

Education and Technology to Empower Teacher in Digital Era

Agus Wardhono

aguswardhono@unirow.ac.id

Melissa Lichtinger

melissalichtinger@gmail.com

Josefina Lara Chavez

jsfinalara@gmail.com

Abstract:

Digital learning technologies may enable students to grasp concepts more quickly and fully, to connect theory and application more adeptly, and to engage in learning more readily, while also improving instructional techniques, leveraging instructor time, and facilitating the widespread sharing of knowledge. Digital technologies will enable this in new and better ways and create possibilities beyond the limits of our current imagination. During this presentation, the audience will learn about their own learning styles, the benefits and disadvantages of digital learning and what the future may hold in terms of education and technology, in particular to second language acquisition.

Background of the Study

Most educators today are familiar with the information technology world. Smaldino *et. al.* (2012) claimed that the effective use of technology and media in teaching learning process asks the teachers to have better organizing in advanced, first thinking through their objectives, then altering the everyday classroom routine as needed, and finally evaluating to determine the impact of instruction on mental abilities, feelings, values, interpersonal skills, and motor skills. However, the shift to this century increases access to digital resources will change not only how teachers function but student roles as well.

What is digital learning?

Digital learning is any type of learning that is facilitated by technology or by instructional practice that makes effective use of technology. Digital learning occurs across all learning areas and domains.

It encompasses the application of a wide spectrum of practices including:

- blended and virtual learning
- game-based learning
- accessing digital content
- collaborating locally and globally
- assessment and reporting online
- active participation in online communities
- using technology to connect, collaborate, curate and create.

What are digital technologies?

Digital technologies are electronic tools, systems, devices and resources that generate, store or process data. These includes social media, online games and applications, multimedia,

productivity applications, cloud computing, interoperable systems and mobile devices.

Overall, the complete learning approach has witnessed a significant change, supporting students perform in academics and getting more exciting. Integrating with all the supplier of electronic publishing options, electronic learning software companies have discovered a serious market for themselves within the training market. Today, electronic content writers and eLearning software companies are going together in developing a background within the area of education.

Learning paradigm change, success in the learning process is not only determined by educator factor but it is strongly influenced by active learners. This new paradigm requires the application of Students Centered Learning (SCL). Educators should be the facilitator and motivator, not the only learning source. By SCL approach, learners can develop their competencies optimally, since they have internet as the helpfull source in learning. They can obtain the information with or without limit.

In the future teachers are expected to create, use, and evaluate their students using CALL (Computer Assisted Language Learning) and MALL (Mobile Assisted language learning), as the Government has started to leave the PBT (Paper Based Test) and change it by using Paperless. These teaching materials are equipped with many interactive questions that must be done by the students.

It's hoped as a step to make students have better competence. Teachers then begin to recognize the teaching material that are presented in a web. To get it more varied, some materials are also delivered during the face-to-face in the classroom/learning. The enrichment teaching materials are accessed on the Internet by students. In addition, e-learning (web) was also introduced to the prospective educators to get them not left-behind the learners, who are used to exploring the virtual world. In relation to this case, this paper will also discuss the responses of prospective educators of the Indonesia literature and language education department students by using CALL and MALL-based teaching materials.

E-learning is one form of learning by applying SCL implementation for e-learning models are self-faced. With e-learning students have the autonomy to decide when and where they work, and whether by offline or online. Moreover learners can also choose the environment that is safe and comfortable to learn. This adaptability is one of the advantages of e-learning model (Chrysafiadi, 2015: 7). In addition, this learning model also adjusts the cognitive needs of learners. Mason and Rennie (2007: 199) state that the web can also support higher ability of the students to build and maintain the relationships of the various components of schooling resulting in a personalized form of learning (personalization of learning). Meanwhile, Facer (2006: William, 2008), Personalization and Digital technologies asserts that through the web will cause students to construct the traditional school with new value and cause students to be able to organize their own learning service for themselves so as to give satisfaction in accordance with the expected choice, more comfortable, and can be controlled in both design, production, and distribution.

In many countries, the presence of the learning system through the web was taken pessimistic for fear of having a class via the internet, although currently more than 1.5 billion active learners in the world access it (Aggarwal, 2003: 73). Pessimistic happens because today there are very few teachers who are able to implement a web-based learning for learning this kind required accuracy and less time to prepare and organize the material in the web structure.

Web-based learning will make learners become the consumer rather than the producer of information (Fich, 2002). It is because the characteristic of the web is fun and patterned to provide material carefully and systematically. The phenomenon of student as a consumer is evidenced by the

percentage number.

Various forms of learning activity used e-learning, which are used in this article, are in the form of individualized self-paced e-learning online. Learners can learn independently by accessing material / teaching materials online. Selwyn (2011: 14) states that digital technology intangible web can be give a great benefit to the student as it is able to empower or improve the quality of the learning process. Besides, it can also be used as a basis for the provision of learning in society (socially situated) because it is able to manipulate the artifact, object or network. The emergence of the web to learn is seen as a manifestation of constructivist philosophy.

In this context, the presence of the cloud system in the lectures is not to replace the conventional lecture system, but as a variation learning which combines material delivery. Some of the materials are presented in the form of online/offline without losing the main functions of learning in the classroom (Wolk, 2011: 168). Educators provide teaching materials in the form of text (text-based content) such as pdf, ppt, doc or any kind of it. While the methods used in e-learning is self- directed learning, cooperative learning, and problem based learning.

- Aim

- Specific objectives of this research will be proposed to produce ICT-based English learning model in the form of MALL (Mobile Assisted Language Learning) software, the development of competency-based English learning materials in English for Academic Purpose learners in improving all skills (listening, speaking, reading and writing) for exact and social course students.

Advantages

- First, the advantages of using new technology in language classrooms can be interpreted in light of the changing goals of language education and the shifting conditions in our postindustrial society (Warschauer and Meskill 2000). New technology was part of the social fabric at the turn of the century. So while we taught foreign language students to write essays and read magazines a generation ago, we must now teach them to write e-mail and conduct online research. Thus, integrating technology into language classrooms is inevitable.
- Second, technology integration in foreign language teaching demonstrates the shift in educational paradigms from a behavioral to a constructivist learning approach. Language is a living thing, so the best way to learn a language is in interactive, authentic environments. Computer technologies and the Internet are powerful tools for assisting these approaches to language teaching. Even though constructivism is not a theory associated with using technology, constructivist assumptions are guideposts for developing a vision for integrating technology into the language curriculum (Brown, 2007). The following are summaries of these assumptions:
 - Learning is an active process. Learning is a natural, integral and ubiquitous part of living; not something handed as a package to somebody else (Anderson and Speck 2011). In today's language classes, the teacher's role should shift from "sage on the stage" to "guider on the side," while students should actively search for and explore answers instead of receiving standard interpretations. Technology integration helps this shifting process for teachers and students.
 - Problem solving is the focus. The Internet, as well as some simulation software, provides a stage for the real world where students observe, think, question, organize and test their ideas. Unlike libraries, the Internet is a living medium that offers updated information — enriched by graphics and animations — to help students solve real-life problems.

Disadvantages

- A few common pitfalls of Internet use include objectionable materials, predators, copyright violations and plagiarism, viruses and hacking, netiquette behavior, and privacy issues. Teachers must be prepared to deal with these issues as they use technology in their classrooms.
- Startup costs, which include hardware, software, staffing and training, are expensive. Some people indicate that intelligent use of new technologies usually involves allocations of about a third each for hardware, software, and staff support and training. It is often the case in poorly funded language programs that the hardware itself comes in via a one-time grant (or through hand-me-downs from science departments), with little funding left for staff training, maintenance or software.
- Technology may not be good for every language at all levels. For logographic languages, computer typing may not help improve efficiency in composition, especially with lower level learners. It also takes a long time for students to become familiar with computer typing; therefore, teachers should creatively use technology but not rely on it alone.
- Spending too much time on computers is considered harmful to a child's development of relationships and social skills. The American Academy of Pediatrics calls for limiting children's use of media to only one to two hours per day.

Research methods

This research is a qualitative descriptive research, because the data analyzed is not in the form of numbers. Although there is data in the form of numbers, but it is not dominant, because it is used as a tool in qualitative analysis. This paper is a form of research and development that discusses the development of e-Learning System. Development is carried out using web-based instructional development procedures with the following steps: needs analysis, framework analysis, conception / design, develop / production, implementation, learning process, evaluation / optimization, downstream, and commercialization. Furthermore, to obtain the data of the product, it uses questionnaire technique. The data analysis technique used is qualitative analysis technique Huberman (2014: 18) by the steps of (1) data collection, (b) data reduction, (c) data display, and (d) the interpretation and conclusions.

Result and Discussion

We can definitely agree that technology has done a great job in helping language learning, but this is just the beginning of the age of technology-enhanced education. In the future, wireless networks, videoconferencing and other multimedia-enhanced communication methods will be more popular in the language classroom. However, teachers should always remember that technology is just a tool, and students' learning achievement relies on appropriate and creative instruction. If you are aware of the pitfalls of using technology to design creative activities, technology will work harder and better for foreign language education.

Problems with the Research Base:

- Researchers have yet to come to agreement on just what promotes and what hinders Second Language Acquisition. Much of the technology research base is centered on the investigation of computer use that facilitates or promotes those things that we believe aid language acquisition (e.g., interaction, target language input and output, acculturation, motivation) rather than on measurement of outcomes.

- Most research on Second Language Acquisition and technology use has been carried out using subject populations at the college level. Very little research in this area has been done at the K-12 level.

What does the research indicate?

- Provides an area for natural meaningful, and realistic language production and reception between and among native and nonnative speakers of the target language.
 - Language learners engaged in computer mediated contact with others—for example, in chat rooms where writing becomes speaking- tend to produce more language than in face-to-face discussions.
- Participation appears to be equalized across learner populations; that is, the discussion is not dominated by a small number of students, as often occurs in the regular classroom. This may be due to the reduction of social context clues and nonverbal clues that tend to inhibit participation.
- There is also a greater ratio of student talk to teacher talk.
- A marked increase in cultural awareness.

Conclusion

In correlation with the question of whether e-learning based learning is fun, learners' express fun because learning becomes varied, not monotonous by just listening to educator/ lecturer explanation, adding to the spirit of learning, and not dull. Learners expect not only certain subjects that use web-based teaching materials, but other courses as well. The learning process using teaching materials in CALL or MALL or web-based learning or e-learning would not motivate learners to associate with the internet (web) as a means of learning. This will be a milestone as a prospective educator so that when they become educators later they are aware of the importance of using information technology. These prospective educators will develop this information technology in the learning process that will be the responsibility by itself.

Alongside the ease of use and widespread availability of this evolving technology in our university, CALL/MALL instruction is now widely acclaimed, with several literature reviews noting its benefits and positive effects on student learning, such as providing immediate feedback, increasing participation in class, and improving retention of the teaching material.

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