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ABSTRACT

Developing an Online Collaborative Learning System with Knowledge Construction Based

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There were several researches that stated collaborative learning approach shows a very positive result in the improvement of study result and in the enhancement of team performance related to the understanding of knowledge. The problem identified in the research was based on a simple analysis of the condition of dozens of discussion forums on the web e-learning students, approximately, only one to three are said to be active discussion forum.

The aims of the research are to develop the system prototype which will be used as a foundation in further knowledge construction system development and also to evaluate the effectiveness of the collaborative process model being developed to improve the student's learning process.

The research methodology that is being implemented in this paper consists of identification, data analysis, system design, implementation, and evaluation stage. The system that is being developed in this research based on a knowledge construction learning environment that aimed to provide students the facility for articulating, discussing ideas to others, distinguishing perspectives, adopting ideas from others, clarifying any misunderstanding, negotiating for an agreement, and constructing knowledge to formulate valuable learning output. The result of the research includes design of a learning system which provides collaborative tools based on the knowledge construction approach. The knowledge construction approach comprises six learning phases, which are the Articulation, Clarification, Argumentation, Negotiation, and Integration phase. Each of the phases provides collaborative tools which facilitate the learning process of the student.

Keywords: collaborative learning, knowledge construction, learning environment, learning system

ABSTRACT

Examinees Response Test Pattern Simulation-Based Adaptive Computer Using Fuzzy Reasoning Tsukamoto

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This simulation aims to (1) investigate the suitability of the design of CAT application to fuzzy reasoning method Tsukamoto accelerated high low method based on three criteria, namely the length of the test, the level of exposure item, and the standard error parameter estimation capabilities, and (2) investigate the ability of banks in the matter of providing about adaptive responses in a variety of patterns.

Calibration characteristics using response data UASBN matter. Data were analyzed with the program Bilog_MG. Number of questions in the question bank of 140. Simulations using a response pattern of the response pattern is all true, all wrong, wrong-true, and normal with respect to three criteria and the use of five categories namely initialization capability is very high, high, medium, low and very low.

Simulation results show: (1) Tsukamoto fuzzy reasoning method accelerated high low method is able to provide about the adaptive method in accordance with the concept of fuzzy reasoning methods Tsukamoto, and (2) Although the movement is limited in scope and characteristics of the matter in item, especially in any bank or correct all the attention, the length of the test, the level of exposure item, standard error estimation and parameter estimation capabilities convergent but wrong-true response pattern and the normal fuzzy reasoning method Tsukamoto accelerated high-low method is able to provide adaptive item;

Keywords: Fuzzy Reasoning Tsukamoto, Computerized Adaptive Testing

ABSTRACT

Application of Adventure Game for Islamic Learning

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The importance of education is borne out of the fact that the first revelation of the Quran is a command of reading (*iqra'*). As the purpose of reading is to learn something, the command of reading is also the command to study, which is the heart of education. One leading philosopher, **Rene Descartes**, once said that “*Cogito Ergo Sum*” to the effect that my existence depends on my thinking process. In addition, **Ary Ginanjar**, the writer of best seller book, *ESQ Power*, predicts that the need of society in the near future is mostly that of spirituality, which is considered as the key of ultimate happiness. What lack in our society are not the educated people, but people of high morality standard. It is our duty to raise the individuals and intellectuals of high integrity and morality (*ulul albab*).

This educational game will take into consideration the daily activities of students which are then imbued with religious values. The guideline of Al-Qur'an and the Hadits will also be included in situational games so the students will learn the values and norms of religion in a very enjoyable way. This method of teaching will hopefully make learning easy to deliver and to grasp. Since the interest of students on learning is equivalent to their hobbies, it is wise to apply the new learning methods that meet their contemporary needs. By using new technology and information, the goal to raise a new generation of high morality and integrity will be more viable.

ABSTRACT

Supporting Teaching and Learning Process Using cd Interactive in Islamic Junior High School

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Although students have studied English for a year, they have not been able to use English communicatively. This is caused - one of them - by the lack of using teaching media and the disability of the teachers to use it. This paper is a “story telling” about succesfull of CD interactive as learning media. By in large, this study was underpinned by theory of media in teaching, computer based instruction and communicative language learning. In conducting the investigation, Research and Development (R&D) approach coined by Borg and Gall (1979) was applied. From this study it was found that (1) the process of English teaching-learning carried out in each Islamic Junior High School at Lombok Barat Regency was characterized by the use of traditional approach in which the teachers as the central of the process. (2) the teaching media which developed in this study was a 45 minutes Compact Disc (CD) of interactive teaching media, and (3) that CD interactive teaching media was found to be significant in increasing students’ communicative competence. It is recommended to (a) interrelated department to design such regulation which encourage the developing and taking the advantages of using of interactive teaching media, and (b) teachers to use and develop this media based on their needs to teach English more interesting and communicatively.

Key words: communicative, interactive, english

ABSTRACT

The Use of Kompasiana as Media for Teaching Writing Skill at School

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The increase of social networking is deliberately in the massive progress showing the dignity of internet towards global culture of human race. It goes the same for the bad impact of social networking in some cases. In fact, the opportunity to enhance the quality of teaching and output of learning process should be closely in line with the vast use of social networking. Kompasiana is a journalist blog of Kompas which has then turned into the form of citizen journalism. Kompasianers (epithet of Kompasiana members) are freely allowed to post writing in the name of themselves instead of insulting people upon ethnic and religion dispute. They have liberty of conveying idea, opinion, review, or even reaction alongside the posting does not break the term of rules of Kompasiana. This paper uses qualitative literature in order for gaining the goal to propose an idea supported by scientific research. Kompasiana is used by the teacher for maintaining the result of students' writing to get responds from the others. It drives to the valuable use of internet access for educative learning media as well as the solution for the demand of learning media and variant in teaching language in which is mostly stagnant in the class. This could also available for students to publish in their free time out of school. Further, Kompasiana will also impact quality and quantity of students' writing regarding the desirability in existence. There should be further research exploring the paradigm swift of social networking in teaching foreign language.

Keywords: kompasiana, teaching media, writing, school

ABSTRACT

Application Software “Siapcerdas” To Identify The Potential Of Intelligence And Learning Styles Of Students In Education Institutions To Enhance Students Achievement

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Every individual has the basic intelligence and different learning styles. In educational institutions, it is important to know this so that learning how to achieve maximum results with the potential to facilitate intelligence and learning styles of students. SiapCerdas is one form of utilization of ICT in education in the form of digital media software macromedia application form which includes the identification tests of intelligence and learning styles of students. The software is designed as a solution aimed to test the potential of intelligence and learning styles easily, quickly and accurately.

Software SiapCerdas using survey methodology or test with some questions. SiapCerdas Software consists of three forms of the test is taken based on the results of research by psychologists studies. Learning Styles Single by Richard Bandler. Learning Styles by Dawna Markova Compound, multiple intelligences by Howard Gardner and the dominance of the Brain-by Herrmann (Herrmann Brain Dominance Instrument). The test form of the questions and answered quisoner students with models of the game. The test is in the software SiapCerdas is Brain Dominant Test, Multiple Intelligence and Learning Style Test. The answers will be included in the document data. Data entry forms are grouped in the reporting table. Data is easy to read with high accuracy so as to facilitate the identification of basic intelligence and learning styles of students, so that will help develop strategies for teachers to make teaching and learning activities. Software Siapcerdas completely result of test with learning style recommendation. The results of this application may be a reference for schools to improve student achievement. The data of each student can be a recommendation to the school program to facilitate the class with an appropriate learning model that increases student achievement

Key words: Test of intelligence, Learning styles, Software siapcerdas, Students Achievement

ABSTRACT

Blogmatika: Mathematics Learning Inovation In School Based On Ict (Information And Communication Technology)

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Information and Communication Technology (ICT) is growing very fast, especially computers and internet (Interconnection Networking). ICT has been used for education to increase the quality of students. There are so many schools based on ICT. On the school, students learn by using computer technology and prefer the mastery of technology. In the other side, the fact remains that the mathematics national test scores of students more lowest then other subjects. This is because the learning method which is generally done by teacher is less efficient and the perception in the minds of students that mathematics is a very hard lesson.

Seeing the problem, author is interested to create mathematics learning innovation, BlogMatika, in school based on ICT. The objective of this paper is to describe about BlogMatika. The method used is literature review, where author review the literature relevant to the object study.

BlogMatika is mathematics learning innovation where every student makes their blog then post the material that has been taught by using their own creations. Teachers give some tasks and students answer it to posted on blog, but task of each student is different to prevent the occurrence of cheating. Assessment can be made based on blog content and the number of visitors or blog enthusiast. The students at school based on ICT likes computer and internet, so mathematics will be fun. Therefore we can conclude that BlogMatika can be an alternative for teachers in teaching mathematics.

Keywords: BlogMatika, Mathematics Learning Innovation, School based on ICT

ABSTRACT

Developing Instructional Multimedia for Science at Elementary School

Suyoto

The research aims (1) to develop feasible instructional multimedia software for science of Fifth Grade Elementary Students as a learning resource, and (2) to see the enhancement of students' learning achievement on science.

The subjects of the research were 57 fifth grade students of elementary school. This research was conducted at State Elementary School 4 of Wates by using research and development. The development method was conducted in five steps: (1) pre study, (2) learning material analysis, (3) development process, (4) field testing, and (5) socialization. Pre-study consisted of literature and field studies. The development process included need analysis, ability analysis, multimedia design development, material and media expert validation, and hypothesis development. Field experiment comprised preliminary field testing, main field testing, and operational field testing. The instruments used in this research included evaluation observation sheet and interview guidelines.

The findings show that generally all aspects in the developed learning multimedia are considered satisfactory with a mean score of 4.34. Results of research indicate that: (1) the multimedia development phase of science study is conducted through the product development, test field, and dissemination; the assessment of the material expert reveals that the learning result aspect is in the good category with a mean score of 3.86 while the content aspect is in the good category with a mean score of 4.00, the assessment by the media expert suggest that appearance aspect is in the very good category with a mean score of 4.66 while the program aspect is in the very good category with a mean score of 4.60; field testing indicates that the learning aspect is in the very good category with a mean score of 4.41, the content material in the very good category with a mean score of 4.39 and the media content is in the very good category with a mean score of 4.46. (2) The use of multimedia in science learning process can enhance students progress, proven by KKM achievement of 75, which means that 72.89% increaseng of KKM from the first percentage of 14.29% to 87.18% after the field testing. The increase in the percentage of KKM gained by student is categorized very good. Therefore, the developed learning multimedia in this research is possible to apply in science study at Elementary School.

ABSTRACT

“Z80 Simulator” for Improving Student Competence in Microprocessor Field of Subject

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Abstract

This paper presents the use of “Z80 Simulator” for enhancing the student competence in the practice course of microprocessor subject at Electrical Engineering Department, Yogyakarta State University. According to the Classroom Action Research method, there are four stages that should be taken, firstly is planning for action, second step is implementation of the action by using Z80 Simulator in the classroom, the following step is observation of the learning process and the final stage is reflection based on the observation data. Performance measured in this paper is the suitability of Learning Process with a plan of action and the percentage of students who get B score and above. The result shows that a) the Learning Process in the microprocessor field of subject by using Z80 Simulator not optimal yet in certain terms, b) the Learning Process by using the Z80 microprocessor simulator can obtain the number of students who got a B score reaches 75%.

Keywords: Z80 Simulator, Microprocessor Field of Subject

ABSTRACT

Application of PDF Reader for Final Project/Thesis Reports in Electrical Engineering

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This paper presents the process of developing a PDF Reader application, to be used in a library. This application is performing a digital service from students final project/thesis reports that collected by department library. The implementation of application can motivate the student to search digital reference with more security and easiness features.

System is developed using Waterfall Method. Four Steps of the method is consisting of system analyzing, designing, coding and testing. Easiness of searching the reference will be one of features in the program. Students can also read the abstract without reading the whole report. User can print the report but cannot copy it to another storage media to prevent plagiarism. When reading the whole report, bookmark is also provided to enhance the flexibility of reading.

Keywords: application, pdf reader, security and easiness features

ABSTRACT

The Application of Information System in Enhancing the University Competitiveness in Indonesia

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The competition of Universities in Indonesia is very tight and need appropriate strategies to improve competitiveness. One strategy that can be used is to apply Information Systems application used by students, faculty, library, alumni, parents, etc. This paper described some information systems application such as Knowledge Management (KM), Customer Relationship Management (CRM) and e-Learning that will enhance the competitiveness of universities.

Key Words: Universities, Competitiveness, Knowledge Management, Customer Relationship Management, e-Learning.

ABSTRACT

Application of Mathematical Software for Realistic Mathematical Learning Process in Differential Equations Subject

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Mathematics, as a subject, should be acquainted carefully otherwise the students just recognize the mathematical calculation. In this case, the students will not capture the mathematical concept that being the most important part of mathematical learning. This paper proposes a different approach that starting a mathematical learning process from such related real problem. A swinging of bridge motion is chosen to learn the second order differential equation topic. Computer software is introduced to view the transformation process of the real problem being such related mathematical problem, while the mathematical software (MAPLE-15) is used to derive the mathematical solution of the related problem. The interpretation of the solution that gives a sufficient condition for a safe bridge actually could motivate the student to learn mathematics enthusiastically to pursue them to learn mathematical concept.

Key words: Differential Equations, Mathematical Software, Mathematical Learning Process

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ABSTRACT

Security Analysis of IC Card Management System in Smart Campus Information System **Man-Gon Park, Wildan Toyib and Myong-Hee Kim**

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Recently smart technology is widely spread to all areas of our life such as teaching and learning for education, banking systems, logistic services, and so on. An integrated circuit card (IC card) or smart card which is pocket-sized card with embedded integrated circuits consists of RAM, ROM, and Flash memory and microprocessor components. The IC card is operated with a loop antenna for two-way wireless communications. IC cards have security credentials for authenticating the IC card holder and the security requirements for an IC card management system.

The smart campus information system is largely composed of total management system, campus network system, ubiquitous library system, ubiquitous commerce system with e-payment systems, mobile attendance management system, ubiquitous information management system, IC card management system with large quantity card s issuing system and immediate card issuing system, network security control system, other mobile systems, and other infrastructure by use of smart IC card systems. Some components that play a role in IC-card security such as human readable security features, security features of the IC-card chip, security features of the operating system, security features of the network, and security features of the application.

In this paper, we discuss on the practical security analysis methods of smart IC card management system in smart campus information systems by use of FTA (Fault Tree Analysis) and FMEA (Failure Mode Effect Analysis) methods with diagramming of fault trees and producing FMEA matrices through classification of security mechanism from security features.

Keywords: Security analysis method, IC card Management System, Smart Classroom, and Smart Campus

ABSTRACT

Intelligent Learning Content Management System Using Web Services Technology for E-Learning Performance

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In recent years, e-learning started to attract a lot of attention from researchers as well as practitioners. Many of the existing architectures of e-learning systems are mainly based on plain client-server or peer-to-peer architectures and are therefore suffering from drawbacks like poor scalability or complicated interchange of content. In this paper, we present a distributed, service-oriented architecture for e-learning systems based on Web services, and describe the extensions to support software agents. Moreover, we show what advantages such an architecture may have to offer and propose the usage of intelligent software agents for the distributed retrieval of educational content. The implementation of these services enables a reuse of functionalities of an e-Learning platform. The present research has identified and created common services, which essential for the creation and authoring stages of typical e-Learning system architecture by utilized Learning Objects (LO). These services are Web Services based and will provide a common interface between various components leading to platform independence and interoperability between learning system.

Keywords: e-Learning, Web Services, Intelligent Learning, Content Management

ABSTRACT

Emerging ICT's and Their Potential in Revitalizing Small Scale Agriculture

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Dr. Ir. Muh. Noer Sangaji, DEA

Agriculture plays a vital role in the social and economics development. Small-scale agriculture and the harvesting of natural resources, provide livelihoods for over 65% of the Central Sulawesi population. However, most smallholders are resource-poor and face many challenges. Modern ICTs have the potential increase agricultural productivity through communicating knowledge and information rural agricultural communities, providing capacity building, accessing markets and credit, restructuring of extension and scaling up inter-linkages of development interventions. This paper based secondary data from the state offarmers in Central Sulawesi (through desk study). The paper points out the potential of emerging ICTs in efforts aimed at dealing with some of the challenge small-scale farmers face. Findings suggest that FM radio stations and the cellular phone have become important tools in improving small-scale agriculture in rural areas. The internet, web-sites and web-based applications are becoming increasingly important in sharing and disseminating agricultural information and knowledge and marketing of goods and services, other emerging ICT application for small-scale agricultural include radio frequency identification technology, market information systems, geographyc information system, precision agriculture and public access facilities. They study also established that low usage levels of these technologies is the result of low technical capacity and limited ICT infrastucture in the sector, especially in rural areas.

Keywords: Small scale agriculture, ICTs, Central Sulawesi.

ABSTRACT

Cheaper and Creative Learning Method based WikiWikiWeb (Web Information Exchange)

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Globalization causes the dimensions of space and time to be short and narrow. It is caused the use of technology that enhances the human touch and exchange information from one hemisphere to another hemisphere. With the advance of technology should be used develop a cheaper education and efficient.

But in the other hand shows 10.268 million students drop out of compulsory school age (Source: Kompas). The dropout rate is caused by higher cost of education. Many students prefer choose help parent economic than study to the school. In others problem students in learning process do not show creativities culture. It can be seen from the low students writing skills and the students that plagiarism in making scientific papers, journal and thesis or final paper. So from this background author has the goal how providing a solution that is cheaper and creative education with technology

One of the technologies of the information that the author offers as a solution of the background above is Wiki. Wiki is a website that allows users to add or change the content of those sites. Here visitors can exchange information web. The mechanism is that students should contribute material to the wiki and other students may download material and have also donated materials.

The results are in educational the technology can be used as a reference in the learning process so that students do not need to buy books and tuition fees will be cheaper. In addition to creative student because he or she can practice writing and provide information on the wiki and then when they need to download the data they have to exchange with the appropriate subjects

Conclusion of information the technology is a wiki can serve as a learning media that can enhance the creativity of the students wrote and cheaper cost of education without buying the book.

ABSTRACT

Bugis Linux Ubuntu

Yusri Aldiano

Development of computer technology is growing rapidly deliver great benefits for a society, because it can provide ease in job activities to achieve a certain goal. However, one of the global challenges now is how to utilize information and communication technology (ICT) in an academic context. Use of ICT in education is still limited to that caused by several factors including: the provision of hardware, development of course materials and most importantly the lack of public knowledge in computer memprogramkam, because of a computer programming language is difficult to be understood by the public, especially rural communities bugis. This paper aims to formulate the concept of "Ubuntu Linux Bugis" which is about the concept of computer programming languages that use local language ie language bugis rural communities. This paper is library research (research libraries) are presented descriptively about the concept of "Ubuntu Linux Bugis". Techniques of data collection is done is through the study of literature by taking data from various sources related to the issues discussed, as well as empirical studies by observing the conditions and circumstances that occur in society, particularly rural communities bugis. On the synthesis will be explained about how the concept of making "Bugis Ubuntu Linux" and how those ideas to the technical implementation of rural communities. So that rural society will be able to utilize Information and Communication Technology (ICT), particularly in communities of learning and skilled in the use of computers to acquire, process and present data and information especially in teaching and learning.

Keywords: Linux Ubuntu, Bugis language, Bugis Village Society.

ABSTRACT

The Effectiveness of Computer-assisted Multimedia for Social Science Learning in Grade IV of Sekolah Dasar Percobaan

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This study **aims** to: investigate (1) the effectiveness of social science learning employing computer-assisted multimedia, and (2) the attraction of computer-assisted learning multimedia for social science learning.

This study was an experimental study conducted in Sekolah Dasar Percobaan II Caturtunggal, Depok, Sleman, Yogyakarta, in Grade IV in the second semester of the academic year of 2007/2008. The experimental design in this study was that of the pretest-posttest control group design. The research subjects consisted of 42 students in the control group and 44 students in the experimental group that were randomly selected. The instruments used in the study were tests to measure the social science learning achievement and a questionnaire to investigate the attraction of the learning program multimedia.

The results of the study show that there is a significant difference in the learning achievement between the control group and the experimental group. This is shown by the value of t_0 which is 6.65, greater than the value of t_t which is 2.39, at the significance level of $0.000 < 0.01$ with a degree of freedom of 84. Because of $t_0 > t_t$, H_0 is rejected, **implying that there is a significant difference between social science learning employing the multimedia and that employing the conventional technique**. In general the attraction of the social science learning program multimedia is high, with a mean of 4.2 (in a scale of 1 – 5) from 22 indicators measuring aspects of picture, animation, video, color, writing, and accompanying music displays.

ABSTRACT

Multimedia in Bilingual Learning: A Case of Pilot Project of International Standardized School In Indonesia

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According to Permendiknas Number 78 Year 2009 that an International Standardized School (RSBI) may use bilingual in their teaching and learning. In fact, Astika (2010) after doing a reasearch concluded that science teacher of RSBI in Central Java do more than 50% language error while teaching bilingual. Astika argued that this error caused by teacher's lack of language ability and limited use of technology in classroom.

This paper will discuss the way of multimedia in bilingual learning can increase students understanding of the content and the language in International Standardized School in Indonesia. Recent students are discussed as a theoretical guidance in developing a multimedia in bilingual learning. A case in mathematics for senior high school is made to give concrete application for teacher.

Keyword: multimedia, bilingual learning, international standardized school

ABSTRACT

Making ICT Based Child Society : Ideas for School Leaders of Bangladesh

Shanta Akhtershima

Now a days ICT based learning is well known in the world. But it is not well known as others country in Bangladeshi context . But achieve the “vision 2021” and make Bangladesh as a “digital Bangladesh” it necessary to give concentrate in ICT from the root level of education that means primary education. Because primary education is the basic in all education . So in primary education time if all primary school going child learn using ICT as a good way , they will make a good ICT nation in future and also can achieve the vision 2021 with a digital bangladesh. But now Bangladesh can not achieve the quality education with a successfull way in primary level. For that now their goal is acheiving the quality of education in primary level . So achieve this goal as eraly its also important for school leader teach their child using ICT and in this way, making a ICT based child society. But it also true for Bangladesh , with near a 15 million (march 15,2011: census report) poulation, its really very hard to make acess ICT in primary level education, where only get this acess only a small number of student in university level. In this situation i want to give some idea and sugession for the school leader of Bangladesh to make a ICT based child society . I use the secondary source to collect my information for this research.

KEY NOTE : ICT based education, improve quality education in primary level, ICT based child society, degital bangladesh,vision 2021.

ABSTRACT

Learning Management System (LMS) as an Alternative for Supporting Co-op

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Co-op or Cooperative Education Program is one of partnership types established by schools and companies. It is a type of work integrated learning. Some benefits of Co-op for students are improved learning motivation and problem solving ability (Weisz, 2000), the ability to apply theory into practice (Van Gyn et al., 1997), as well as improved communication, interpersonal abilities and professional etc (cates & Langford, 1999; Eames et al. 1996; Weisz, 2000). However, Co-op program faces several challenges, one of them is the students are rarely visited at the workplace by representative of school. In fact, the visit by school party has two functions, namely monitoring the students and monitoring topic for Business assignment as a part of research. Additionally, the mentors have to report what they feel about their work in guiding Co-op students that they don't know or acknowledge through academic promotion process (Weisz, 1995). Then, to support long-distance learning, LMS (Learning Management System) occurs in covering the problem of distance in learning. LMS becomes the topic for this research in handling long-distance problem faced by the students and academics during Co-op program. Therefore this research aims to reveal LMS as an alternative for supporting Co-op. The method used is descriptive qualitative (non-experiment). LMS for Co-op might be able to be interactive learning media in integrating work integrated learning and ICT.

Keywords : Co-op, LMS

ABSTRACT

ICT-assisted Oral English Instruction in Grade VII Students of SMPN 5 Panggang, Gunungkidul

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In this globalization era, technology is becoming increasingly important for human lives. Almost the aspects of lives, both personal and professional lives, make use of technology. One of the uses of technology in the language teaching is called Computer Assisted Language Learning (CALL). As the access of the Information and Communication Technology (ICT) spreads widely, so CALL has moved beyond the use of computer programmes to embrace the internet (Dudeney and Hockly, 2007: 5-7).

The teaching of English as a foreign language in Indonesia covers four skills, those are listening and speaking which are categorized into oral language and reading and writing as the written one. The oral language is different from the written one (Richard, 2008: 3). The ICT can assist both the instruction of them. In this research, the focus is on the use of ICT in the oral English instruction. The ICT was used in the instruction to present the media that were designed by inserting some pictures, recordings, animations and videos downloaded from the internet. **The goal** of this research is designing a simple ICT-assisted oral English instruction for Grade VII of SMPN 5 Panggang, Gunungkidul.

The method of the research is Research and Development method. The instruction involves the ICT-assisted media which were designed based on the students' need. The english teachers reviewed its design before it was implemented in the class and evaluated by the students.

Theresult of the second questionnaire shows that the average of all aspect of the instruction is 3.93. It means that students are positive about the implementation of the ICT-assisted oral English instructions.

Keywords : Oral English instruction, Information and Communication Technology (ICT), video, animation, website

ABSTRACT

Use Blog as Instrumen Increasing Students Creativity

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Internet presence is no longer as a luxurious item. Everyone can access the Internet through Internet cafes. In addition to get positive benefits, the Internet also has the negative impact. As the problems of youths, many impressions which easily can be pornographic, online games that make the player addicted to play it many times.

One of the positive probe that can be used by students to be creative are add social networking, science, and technology are the Blog. The existence of the blog is absolutely needed for a variety information or data that we get through a lot of internet access from your blog. Blog is effective for sharing knowledge, and have broad benefits, not only for bloggers but also the community.

Blog is the solution of these problems, the students create and publish the material in the paper and make it more attractive. Editing will have more value to science and can be utilized learners themselves. In addition to the papers, all tasks assigned by the teacher. Such as reeds work, poetry, short stories, dance, etc. It can also be displayed in the blog to encourage learners to work. To further motivate learners in managing blog blog contest was also held at the school every week or month.

The purpose of this conceptual scientific work is to describe of using as media to improve students creativity in working. Based on Syaina and ibrahim (1989: 181) the scientific work is better consist of preface, background of the study, reset, methodology, and conclusion. In this context the writter arranges it consists of five parts, those are preface, library study, methodology, inscriptive methode, analisis about probelm, adn closing.

Keywords: blog, participants the student, creativity

ABSTRACT

Application of Mathematical Software for Realistic Mathematical Learning Process in Differential Equations Subject

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Mathematics, as a subject, should be acquainted carefully otherwise the students just recognize the mathematical calculation. In this case, the students will not capture the mathematical concept that being the most important part of mathematical learning. This paper proposes a different approach that starting a mathematical learning process from such related real problem. A vibration observed on bridge motion caused by vehicle passing on it is chosen to learn the second order linear differential equation topic. Computer software is introduced to view the transformation process of the real problem being such related mathematical problem, while the mathematical software (MAPLE-15) is used to derive the mathematical solution of the related problem. The interpretation of the solution that gives a sufficient condition for a safe bridge actually could motivate the student to learn mathematics enthusiastically to pursue them to learn mathematical concept.

Key words: Differential Equations, Mathematical Software, Mathematical Learning Process

ABSTRACT

Global School Administration System (G-SAS) for Better Education in The Future

Alfian Cahyo B, Nurin Nahariyati, and Ummul Hasanah

Technology is something that cannot be avoided in our daily live. For this matter, we focus on schools area because the using old applications is not effective and efficient yet. Many missing data and the school blindness of the students characteristic caused many student are being under achievement. So, it is important to create a new effective application to let administration system easier.

This school information system make easy for school administrator especially for guidance and counseling teachers. Its content about the clasification of student achievement, students and parents complete identity, the characteristic and aptitude of students. For administrators, it will be covered instantly by the automatic system. For instant is about how the way to decide the student's major.

All of data which is needed for this system will be collected and filled by MPK*. On the other hand, this system include of automatic attendance list then the result of this data will be sent to student's parents automatically by sms center every week or month. And it can be accessed on school web.

The application will be constructed based on the combination of Java, CSS, mySQL, HTML, and PHP Script. It will cover the whole process of administration and information center like the explanation above. Later, this application will be in form of web that can be accessed both from desktop and handphone.

It will be functioned as a sms center too. So, this application or system will make the parents easy to get the report of their children.

Keywords: G-SAS, Better education, future.

ABSTRACT

Design a Mobile Learning Flash Lite-Based

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Telecommunication and internet technology is growing very rapidly and became an influential sector in the world. These developments enable new breakthroughs in education, one of which is mobile learning (m learning). M-learning allows learners to learn without limits because it can be accessed in anywhere and anytime. On the other side, the mobile learning has the necessary limitations of the design that is able to overcome these obstacles.

Keyword: m-learning, e-learning, adobe flash lite

ABSTRACT

Manipulator Robot Simulator As a Learning Tool on Robotics Course
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To address the lack of manipulator robot availability as a practice tool in robotics learning, we propose a robot simulation software, which we named SIRUPP (Simulator Robot Manipulator untuk Pembelajaran dan Perancangan/ Manipulator Robot Simulator for Learning and Designing). SIRUPP is a simulator application that enable user to simulate manipulator robot movement in a virtual work environment and visualize the simulation in 3D. One of main components of SIRUPP is physics simulator module. The objective of this effort is to design and implement physics simulator module based on robot kinematics, using Denavit-Hartenberg (D-H) notation, and dynamics, using link's mass and joint's friction parameters. This module will be built based on a physics engine, i.e. Open Dynamics Engine (ODE).

Functionally, the module is capable of modelling kinematics and dynamics of manipulator robot, translating kinematics and dynamics parameters to a virtual robot, controlling the virtual robot with a controlling method, and saving the simulation data to text file for further analysis. In validation test, we compare the movement of virtual robot with the movement of real robot, i.e. PUMA 260, when we control them with equivalent controlling methods. The results showed that simulator module is capable to simulate real robot movement with small error, so that the simulator can be used as a learning tool in robotics.

Keywords: Robot simulation, manipulator robot, physics engine, roboticslearning, SIRUPP, ODE, PUMA

ABSTRACT

Information and Communication Technology: Taking Benefits to Improve Student Writing Skill

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All teachers want improve student writing skill by giving more opportunities, good evaluation to the assignments, and collecting and returning assignments well. In common practice, students must bring a printed copy of their work to be read and discussed in the class. Then the teachers must give more time for correcting and discussing students' assignments. The circumstance is not really efficient to give proper assessment to students writing. The learning process is limited by time meanwhile improving student writing needs more time because the teachers must discuss about the contents of student writing, and collect students' assignments before correcting and returning them back. Information and Communication Technology can be used to solve the problem.

This paper simply will explain about on how Information and Communication Technology can be used to improve student writing. Information and Communication Technology can minimize time and give more opportunities for student in writing because learning process will not be limited by time. Teachers can still communicate with students about the contents of writing and give correction for improvement well even if they are not in the class.

Keyword: Information, Communication, Technology, and student writing

ABSTRACT

“KINECT” AS AN INNOVATION IN NUI-BASED INTERACTIVE LEARNING DEVELOPMENT

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Nowadays, education plays an important role in accelerating human resources quality to face international competition. Education is also expected to be in line with the Information and Communication Technology (ICT). One way to synchronize education and ICT is technology-based interactive learning process. The newest technology as interactive learning media is motion sensor. Kinect, a motion sensor with natural user interface, leads the learning process to object manipulation. Say for example in learning brain cells, current technology only shows the brain cells in the form of pictures, but Kinect provides a more vivid representation of brain cells. Kinect also allows us to touch, change, and part the brain cells into small pieces by our hands as a motion sensor.

The method used in this study is qualitative research methods. This method is also the basis decision of the use of Kinect NUI technology as a form of presentation that can be implemented in an attractive learning.

Result of the study shows that Kinect, a NUI-based learning media, is very useful to improve Indonesian education. This study also shows that presenting the learning material using a nearly real object, enhances creativity and improves the quality of the nation's competitiveness.

Keyword: Kinect, Natural User Interface, Effective Learning

ABSTRACT

Online System for Physic Learning Difficulties Diagnostic Based on Social Networking and Web Integration

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Information and Communication Technology is an important part in the third millennium era. Its applications have been utilized in various fields of service in the form of practical products that are useful to society. In the field of education one of them is e-learning which is embodied in the diagnostic system online physics learning difficulties is designed to be a solution to improve the quality of students learning physics.

That system is a combination of integrated social networking. Social networking becomes a way for user to entrance and follow a series of diagnostic tests online. After the tests performed, the results will be presented in quantitative and qualitative report. The user will then get tips and tricks to improve his learning activity through social networks Facebook messages and Twitter.

This system will provide some significant benefits in improving the quality of learning physics. First, users who are students will be more attracted to measure the understanding of physics and motivated to improve their learning activity based on tips and tricks that are received periodically. Second, teachers will be helped to identify their student basic capability in physics and push them to make a good lesson plan.

In conclusion, this system is a solution that will improve the quality of physics learning activity.

Key words: diagnostic, online, web, social networking

ABSTRACT

Moving Forward With Innovation: Facilitating Language Learning Through On-Line Social Networks (Snss)

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The development of technological advances has brought world into the rapid changes and internet with its various forms is one of many products in technological advances which enable global communications are spread quickly. Therefore, in the field of English language teaching an educator should be able to see it as the prospect to move from traditional teaching model into revolutionary way. Addressing the sub-theme on the use of ICT for Education Future, this paper tries to propose the pedagogical uses of on-line social networks as a part of internet forms that facilitate language learning and their integration may provide potential benefit to support learner's autonomy in learning a language. The discussion in this paper covers the characteristics of on-line social networks, their conceptual framework, and their integration as a means of facilitating teaching and learning process. Meanwhile, the focus is placed on the whole process of integration of on-line social networks into continuous learning through forum discussion provided in several social-networks.

Keywords: ICT, online social-networks, learner's autonomy, forum discussion.

ABSTRACT

Designing Project Based Learning through 2.0 Web Application for Indonesian Teachers

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Nowadays, Indonesian student use the Information and Communication (ICT) massively, including the usage of 2.0 web applications such as Facebook, Twitter, YouTube, and others which allows every user of those applications to interact and content sharing with each other. As an example, Indonesia is the biggest Facebook user (3rd position) and 69% of Indonesian Facebook user is people in age under 24 (socialbakers.com, 2012). Unfortunately, this condition not accompanied by the ability of teachers to utilize those applications to support the instruction in the school. Then, in some of educational research in Indonesia, Project Based Learning trusted to improve creative thinking, problem solving, and others ability of students which is must have for 21st century people. The opportunity, web 2.0 might be applicable for Project Based Learning. Because can make students works collaborate anywhere and anytime. This research aims to model/design Project Based Learning through 2.0 web application for Indonesian teachers which modified by Indonesian educational culture. And the method which use on this research is non-experiment method to formulate a model of implementation the usage of Project Based Learning through 2.0 web application for Indonesian teachers as a form of usage of ICT in Indonesian education.

Keywords: Project Based Learning, 2.0 Web Application, Indonesian Teacher.

ABSTRACT

Optimisation of ICT for Education in Remote Area

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This paper presents the method in delivering remote education by involving ICT's touch. The main idea of this paper is focused on remote learning for children from remote area. ICT for education in remote area aims to distribute and deliver the education to every child who lived far from the formal school. By using ICT, children who lived in remote area do not have to attend the formal classical class. Interface between teacher and pupils can be substituted by using web camera that is connected to the class directly and so did with submitting exercises or homework. All of class activity is supported by technology usage. Children who cannot attend to the class can visit the small building that provided by the government which equipped by ICT peripherals to facilitate their learning activity. This method may ease the government to execute the Constitution of Republic of Indonesia Chapter XIII, Article 31, verse 1 – 5 (1945) which explained about national education and UNESCO's mission about education for all (1994). It is government's responsibility to give the equal opportunity to every child to access the education. The expected result from this method is children from remote can get their right to experience education from formal school without leaving their place and implement their new knowledge to their life. Therefore, implementation of ICT for education in remote area is necessary to build a better nation over education.

Keyword : remote area education

ABSTRACT

Strategic Plan of ICT-Mobile Learning Case Studies on Sanskrit for Indonesia

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Information and Communication Technology (ICT) especially used of Mobile Learning into teaching of Sanskrit for Indonesia. Sanskrit is one importance language to learn widely among countries instead for Indian, American, and European. Sanskrit become so importance since being the most scientific language. Based on Indonesia Archipelago with its geographic challenges about 250 million population will be increased in few years, while knowledge of Sanskrit very less compare to Arabic if we are thinking as the root of Bahasa Indonesia, and other tribes language such as Balinese, and Javanese. This paper elaborates upon the concept of ICT - Mobile Learning, and present a strategic planning model for teaching of Sanskrit. A sample of ICT – Mobile Learning plan is described to demonstrate how this knowledge can be applied into implementation in order on better outcome of Speak Sanskrit learner.

Keywords :ICT-Mobile Learning, Strategic planning, Integration Sanskrit teaching

ABSTRACT

The Development of Discharge Planning Model through Family Empowerment in Nursing Care for Low Birth Weight Babies

Yeni Rustina, PhD

Low birth weight babies (LBW) have special needs that must be met by the caregiver to avoid health problems and even death. This study aims to develop a model of discharge planning based on information technology. Qualitative and quantitative approaches will be used as research methods. The samples will be nurses, doctors, and parents of LBW babies who are hospitalized, according to inclusion criteria. The number of participants for the qualitative phase is 6-8 per group and number of quantitative phase sample is 25 people for the control and intervention groups. Data collection will be done using focused-group discussion (FGD), the study of nursing documentation, observation, and questionnaires. The data collected will be used as a basis for model development. It is hoped that this model can optimize the role of families in the care of babies in the hospital since and after the babies care at home.

Key words: Low birth weight babies, health problem, model, discharge planning, information-technology.

ABSTRACT

The Rise of Plagiarism Culture as Impact for Use of The Internet for Islamic Learning

Taufiq A Simon

Information and communication technology is now a product that is competent to change the way of thinking and even the human lifestyle. Many 'new shades' that can be applied in real life because, according to Nurani Soyomukti¹ (2010) that history shows that the ability to think humans should be supported by technology or the tools and technologies that is to help people get closer to nature..

Internet is one invention issued by information and communication technologies in particular are very popular in Islamic education because of the completeness of the documentation that there is also ease of access over the times. It then raises new issues concerning copyright which is one of them, because of its technically not a few of the students and to easily copy and paste the data in order to launch the process of making paper one of them that are part of the construct education.

Obligation of educators to criticize even remove the culture Co-pas into the consequences that must be fought by teaching how to take a reference, introducing the principle of skepticism on the learner and the teacher must get to know the language of the internet.

¹ Soyomukti, Nurani, *Teori-teori pendidikan: tradisional, (Neo) Liberal, Marxis-sosialis, Postmodern*. AR-RUZZ MEDIA 2010 Jogjakarta

ABSTRACT
Improving Learning Effectiveness and Flexibility through Hybrid Learning Model
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This study aims to examine the effectiveness and flexibility of the hybrid learning model, namely the combination of face-to-face learning and web-based e-learning in Technique of Refrigeration and Air Conditioning Course. This research is classroom action research. The subjects are students who take Technique of Refrigeration and Air Conditioning Course in the second half of the Year 2008/2009. Methods of data collection were questionnaire, observation, tests to find out the effectiveness and flexibility of learning. Data analysis was descriptive analysis. The results of this study were: (1) hybrid learning model can improve the effectiveness of learning both in learning process and output, make learning fun and challenging, able to increase enthusiasm, improve student involvement, provide a conducive learning atmosphere, and make learning more meaningful (with a mean score of 2.977 and 3.111 of a score range of 1-4 respectively for the cycle I and II). Achievement of learning increased. All students can achieve and exceed the minimum criteria (B-). Cycle I: The score of A = 3 people (18.75%), score A- = one person (6.25%), score B + = 4 people (25%), the score of B = 5 students (31.25%), and The B- = 3 people (18.75%). Cycle II: The score of A = 4 people (25%), score A- = 5 people (31.25%), the score of B + = 1 person (6.25%), and the score of B = 6 people (37.50%); (2) Hybrid learning has also been able to increase the flexibility of learning where learning materials can be accessed from anywhere and anytime, learning materials easily enriched and updated (average score of 3.542 and 3.625 in the range of scores 1-4 in succession to cycle I and II).

Key Words: Hybrid learning, E-learning, Learning Effectiveness and Flexibility, Refrigeration and Air Conditioning.

ABSTRACT

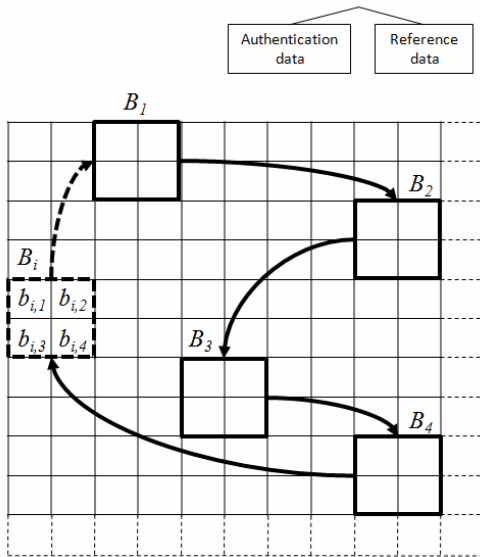
A Block-Mapping Based Fragile Watermarking Scheme for Optimized Tampering Localization

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In this paper, we present a block-mapping based fragile watermarking scheme which can perfectly recover the host image from its tampered version. By using this technique, we can detect any modifications made to the image and indicate the specific locations where the modification was made. In particular, our scheme embeds a watermark consisting of the authentication and reference data for the host image into the generated block of the random indexed sequence (RIS) by using the block-mapping construction. On the receiver side, one can identify the tampered blocks by comparing the extracted data with the calculated authentication one. Then, the reliable reference data extracted from the next block of RIS is used to exactly reconstruct the host image. Furthermore, our scheme is sensitive to any tiny changes in images so that it provides an ability of optimized tampering localization. The experimental results confirm the effectiveness of our scheme by demonstrating that the watermarked image with acceptable visual quality can be recovered as well as tampering detection and localization.

Main idea

Embedding stage : Extract a watermark from B_1 and embed into B_2 .



Detecting stage: check the authentication in B_1 (Tampered or not).

Recovery stage: Reference data extracted from B_2 and then recover block B_1 , if tampered B_1 .

Keywords: Fragile Watermarking, Block-Mapping, Tampering, Localization