

Utilization Of Information Technology In The Field Education (E-education)

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Abstract

The development of information technology makes it easy to communicate the exchange of information so that the place, time and distance are no longer an obstacle. The development of information technology so rapidly could not be separated from the development of computer engineering. Advances in computer and information technology also provides a positive impact on education. Application areas of computer technology and information technology are the most influential in the field of education is the use of computer networks and the Internet. With the internet information services to target students are not limited space, where time and distance. Through the internet information services can be provided as a source of learning, learning media can be studied according to the speed of learners. Media study is not limited to letters and pictures but can be combined with graphics, animations, video, audio together so that the media is better known as multimedia. Positive influence of Internet use for education in developing human resources education should be able to follow the development of science and technology applications. Applications include the industrial world so that graduates are able to meet the demands of the workplace competencies. Based on these facts one way to be able to follow the rapid development of science and technology is to always access the information up to date and all it can in the can over the internet. However, its implementation is still required in support of infrastructure and human resource capabilities well as providers, managers and information users.

Keywords: Materials Business, Energy, Design

1. Introduction

Education is a systematic process to increase dignity and dignity human holistically, which makes it possible the three most elementary dimensions of humanity namely: (i) affective which is reflected in quality faith, piety, noble character included noble character and superior personality, and aesthetic competence; (ii) reflected cognitive on the capacity of thought and intellectual power to explore and develop as well master science and technology; and (iii) psychomotor as reflected in ability to develop skills technical skills, practical skills, and competencies kinesthetic can develop optimally. Thus, education should become a strategic vehicle for efforts to develop all individual potential, so that the ideals of building humans Indonesia as a whole can be achieved.

To bring about development Indonesian people as a whole, need educational services that can be reached by all Indonesian citizens. Therefore, efforts to increase public access to higher quality education is mandate that the Indonesian nation must carry out in accordance with the objectives of the Indonesian state contained in the Preamble to the 1945 Constitution, namely to protect the entire nation and all spilled Indonesian blood, educate national life, promote prosperity general and participate in carrying out world order one based on freedom, peace lasting and social justice.

The 1945 Constitution mandates regarding the importance of education for all citizens country as stated in Article 28B Paragraph (1) that everyone has the right to develop themselves through fulfilling their basic needs, entitled to education and benefit from science and technology, arts and culture for the sake of improving quality of life for the welfare of the people humans, and Article 31 Paragraph (1) that each citizens have the right to education.

Observe the mandate contained in the preamble to the 1945 Constitution and several articles in the body of the 1945 Constitution above, institutions education has an important role in assisting government tasks in strive for the creation of administration quality and effective education, so as to be able to produce resources high quality Indonesian people, productive, creative, and competitive which is high with other nations. But deep in fact, our world of education is still faced with the problem of low quality implementation of education so far.

Development of information technology in recent years developing at a very high speed, so that with this development has changed paradigm of society in seeking and get information, which is no longer limited on newspaper, audio-visual and information electronics, but also sources of information others that one of them through Internet Network.

One of the earning fields significant impact with this technological development is a field education, which is basically education is a process of communication and information from educators to students which contains educational information, which has elements of educators as source of information, media as a means presentation of ideas, ideas and educational materials as well as the students themselves (Oetomo and Priyogutomo, 2004), several parts of this element get a touch of media technology information.

To solve that problem related to the world of education can be done by utilizing technology information in education. With the use of information technology for the world of education, it can produce qualified human resources with improvements to educational conditions.

2. Research Method

Definition Of Technology Information

According to William & Sawyer (Abdul Kadir & Terra CH, 2003), information technology is defined as a technology that combines computers with paths of high speed communication, which brings data, voice, and video. This definition shows that in technology there are basically two components of information major namely computer technology and technology

communication. Computer technology is technology computer-related including equipment related to computers. Medium communication technology, namely technology related devices long distance communication, such as telephone, feximil, and television.

According to Martin (1999), Technology information is not just limited to technology computers (hardware and software) which will be used to process and store information, but also covers communication technology for sending / disseminate information.

Based on the two definitions above, it can be concluded that information technology simply can be viewed as a science needed to manage / manage information so that information can be easily searched or rediscovered. While inside its implementation to be able to manage the information well, quickly, and effectively, it requires computer technology as a processor of information and technology communication as a conveyor of distance information far.

3. Results And Discussion

The development of information technology very rapidly is a potential for improving the quality of education. The Internet as the biological child of information technology keeps information about everything that is infinite, which can be extracted for interest in educational development. With the internet learning is no longer limited by time and space.

The existence of information technology for the world of education means the availability of channels or a means that can be used to broadcast learning programs both directionally and interactively. Utilization of technology this information is important given the conditions geographic Indonesia in general is at mountainous areas that were scattered inward on many islands. With technology information makes it possible to hold distance education, making it possible the occurrence of equitable education throughout the earth territory of Indonesia, well that already got it reached by land transportation or not can be reached by land transportation. Thus the use of technology information in the field of education has important meaning, especially in terms of equity education and improving the quality of education in Indonesia.

To take advantage of technology information in the educational process, there is some development steps that can be conducted among others as follows: (1) designing and creating database applications, that is store and process data and information academic, both lecture system, system assessment, curriculum information, management education, as well as learning materials; (2) designing and creating learning applications portal-based, web, interactive multimedia, yang consisting of tutorial applications and learning tools; (3) optimize the use of educational TV as an enrichment material in order support the improvement of education quality; and (4) implement the system in stages ranging from a smaller scope to extends, thus making management easier utilization of IT in the implementation process education.

Currently using information technology in the educational process in general include: a) Information Systems Management Management Information System (SIM) is an information system organization that supports management processes. Very good driver's license helps in time and material efficiency organizational transactions as well supports operation, management, and functions decision-making. Utilization information technology to run information systems allow flow information to run quickly and accurately. Online databases conducted by Dinas Education and colleges facilitate the exchange of information and data quickly. This ease means efficiency in implementation education in all things. Academic information systems with data online base at educational institutions very help parents to earn information on each child's development moment. Online database delivers MIKROTIK information facilities for students, parents and society. The existence of an interactive WEB of the institution education facilitates communication between educational institutions with the community customer. Vision, mission and profile of the institution education can easily be identified by society in general, so will result in increased interest society towards educational

institutions the. Academic WEB delivers the convenience of students, lecturers, employees, parents, and society, like the academic advances of students, daily developments, obligations administration, new student registration and others.

b) E-learning According to Onno W. Purbo (2002)

E-learning is a form of technology information applied in the field education in virtual form. Via e- learning learning is no longer limited by space and time. Learning can be done anywhere and anytime. Learn to be independent based on students' creativity done through e-learning encouraging students to do analysis and synthesis of knowledge, excavating, cultivating, and make use of information, generate writing, information and own knowledge. Learners are set up to do exploration of science.

E-learning is carried out over a network the internet, so it's not a learning resource only teachers, but also anyone there in various parts of the world. Facilities can be used by students for learning through e-learning including: e-books, e-libraries, interaction with experts, email, mailing list, news group, world wide web (www), and others. Websites that provide multiple e-learning including: educasi.net, science computers, plasa.com, smart media.com and many other sites.

Implementation of e-learning can be done by various parties. College is expected to be able to organize e-learning itself. In simple terms e- learning can be implemented by lecturers by creating your own site or site colleges linked to the site-Sites can be filled with subject matter which can be visualized, tasks and evaluation.

c) Learning Media Utilization of information technology as a learning media can go through the use of the internet in e-learning as well as the use of computers as interactive media. Expected with the use of this medium can be stimulating thoughts, feelings, interests and concerns learners such that the learning process can occur. Other than that, the learning process will be more effective because of the use of learning media allowing the inner barrier to be overcome teacher-student communication processes such as physiological, psychological, cultural, and barriers environment.

The researchers found that there are various ways learners process learning information of a nature unique. Some students find it easier to process learning information visually, others are easier to process information by voice (auditorial), and others are easier to process learning information by doing direct touch / practice or kinesthetic (Bobby DePorter & Mike Hernacki, 1999).

In general, the use of technology information as a medium of learning can be categorized into three groups. Utilization of the first group, using computers as media delivery of teaching material, which is commonly known with the term Computer Assisted Instructional (CAI) or Computer-Based Training (CBT). In this type of utilization, information (learning material) that you want delivered to students packaged in a software (program). Learners can then learn how to run a program or device software on the computer. When designed well, a program package can be created learning to simulate or practice material, which can also provide feedback directly to the learning progress of these students through recorded learning evaluation results.

Utilization of the second group utilizes information technology as media distribution of teaching materials through Internet Network. Teaching materials can be packaged in the form of a webpage, or a program interactive learning (CAI or CBI). Teaching materials are then placed on a server connected to the internet, so it can be taken by learners well using a web browser or file transport protocol (file sending application).

Utilization of the third group utilizes information technology as media of communication with experts, or speakers sources, or other learners (teleconferences). This moment of communication can be used to ask things which are incomprehensible, or express opinions so that you can respond by other students or by the teacher. Thus, learners can get expert feedback or from resource persons as well as from fellow participants to educate others about things that are related to understanding teaching material.

d) Life Skill Education Information technology with computers as his heart has entered a variety aspects of life. Almost all field work requires a computer. Skilled jobs using a wide open computer. Computer skills is one of the life skills badly needed to compete in a science-based economic system.

Information technology education contains life skills that can develop both specific life skills and general life skills. Proficiency in operating computers using programs, both application and language programming is a life skill which is vocational. While internet information digging skills on the internet, cultivate and use it is a general life skill.

4. Conclusion

From the above explanation, conclusions can be drawn among others:

a) Efforts to increase public access towards higher quality education is a mandate that must be done Indonesian nation in accordance with the objectives of the Indonesian state as stated in Preamble of the 1945 Constitution.

b) The use of information technology in education has an important meaning especially in efforts to equalize educational opportunities, enhancement education quality.

c) For the development of information technology at educational institutions, there are several steps that needs to be done, among others, are: (1) designing and building database applications; (2) designing and making applications portal-based learning, web, interactive multimedia, which consists of tutorial applications and learning tools; (3) optimize the use of educational TV as an enrichment material in order support the improvement of education quality; and (4) implementing the system in a manner gradually.

d) Utilization of information technology for the educational process includes; management information systems (SIM), e- learning, learning media, and life skills education.

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