

LF-TEEC
Living the Future:
International Conference on Technology, Engineering, Education & Computer
27 - 28 March 2018
Online Classroom Conference

Abstract Book

LF-TEEC

Living the Future: International Conference on Technology, Engineering,
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Chair:

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Abstract (Code:5383)

Title of the Paper

The Effectiveness Evaluation of SGPWF on Water Quality and Ecological Restoration

Problem Statement

Today's domestic sewage discharged without treatment directly, the lake water body eutrophication is a common problem in Taiwan; Sustainable Green Power Water Farm (SGPWF) can effectively solve this problem.

Research Questions

The benefits evaluate of Sustainable Green Power Water Farm (SGPWF) for Water Treatment and Ecological Restoration.

Purpose of the Study

The purpose of the study is explored the is to investigate the improvement benefits of Sustainable Green Power Water Farm system for experimental group and control group of water quality and ecological restoration effectiveness evaluation.

Research Methods

This study's research site was located at the waterfront of Li-tze Lake in Pitou Township, Taiwan. SGPWF was established to evaluate water purification and ecological conservation improvement. During one year, water quality and ecological conservation assessment were recorded to investigate the performance of using the SGPWF system.

Findings

The results showed that the dissolved oxygen (DO) of the water sample with the set-up SGPWF system increased by over 2.4 times; the upper, middle, and lower layers had slight differences in temperature and pH; and ecological diversity was relatively higher. The research results showed that SGPWF can improve water quality and ecological conservation.

Conclusions

The results of this study have showed that SGPWF did play a considerable role to improve water quality and ecological conservation. In particular, there is no obvious stratification in a SGPWF system, meaning that the water is mixed uniformly.

Keywords

Landscape Ecology; SGPWF; Ecological Restoration

Yuan-Hsiou Chang

Hsiao-ling Lu

Abstract (Code:5478)

Title of the Paper

Analysis of differences in perceptions by experts/ordinary citizen groups on Genome-editing Technology

Problem Statement

it's necessary to consider the extent to which there is a perception gap between experts and ordinary citizens in the process of predicting and preparing the impact of the technology

Research Questions

What is the difference in perception between the expert group and the ordinary citizen group regarding the scope of human application of genome editing technology?

Purpose of the Study

Establishing a policy direction considering all members of society such as experts and ordinary citizens in preparation for the development and application of new technology

Research Methods

Qualitative feedback(Expert Advisory, ordinary citizen forum) and conduct surveys on the two groups(limit range for human application, application of embryos for the treatment of fatal genetic diseases, Self-improvement of body function)

Findings

[Expert] Expected controversy over the scope of the target disease. Promote the development of gene therapy for intractable diseases and rare diseases. [Ordinary Citizen] Expected to quickly popularize in cost and accessibility. Insufficient study of the occurrence and resolution of side effects. [Survey] The acceptability of ordinary citizen group's genome-editing technology is higher than the expert in all three items

Conclusions

It is necessary to create a system and a window to communicate with various stakeholders and transparently disclose relevant information : Recognize the different ways in which experts group and the ordinary citizen group understand and appreciate the risks of science and technology, and establish correct communication strategies

Keywords

Technology Assessment, Genome Editing

Seongmin Yim

Abstract (Code:5520)

Title of the Paper

A web2.0 for science gamification in High School: Jedirojo Science

Problem Statement

Web2.0 technologies are promising tools not adopted yet by formal education despite they provide learning advantages. Besides, it remains unclear what effects might arise from gamified web contents.

Research Questions

Would a science playful learning approach to web2.0 as a teaching experience enhance students interest and abilities to perform complex research tasks based on reflection and reasoning?

Purpose of the Study

We intend to provide a web2.0 for science learning in high school as a model to encourage teachers to adopt this technology in formal education. Moreover, our proposal's aim is fostering challenge and commitment in the learning process of molecular biology issues by using a fantasy based context.

Research Methods

We have developed a web2.0 model for science learning in High School whose contents and tasks are displayed in an attractive and casual frame based on elements from movies and videogames in order to catch the attention of students. The interest aroused by each section was assessed after tracking their amount of pageviews and comments for 18 months.

Findings

Contents presented as science fiction issues have been the most popular entries, reaching more than half the total pageviews the web has received. This along with the good reception our gamified tasks have caused among a sample of student support the basis of interest increasing we pursue by displaying contents in a sort of leisure context.

Conclusions

Students are usually prone to willingly work with complex contents as long as they are presented in an online playful framework where sources and tools can be easily available from home. Indeed, they enthusiastically assume a reasoning and researching active stance when they are challenged to solve tasks in the form of playing-role games based on their own tastes.

Keywords

Playful Learning; Web2.0; Science Education

Pablo Fernández Rubio

Alicia Fernández Oliveras

Abstract (Code:5527)

Title of the Paper

Playful learning and ICT for training science teachers: coordinating a teaching-innovation project

Problem Statement

Contribution to science teacher training from a perspective based on playful learning and the use of ICT tools

Research Questions

How can we best contribute to science-teacher training and foster playful learning approaches while motivating the use of ICT tools?

Purpose of the Study

The aim is to stimulate teachers in training to design and conduct educational approaches based on playful learning for scientific education, promoting the use of ICT as educational tools. With this objective, a teaching-innovation project was financed and developed for the higher education of kindergarten, primary, and secondary pre-service teachers.

Research Methods

For kindergarten pre-service teachers, two teaching proposals were developed, the first at a course concerning formal and non-formal contexts, and the second at the end-of-degree project. The proposal for primary pre-service teachers was related to their practical professional training, the last semester of their degree. For secondary teachers in training, a proposal regarding the end-of-master's project was made.

Findings

Teachers in training were able to design and develop educational approaches based on playful learning for scientific literacy, together with cross-curricular skill development. They also showed an improvement in their ability to use ICT tools as educational resources.

Conclusions

The teaching-innovation project presented is composed of several successful proposals devoted to spreading the idea of playful learning for science education between pre-service teachers of different educational stages.

Keywords

Science education; teacher training; playful learning

Alicia Fernández-Oliveras

Abstract (Code:5539)

Title of the Paper

Effective leadership competencies in IT-company: guidelines for leader development and education

Problem Statement

The effective executive level is vital in changing global environment. Research on global IT leadership lacks clear theoretical background. Studies provide disputed evidence which psychological factors contribute to leaders' efficiency

Research Questions

What kind of competencies do IT leaders have to exhibit to be perceived as effective? Are these competencies different for leaders' effectiveness in local and global IT organisations

Purpose of the Study

The purpose of this study was to investigate the relationship between different competencies of IT leader and perceived leadership effectiveness in global and local IT organisation.

Research Methods

The integrative literature review was employed. Published, peer-reviewed, quantitative studies, that examined global leadership competencies and outcomes for employees and organisations were included. The competencies' framework with three levels (core traits, personal character, ability) and four dimensions (Intercultural, interpersonal, global organisational knowledge and skills) (Kim and McLean, 2015) was chosen to examine psychological factors that contribute to IT leadership effectiveness

Findings

Features related to adaptation of cultural environment are significant for a global leader. Personality traits (extraversion, awareness, openness to experience), characteristics (self-esteem, self-efficiency, global mindset, motivation), and abilities (communication skills leadership style, experience), together with organizational context are associated with higher leadership efficiency. Local and global leaders differ in the significance of social intelligence (IQ, EQ, CQ).

Conclusions

Study results are guidelines for IT leader development and education: strengthening personality traits related to performance; utilizing communication gaps; regaining cultural differences; promoting trust and motivation; fostering leader's proper roles and attitudes, composing teams based on teamwork and taskwork, modelling and practising other critical competencies for global leadership through cross-trainings, self-correction. Local leaders are also exposed to global leadership.

Keywords

IT leadership; global; effectiveness; competency; local

Lina Cirtautienė

Auksė Endriulaitienė

Abstract (Code:5541)

Title of the Paper

Risk Management in the Human Resources Department of a Romanian Electricity Company

Problem Statement

Risk is inherent in a company's operations. Risk is perceived as the hazard that the company faces. Risk management is an important competitive tool that any company can use.

Research Questions

What are the risk events that can affect the Human Resources Department of an electricity company and how can they be best analyzed and mitigated?

Purpose of the Study

The objective of the paper is to conduct a thorough risk management analysis in the Human Resources Department of a Romanian electricity company.

Research Methods

The risk analysis included the identification of risks, the classification of risks according to their most likely consequences, the evaluation of the identified risks by calculating the risk index, and the mapping of relevant risk events on the risk matrix.

Findings

After conducting the risk analysis for the company, eleven main risks which can affect company's operations were identified. After calculating the risk index and evaluating their tolerance level, the risks that the company has to address urgently are missing documents from files, erroneous reports, not respecting deadlines for reporting and the risks of not knowing the applicable work legislation.

Conclusions

The paper presents the risk management analysis for the Human Resources Department of a company. After the identification and evaluation of risks, mitigation strategies were proposed for all identified risks in order to reduce their probability and impact. By implementing the recommended solutions, the company can successfully reach a tolerable residual risk level for its Human Resources activities.

Keywords

risk management, risk index, risk matrix, mitigation strategies

Dana Corina Deselnicu

Gheorghe Militaru

Bogdan Tiganoaia

Abstract (Code:5599)

Title of the Paper

Methods Used In The Risk Management Process – A Comparative

According to the Business Dictionary [1], risk management is the process of identification, analysis, assessment, control and avoidance, minimization or elimination of unacceptable risks. In order to avoid risks, an organization should choose a suitable method for its risk management (it should include all type of risks). A risk is presented as the possibility of an event to occur in a certain period of time. The existence of risks can have a negative impact on the organizational achievement of its objectives. There are many types of risks that a company can face such as: human resources risks, operational risks, network security risks, IT risks and financial risks. To handle the risks the companies can use a risk management approach that identifies, assesses, manages and controls potential negative events. Among other things, the goal of effective risk management is to ensure that each risk is identified, documented, prioritized, and mitigated whenever possible [12]. Because all organizations face risks, whether positive (i.e., opportunities) or negative (i.e., events that hinder company processes), the challenge for auditors is to know when risks will occur and the impact these will have on the organization [12]. This article presents an exploratory research based on a comparative study regarding the risk management methods in a company. The risk management methods were identified and analysed in detail through a template. This comparative study is based on representative common criterions and data obtained from different specialized sources. The article concludes with some issues open for consideration among the practitioners in the field

Keywords:

Risk, management, methods.

Bogdan Tiganoaia

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