Online physics tutorial assignment

The use of e-mail in the classroom, for example, has made possible the ideology of a “ small world”. According to Katie Brigandage, the development, inventions and changes in the field of science and technology is very tremendous. At present, colleges and universities and special institutions in the Philippines are conducting studies preferably with the aid of computer instruction and e-learning. E-learning is a new education concept by using the Internet technology, it delivers the digital content, provides a learner-oriented environment for the teachers and students.

The use of e-learning promotes the construction of life-long learning opinions and learning society. As a new concept of education, e-learning gives a condition for us to realize the life-long learning principle and help us to build a more real learning society. The e-learning plays more in high education for the reason of fast need of high education. According to Roman Go, In the history, the growth of physics has brought not only fundamental changes in ideas about the material world, but also, through technology based on laboratory discoveries a tremendous transformation of society.

Physics is considered chiefly as a body of knowledge. Physics as a discipline requires students to make use of a variety of methods of understanding and to reinstate from one to the other-words, tables of numbers, graphs, equations, diagrams, maps. Physics requires the ability to use algebra and geometry and to go from the specific to the general and back. This is what makes learning physics difficult for students. College students find physics as a difficult subject that is why they didn’t pay attention to it. They think it is difficult because they have to compete against different calculations, graphs and explanations.

But if we pay attention with it we can solve every problem that we will encounter. Physics will help us to understand our world better and to use this understanding for the benefits people and environment. 1. 2 Statement of the Problem What if the people don’t have time to study at school? What should they do? If the client wants to study on their own. Is it for free or you need to pay for it? How effective is E-learning is multiple environment including academia and the public sector? How E-learning perceived in the library and the educational community by users and implementers?

What are the best ways to implement E-learning? 1. 3 Scope and Limitation This study will focus on enhancing and developing an interactive learning system bout Physics that offers online instruction that can be deliver anytime and anywhere through Web which will help students to sharpen their learned concepts and help them in applying mathematics. The proposed project can be summarized as an easy- to-use, exciting, educational and excellent Physics tutorial lectures, activity presentation, quizzes or exercises and lesson review.

The study will be discussing Every’ topic will feature an animation and videos that will explain physics topics. Also in every topic there will be some quizzes or exercises in a form of puzzles or games hat will make the tutorial provide an exciting moment of learning, so that they will not get bored. The results of the quizzes, exercises and exams will be recorded on a database that will serve as the source of the students learning status that will allow them to see their advancements in these tutorials. Other than these topics will not be tackle or discuss. The study is intended for college students.

The completion of this project and implementation of the proposed online tutorial will be very beneficial to the following entities: To the Students – The completion and implementation of this project will give the students the opportunity to sharpen their knowledge regarding concepts and skills in Physics. It can also serve as a motivating tool to encourage students to take physics seriously. To the Teachers – It will be important for the teacher to have a new teaching strategy to use this kind of learning material for their students for the better result on their medium instruction.

To the Researcher – This will be an achievement that can be proud of and fulfillment of the academic requirement. This will also broader their knowledge that will help them in their future career. The content of this capstone project manuscript can be used as reference to other researchers who would like to venture into similar topics in the future. It can also serve as a basis on developing new project or improved project that will utilized the output of this study.

To the University – This study would be used as additional reference material of the future researchers, especially for the student of the Computer Studies. 1. 5 Research Methodology Descriptive method of research will be used in the study in order to gather pertinent information regarding the existing system problems as well as to determine the chemical performance and usefulness of the proposed system upon its completion based on the specific criteria identified by the researchers. Descriptive method of research is concerned with the description of data and characteristics about a population.

The goal is the acquisition of factual, accurate, and systematic data that can be used in averages, frequencies and similar statistical calculations. Descriptive studies seldom involve experimentation, as they are more concerned with naturally occurring phenomena than with the observation of controlled situations. This chapter presents related literature and studies that are relevant to the study. It tackles the varied reactions and findings of other researchers who conducted studies and research on related topics.

Related Literature This section presents both foreign and local related literatures relevant to the study. The relevance is shown by the proponents in order to give more reason and understanding of the proposition. According to Kook Waterman (2005), the term “ e- learning” has come to be used not only as one of many research themes but also one of the educational methods that can be adopted by each university. E-learning has been deregulated in stages. It became possible in 1998 to give classes interactively and simultaneously by using videoconferencing based on satellite communications.

It then became possible in 2001 to give classes interactively by using the Internet and/ or other information technologies, although such classes do not have to be run simultaneously. There is an extensive literature on e-learning published from around 2000. Porter[1], Sat [2], Kayaks[3], and Yeshiva[4] introduced advanced practices regarding e-learning in the U. S. A. Iraqi[5] and Marital[6] predict that e-learning will evolve new educational methods, will increase opportunities for learning, or will increase educational effectiveness. E-learning systems have been developed as a research subject in many universities.

The faculty has been seeking to apply these systems experimentally to real classes as educational tools. According to the Canadian Council on Learning (CLC), e-learning defines as the development of knowledge and skills through the use of information and communication technologies (Acts) particularly to support interactions for learning-? interactions with content, with learning activities and tools, and with other people. It is not merely content-related, not limited to a particular technology and can be a component of blended or hybrid learning. 0.

Roister, 2002; 2005) The proponents found out that E- learning is a rapidly growing field in education, provides greater access to educational programs, increases accessibility, learning flexibility and opportunities for learning and requires careful attention to instructional design, pedagogical planning and professional training. According to Remnant C. Ruminant, Kooks Kim, Jaw-GU Song and Woo young So. Filipino culture places a high value on education. For the majority of the Filipinos, the only best thing for a child to acquire and secure a better future is through education.

So, they want more effective education system. E-Learning is still an emerging market in the Philippines. Its use is still sporadic and most users represent only a small segment of the Philippines education and business communities. The study wants to correct analysis and right direction presentation for Philippine remote education environment. Development of network environment is big effect of computer game by Philippine young generation. Also, effect of education reform policy that Philippines government. Philippines making e-Learning systems for remote education environment.

And, there is wants to correct analysis and right direction presentation for Philippine remote education environment The proponents learned that the design for a good formula to suit Filipino preference will open the opportunity for growth of e-learning in the Philippines. It will benefit individuals who place high value on education and the desire to succeed to remain competitive in the global workforce the Philippines has to give total attention to e-learning development and be used by business professionals, students, administrators and government offices.

Related Studies There are many ways to start a chapter on teaching and learning. With the advent of advance technology, computers have provided student ways of learning effectively using a computerized tutorial system. Research shows that (teacher-student) manual tutorial system found to be helpful who hardly catch-up lesson in school, but it is more helpful to students who have their own computer and computerized tutorial system for the following reasons: a) Computerized tutorial system is always available compare to manual teacher- student tutorial system.) Computerized tutorial system could be repeated anytime s the student wanted to learn. While the other is impossible to be done due to the unavailability of the tutor. “ We must keep in mind that we are in the age of electronics, and man-to-man or teacher-student way of teaching is quickly becoming updated. ” (Unpublished thesis: The Computerized System of Teaching the Basic of Computer by Melissa R. Angles, 2000) “ This research has helped to increase our understanding of the educational implications of replacing face-to-face tutorial sessions with online tutorials, and of the challenges in managing real-time conferences for learning.

It also highlights some possible areas for further exploration of the opportunities provided by the new technology. ” – stated by Kook Chi Eng (Replacing Face-to-Face Tutorials by Synchronous Online Technologies: Challenges and pedagogical implications) Internet computer tutorials can take the form of a screen recording, a written document (either online or downloaded), or an audio file, where a person will give step by step instructions on how to do something. Tutorials usually have the following characteristics: A presentation of content, usually with an example or examples, often broken up into discrete modules or sections.

Some method of view that reinforces or tests understanding of the content in the related module or section. A transition to additional modules or sections that builds on the instructions already provided. Tutorials can be linear or branching. While many writers refer to a mere list of instructions or tips as a tutorial, this usage can be misleading. Synthesis In this summary, there are many related literature and studies that will tell us that using E-Learning is one of a rapidly growing field in education. Many students are now using Web to research and to learn many topics about their subjects in school improve our current system.

The Online Physics Tutorial will help them to recall their discussed topics, to enhance and to develop their skills and knowledge in different topics in Physics. CHAPTER Ill THEORETICAL AND CONCEPTUAL FRAMEWORK This chapter will present the theoretical and conceptual framework which will serve as the blueprint of the software to be developed by the researchers. Theoretical framework According to Epilepsy G. Cool, Airily A. Random and

Lanai M. Grandee (2009) The E- learning will serves as advanced tools in a formal education.

At present it will make the discussion easier and clearer for the better understanding of the students in heir lessons and by giving an emphasis on the important topics. In addition to these studies will measure the effectiveness of E-learning and if difficulties will be found the solutions may be drawn. According to http://relations. Com/2011/07/07/e- learning-in-physics-hopes-and-fears/, there’s a gazillion of learning opportunities in the web today and if we can only harness its full potential, we can enhance the students’ learning experience and, consequently, improve their performance.

Students love the internet. They love to connect with their friends online. They love doing a lot of different stuff like music and gaming. I’d like to view e-Learning as turning the environment that students love into an environment for learning. Through the e-portal, I can upload Sharable Content Object Reference Models (Corms) version of our lesson or enrichment activities, which students can interact with. Students can also create forums and reply to forum threads where they can have further discussions about topics in physics.

Online forums break the barrier of lack of self-confidence that some students show while inside the classroom. Through this, I hope to get the students involvement in informal discussions, while igniting heir interest in the field. Students can also take practice quizzes that can give them immediate feedback. They can also answer test questions that allow them to browse the web for answers, and then they make Judgment as to whether the

information is enough to answer the question or not, thus, improving their skill in finding valuable they find.

The e-portal will also link my students to other valuable resources online and to the repository of the presentations (PPTP & Flash) we discuss in the classroom. With the e-portal, the students' learning and interaction are not confined within the school premises. Conceptual Framework In the online physics tutorial that we'll be going to make, we will consult physics professors and use college textbooks and other references that most students use so that we can identify the common and correct formulas that are used by them.

We will make comprehensive explanations about the topic thus students can clearly understand the lessons. It will have a large collection of GIF animations and presentations designed to demonstrate physics principles in a visual manner. Each animation is accompanied by explanations and links to further information. It will include collection of pages which feature interactive Showplace files that simulate a physical situation. Users can manipulate a variable and observe the outcome of the change on the physical situation. At the end of every chapter, we will include the Activity Section.

These are brief discussions into related topics, generalizations, extensions, explorations and sometimes simple games, magic tricks and interesting problems. By this ways, students will have interest and be motivated in learning physics. The first and second process is Just a normal register and login process. Where in the first process, the students or professor will

register their student or professor information and their desired surname and password then it will be saved to the database if the surname doesn’t exist, also the if you are a student you need to register to a class that your professor given you.

And if you’re a professor you need to create a class or group for your students so that you will have an interaction with them. The third process is where the students will select or choose a lesson in the tutorial. After the tutorial you will take a quiz, exercise or exam and after taking p a quiz, exercise or exam it will display your score. Also, your professor will receive your exercises, quizzes and exams score. And the last process is to log out your account so that other people cannot see your information and scores if you don’t want and to secure the security of your account.

Chapter IV 4. 0 System Overview Online Physics Tutorial System will offer free physics lessons featuring an interactive on-line tutorial content for learning and teaching physics in the college level. It will be an instructional aid for parents, teachers, and educators of college students, as sessions. The tutorial will include games, puzzles, interactive diagrams, and computer animated virtual manipulative lessons that emphasize active learning concepts by visualization. It will use unique animated lessons which allow you to visualize and grasp math concepts more effectively.

This innovative approach makes physics come alive and can generate those “ light bulb moments” that elude many people who are trying to learn physics by conventional methods. It will have a large collection of GIF animations and QuickTime movies designed to demonstrate physics

principles in a visual manner. Each animation is accompanied by explanations and links to further information. It will include collection of pages which feature interactive Showplace files that simulate a physical situation.

Users can manipulate a variable and observe the outcome of the change on the physical situation. At the end of every chapter, we will include the Activity Section. These are brief discussions into related topics, generalizations, extensions, explorations and sometimes simple games, magic tricks and interesting problems. However games and puzzles are presented in this site not merely to entertain or halogen students but also to draw them into the fundamental ideas of Physics. The users will be able to access this through online. You need to register as a student, professor or a user.

So that you will have your own account, as a professor you need to create a group of class and the system will give you a group code for the students. As a student you need to register to the class or group that your professor gave to you. After registering you need to log in and so that you can access your own account and you can start a tutorial after the lesson the system will give you an exercises or quiz so that we will know if you really read or study the lesson you took. The scores that you will take will be sent to your professor. 4. 1 System Objectives 1 .

To provide an interactive learning tutorial that will effectively teach student with concept of physics through the use of animations, games and puzzles and videos. 2. To considered as a teaching guide for students. 3. To get

students to explore the way they support their own learning and that of others by encouraging them to experiment with the ‘ learning objects’ they learn at the online physics tutorial. 4. To able Teachers and students can collaborate in a cure, closed environment – no private information exposed, and students must be invited by teachers to Join. 5.

Teachers can post assignments and assessments that are automatically graded by the system. System Functions 1. User/ Student/ Professor Registration- The system will register the student and professor as a new user to the tutorial. This will only be applicable to those students and professors who will use the system for the first time. 2. User/ Student / Professor log in- the system will ask for the surname and password of the student and professor for privacy purposes. This will be done before the student can take the tutorial and this will be done before the professor will see the scores of the students. . Student/ User/ Professor Profile – the system will have a profile every user you will and it will notify you if your professor has an attachment. 4. Group or Class Creation – this is for the professor they need to create a class or group for his/her students to that the professor to have an interaction with them. 5. Lesson selection – the system will have a selection for the student to find what lesson he/ she wants to learn. These lessons will be physics topic only. 6. Lesson Tutorial- the system will show the files such as articles, images and videos for the lesson to be lot easier for the student. . Quiz/ exercise – after taking the lesson, the web based system will let the student take an exercise or quiz to determine the student’s standing on the lesson. A student can take the exam as much as he wants. 8. Account info – this function allows the user/student to view their

respective accounts which has their recorded standings, scores, remarks on the system. They will not be able to view other students' account. 9. Grades Report – the system will automatically send the students grade to the professor after the students take the quizzes or exercises. 0.

Log- out – after the tutorial, exercise and determining the student's standing, the user can logs out his/ her account. System Scope and Limitations This study will focus on developing an interactive learning system about Physics which will help students to sharpen their learned concepts and help them in applying mathematics. The system can be summarized as functional, simple, and flexible of the program for tutorial lectures, activity presentation, examination, lesson review and reports. The study will be discussing measurements, electricity, magnetism and gravity in a more efficient way of learning. We are going to use

CAMP, Adobe Photos CSS, and Web Browsers that supports Java, Adobe Flash CSS and Dreamier. Physics tutorial system is an online learning tutorial that will help the students to improve their knowledge. The limitation of the project is; first this project is only for college students' . Second, the topics focus on the measurements, gravity, magnetism and electricity. Other topics than this and other branches of physics are not included. System Overview well as a resource for lesson plans, homework help, and home schooling physics It will have a large collection of GIF animations and QuickTime movies designed to