional transmission chain. Solidworks modeling was performed as well as finite element analysis to quantify bicycle safety factors as well as Von Mises efforts. Regarding the assembly and construction of the bamboo bicycle, different cuts of the plant's rods were made to adapt them to the tubular parts of the bicycle frame, in addition to the handlebar. The transmission was assembled with helical gears by coupling them with a power transmission shaft. Also tests were done, already armed the bike, both resistance and speed. And considering testing the transmission with gears.

Bamboo, Bicycle, Gear

Diseño de un prototipo de electroestimulación neuromuscular de baja frecuencia

Design of a low frequency neuromuscular electrostimulation prototype

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Abstract

Objective. Design a low frequency Neuromuscular Electrostimulation prototype with modifiable digital parameters through the Arduino platform. **Methodology.** The following work shows the design of a low-frequency neuromuscular electrostimulation equipment prototype with similar characteristics to conventional devices but with a unique design in its programming, this prototype allows modifying the parameters of intensity, time, pulse duration and Frequency through the Arduino platform, this **HARDWARE** is based on simple analog and digital boards that allow reading input and output data on the device. This prototype emits a symmetrical biphasic current of rectangular pulses and although there is a great variety of currents within the Neuromuscular Electrostimulation (EENM) focused on improving and maximizing the activation of a muscle, generally the symmetric biphasic pulses are better tolerated to the passage of a current through subcutaneous tissue, with greater effectiveness in depolarization of thick fibers of intact nerves. **Contribution.** To offer alternatives for the management of digital devices in electrotherapy.

Electrostimulation, Arduino, Muscle activation

Diseño e implementación de un sistema de control de bobinas Helmholtz para la caracterización de micro y nanopartículas

Design and implementation of a Helmholtz coil control system for the characterization of micro and nanoparticles

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Abstract

In this work we develop a system of arrangements of two pairs of Helmholtz coils positioned on the “x” and “y” axis for the kinetic characterization of microbots in a liquid medium at different densities. These spherical microbots are synthesized with magnetite magnetic microparticles embedded in a polymeric silicone matrix. One of the most specific contributions is the development of an automated Helmholtz coil arrangement system, which, when moved by stepper motors, the Helmholtz coil system becomes Maxwell coil system as distances are modified, causing distances a uniform field gradient instead of a uniform magnetic field. This system can be used in the redirection of microbots for the elimination of cancer cells by means of the hyperthermia technique; In addition, you can transport medications to specific areas for treatment because these microbots are biocompatible with the human body.

Microbots, Helmholtz coils, Maxwell coils

Diseño de interfaz de control y adquisición de datos para un prototipo didáctico de refrigeración

Design of control interface and data acquisition for a didactic cooling prototype

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Abstract

The main objective of this work is to present the design and construction of a control system and data acquisition for a didactic refrigeration prototype, the didactic prototype consists of an evaporation cooling cycle in which it is important to know the voltage variables, current in the compressor, as well as pressure and temperature at each stage of the cycle, in order to understand the thermodynamic phenomena that occur in its operation. The data acquisition and control system reads, registers and displays the voltage, current, temperature and pressure variables on a machine-man interface, in turn it controls the operation of the prototype compressor and fan, when some process variable exceeds the limits permissible. In this system we use the Arduino platform, pressure, voltage, temperature and current sensors as part of the signal acquisition and conditioning system, as a virtual instrumentation environment the LabVIEW software, and a relay module as a power stage to control the outputs of the system. A polynomial regression of 3 orders was used to condition the voltage sensor readings. To verify the operation of the data acquisition system, the readings were compared against measurements of calibrated laboratory equipment.

Arduino, Polynomial regression, Data acquisition

Diseño y construcción de una bicicleta para cargar eléctricamente un teléfono celular

Design and construction of a bicycle to electrically charge a cellphone

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Abstract

In this project a study, design and construction of an electric power generation device was carried out. Electric power is produced, by the movement of an electric generator, enough to recharge mobile devices through the pedaling of an exercise bike. From the research conducted on the generation of electric power it turned out that a generator with the appropriate characteristics can provide the necessary and sufficient energy to electrically power a mobile phone. This article shows the research, design procedure, detail and manufacturing of the electricity generating device. This project will benefit all people in general, since when they need to charge their cell phone they can pedal an exercise bike and electrically charge their cell phone. With the exercise they do when pedaling the bike they will lose weight, which will give you two benefits: Charge your mobile phone and exercise to be healthier.

Generation, Dynamo, Bike

Estudio de los efectos en los sistemas de iluminación electrónica en función de la calidad de la energía en los sistemas automotrices

Study of the effects on electronic lighting systems based on energy quality in automotive systems

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Abstract

Currently, the combustion cars of a large number of electronic equipment: the electronic control unit, position sensors, flow sensors, automatic brake system, ABS system, among others. Currently and in broad strokes cars a set of mechanical parts controlled by an electronic system. In the future, cars are fully electronic, but prior to this step, hybrid cars will be developed which have their respective electric motors controlled by a power stage and their internal combustion engine (Cevallos 2016). This paper identifies the disturbances in the automotive systems that are introduced to the micro network of the automobile, its effects to analyze the effects that may have on the LED lighting system.

Objetivos

1. Estudiar los transitorios y permanentes en automóviles para clasificar su comportamiento.
2. Analizar las perturbaciones que pudieran ser perjudiciales para los sistemas electrónicos del automóvil.
3. Cuantificar de perturbaciones a partir de la Transformada Rápida de Fourier (FFT).
4. Estudio y análisis de los efectos a través de la simulación numérica de los transitorios en convertidos de CD-CD empleado para la iluminación.

Battery, Harmonics, Automobile

Dispositivo con filtro por campo magnético, para retirar polvo metálico en maquina CNC en la industria metalmeccánica

Device with magnetic field filter, to remove metallic dust in CNC machine in the metalworking industry

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Abstract

Objective Implement the "filter by magnetic field" and be able to improve the quality of the geometric and visual pieces, returning the properties to the refrigerant (oil) by removing the impurities, and thus being able to improve the efficiency of the machining through this project. Methodology The device is integrated by a magnetic field filter that was designed to remove the metallic microparticles found in the refrigerant fluid and thereby reduce the geometric and dimensional variation in the specifications of precision machined parts in CNC. A filtering system for the burr of the refrigerant oil is applied by means of an electromagnet. The purpose of this project is to reduce the amount of Scrap by variation produced in the final measurements by premature wear of the cutting tool edge generated by these metal particles suspended in the cooling oil even after being filtered conventionally. This project also aims to extend the useful life of the tools (inserts, bits and shanks), since the durability of the tools is reduced and when they lose the edge they fracture prematurely producing scrap pieces. Contribution. The implementation of the filter would reduce the defect of parts marked by residues inside the refrigerant by 90 percent.

Filter, Magnetic field, CNC machine

Confección de un prototipo de pantaleta con adaptación de compresas térmicas para disminución de cólicos menstruales

Preparation of a prototype panties with adaptation of thermal pads to reduce menstrual cramps

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Abstract

This work shows a process of patterning and making a prototype panties with adaptation of thermal pads to reduce menstrual cramps adapted to the needs and requirements of women. There is talk of the transformation made for the preparation of the samples, from a basic template, as well as the 2 assembly processes of the same and the machinery used, in the same way the modifications made to the transformation are considered for better adaptation to the body in terms of cutting a garment and using materials. The results of the panties are shown with the adaptation of the compress bag according to the materials used for that purpose, where it is determined what is most convenient for the final use of the garment is to give heat to reduce menstrual colic, It is the use of birdseed, since the gel cannot change state when ever being in heat.

Diseño de una mesa elevadora para el traslado de material maquinado, que permita evitar fatiga en el operador

Design of a lifting table for the transfer of machined material, which allows to avoid fatigue in the operator

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Abstract

Objective. Design a hydraulic lifting platform through the use of SOLIDWORKS software, to expedite the transfer of boxes of machined material and avoid physical damage.

Methodology

1. Analysis of the problem that workers have when moving machined material to their respective work areas, emphasizing the bad manipulation they perform.
2. Description of the different types of mobile personnel lifting platforms (PEMP) that exist in the market.
3. Perform a sampling to specify the average weight that the materials acquire after being machined and justify that they are high loads and difficult to handle without causing physical damage.
4. Study of forces in SolidWorks, with the purpose of observing if, it is a resistant mechanism and if the load you wish to supply will not generate buckling on the beams.
5. Design and molding of a mobile lifting platform, and its validation through the SOLIDWORKS finite element program, which will improve the ergonomics in the distribution of the machined material to its next destination, avoiding irreversible injuries and speeding up said activity.
5. Evaluation of the costs generated by manufacturing the lift table and the economic benefits it will have.

Contribution

Avoid physical damage caused by the mishandling of loads and that ultimately generates production problems.

Load, Damage, Design

Relevancia conocimiento y uso de los tics, contabilidad electrónica de personas físicas, en Monclova, Coahuila México

Relevance knowledge and use of tics, electronic accounting of natural persons, in Monclova, Coahuila Mexico

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Abstract

For natural persons with business and professional activity, information technologies are a basic and important activity in order to simplify the fulfilment of their tax obligations before SAT, for this reason this is the present research focuses on whether the taxpayers are aware of the needs to apply these techniques in support of the fulfillment of these obligations, for the management of this work will be used a type of research mixed that combines a part theoretical content and an applying part where the opinions of 20 contributors to the regime are analyzed of business activity, in view of taxpayers' ignorance of these issues, seeks to offer an informed proposal that allows for better use and application of the management of electronic accounting as an essential contribution to taxpayers from the city of Monclova, Coah. (trade, 2018)

Electronic accounting, ICT'S, Tax obligations, SAT

Seguimiento mercadológico con base al software mastransporte en la empresa de mantenimiento vehicular, preventivo y correctivo

Market follow-up based on master transportation software in the vehicle, preventive and corrective maintenance company

ESPINOSA-ÁGUILA, Ma. Luisa, SÁNCHEZ-GARCÍA, María Del Carmen, LOZADA, Raúl Alonso, VILLANUEVA-MELENDZ, Armando

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Abstract

The main objective of the vehicle, preventive and corrective maintenance company is to create a database that is used from the CRM Mastransporte software, this program helps to feed the database and the implementation of all the tools they offer. information on the percentage of useful life of the parts of a vehicle. The process of feeding this database ranges from the proper introduction of customer data, to the entry into the system of the useful levels of each element of the vehicle. The system sends promotional and informative mails indicating and suggesting to the consumer what would be the next purchase of the piece with a lower level of percentage of useful life. The real power is now in the hands of the customers. This is the reason that it is imperative to have ample and updated information about each client, through the implementation of a continuous practice of interpersonal relationships accompanied by their May ally: the CRM.

Database, CRM, Customers

Determining impact level of low material supply into delivery times of web servers

Determinación del nivel de impacto de faltante de material en tiempos de entrega de servidores web

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Abstract

Objective: Determine materials shortage to manufacture web servers, establishing impact level of low supply material into delivery time promised to customers. Methodology, Data analyses show up: greatest shortage, suppliers they belong to, if all orders that fail delivery time to customer is due to lack of materials for its manufacture; also how long takes for each material to arrive, material cost, server's quantity impacted, profit impact of each server, old orders timing, reasons for each material missed. When analyzing by server type commercialized, customer delivery goals, materials required to manufacture; it was found most of orders that do not accomplish delivery time to customers are affected by high value materials shortage; being solid state units (SSD) greatest shortage. From January 2016 to 2018, material shortage went from 1275 units per month to 2985. Main reason for currently shortage is worldwide shortage. Also show up disconnection between sales and operations system. Contribution, Communication between operations and sales system was automated; sales department has access to material availability to manufacture products offered to customer, enabling them to communicate accurate delivery times to customer also to give alternative product to shorter delivery times in material required to manufacture product offered.

Delivery times, Material shortage, Web servers

[Título en Times New Roman y Negritas No. 14 en Español e Inglés]

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Objetivos
Metodología
Contribución

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