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DEVELOPMENT AND VALIDATION OF E-LEARNING MODULE ON GLOBALIZATION AND SUSTAINABLE DEVELOPMENT FOR GRADE 10 LEARNERS

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Abstract:

The majority of teacher's priority is to maintain order in the classroom and to have a controlled learning environment. Any suggestion of adopting very innovative teaching techniques such as using ICT is therefore seen as threatening this orderly pattern and therefore not desirable. There is a genuine fear amongst many teachers about ICT and skepticism of its value to their pupils(*Cox et.al.1999*). The impact of the Internet on the development and delivery of lessons is real. The move to online learning has a huge groundswell of approval and support across all sectors of education and it is likely that this level of interest which has been growing steadily will continue to grow even further in the immediate future. There are a number of clear reasons that can be seen to sit behind the popularity of this form of technology-based education. Some of the more common factors and influences driving the uptake of online delivery include: Flexibility, Economy and Enhanced learning (*Oliver, Herrington, 2011*).

Diffusion of knowledge in digital age is rapidly changing. The impact of technology in learning become core area of research in literature however integration of ICT in special education stays partial(*Aksal, 2015*). Being digital native, digital inclusion and leadership role in ICT integration in education require strategic planning and

management process which ICT inclusion and provision are vital in order to cope with global standards as developing countries education system. The need for usage of technologies which removes the boundaries of time and location increases day by day today when information and accession to information gains importance.(Tugrul & Alkan, 2011).

Introduction

Organizations and especially educational institutions have been investing in information technologies to develop and create programs and trainings to maximize the use of electronic learning in classroom settings. (Zaharias, 2014)While teaching can be based in or out of the classrooms, the use of computers and the internet forms the major component of E-learning. The use of Information and Communication Technology (ICT) and online application in teaching can also be termed as E-learning. It is a network enabled transfer skills and knowledge, and the delivery of education is made up of large number of recipients at the same or different times. At first it was not accepted immediately because it assumes that this kind of system is lack of human element that required in learning. At present it is now highly recommended to use E-learning methods of teaching.

E- Learning is a term used to describe a wide variety of electronics ways that enable to access to different knowledge and information available online. These also include the use of virtual classrooms, web-based learning, computer-based learning, and digital collaboration, video and audio recordings, interactive TV and many more. This kind of learning also is suited to flexible learning methods and distance learning but can also be done together with face to face instruction that can be term as blended learning.

Current e- Learning systems on the market are limited to technical gadgets and organizational aspects of teaching, instead of supporting the learning (Tavangarian, Leybold, Nölting, Röser, & Voigt, 2003).

The Department of Education recognizes the role of information and communications technology (ICT) to improve the state of our education. DepEd is addressing technology gaps among teachers and students. Realizing the effects of the ICT in the education system, the Department of Trade and Industry (DTI) and Department of Education provided most of the schools with computer units and peripherals. Some of the teachers in these schools have undergone ICT trainings. ICT has become an indispensable tool in enhancing the students' learning capabilities. It is certainly an effective tool that enables us to link various learning communities together in new and different ways (Tailor, 2000). It provides great possibilities for effective communication between teachers and students in varying and innovative ways. Teachers considered ICT as an effective teaching innovation, which may improve the teaching and learning process (Moreno, 2015).

To be able to promote this, the congress passed the law known as an “Department of Information and Communication Act of 2015” or RA 10844. According to Republic Act 10844, Section 2 paragraph h, it states that;

“To promote digital literacy, ICT expertise, and knowledge-building citizens to enable them to participate and compete in an evolving ICT age.(*RA10844_DICT.pdf*, n.d.)

The use of technology inside the classroom in order to make the learning interesting and exciting is supported in Article XIV, Section 12 of the 1987 Philippine Constitution which states that;

“The state shall regulate the transfer and promote the adoption of technology

from all sources for the national benefit. It shall encourage the widest participation of private groups, local government and community based organizations in the generation and utilization of science and technology.”

This provision emphasized the important of science and technology as means to attain the national development goals that the Department of Education is also concern. The teacher as the facilitator of learning shall take advantage the use of technology inside the classroom as cited in the Education Act known as Batas Pambansa Blg. 232 that states;

“The teacher must sustain interest and enthusiasm in improving instruction so that he may be able to maximize learning capabilities of his students. He must also be aware of the role of formal education where government has made its policy to gear higher education towards the provision of quality education.”

While the learners are digital natives, most of the teachers today are digital immigrants. Students are all digital natives-fluent “speaker” of different digital language of computers, video games, and the internet, while teachers who were not born to the digital world were immature but still adopted many aspects of the new technology (Prensky, 2001)To address this, there should be a regular training and programs for teachers to develop and create usable applications for teaching different subjects across curriculum and levels. To fully realize this, the teacher should take advantage and understand that using technology is both a platform and tool for delivering instruction. While the internet has its capacity to hold information and great variety of resources, it can also provide accessible and comprehensive education for students anywhere, anytime. The other advantage of using online learning database, we do not

waste our natural resources. For example, A single laptop and projector set-up can be used in one whole session. In lieu of books and papers, students can access modules, submit assignments, and activities online. The teachers can also benefit from learning tools that do not require traditional logistics and loads of materials. For example, the DepEd launches the *Learning Resource Management and Development System (LRMDS)*, a portal for online teaching and learning materials created by teachers, experts and other education partners. The closing of Technological gap in ICT is the first step to enhancing the quality of education in The Philippines (Andaya interview, Dec.17,2017).For the framework to work, a transformation in the enabling environment must take place.

Kumar (2008) stated that ‘when such technologies are used for educational purposes, namely to support and improve the learning of students and to develop learning environments, ICT can be considered as a subfield of Educational Technology’.

It cannot be denied that modern technology creates great impact to get the attention of the learners. This is the reason why technology as an instructional material appeals to students when it comes to learning. Therefore the teachers must come –up ideas with the use of different teaching strategies that will get the learner’s attention, excite them to learn.

Thus, the use of modern technology such as the use of computer aided lessons and digital applications are a good strategy to teach Contemporary Issues for Grade 10 learners.

Discussion:

The world today is rapidly progressing on the road to utilization with the ever increasing number of technical applications that are used to communicate and

pass on knowledge worldwide (Verma, 2018). In a classroom setting, knowledge acquisition can only be limited through books and to the limited information by the teacher unlike if the students are exposed to the outside world and enhances their ability to access information and knowledge. However, this new technology could not replace the teachers in the classroom. It is not a solution for all educational problems either (Wang & Woo, 2007).

The United Nations has set an agenda to end poverty, protect the planet and ensuring prosperity in every country. At the helm of these agenda that called "*sustainable development goals*" is the access to education. When an individual gain sufficient education and skills, he can make his life better and for his family. Education is the key to address all other development issues, including equality, environment protection and preservation and modernization. Access to inclusive and quality is global concern. The vision for ICT in Education is "*21st Century Education for all Filipinos, Anytime, Anywhere*". This means an ICT-enabled education system that transforms students into dynamic life-long learner and values centered, productive and responsible citizens.

In 1996, DepEd embarked on a 10-Year Modernization Program (1995-2005). The main components of this program were the computerization project and the School of Future project. It introduced the use of information technology in the improvement of teaching and learning process, educational management, and operations. DepEd also introduced the use of radio broadcast in education in 1960 and educational television in 1970's through the support of Channel 4, the Tulong Aral program of the 1980's was the first combined use of tv and radio in public education.(Perez, 2016). There were also private sector initiatives in educational radio and tv since early 1980's. Among them

were children's shows such as Kulit Bulilit and Batibot. During 1990's, private-public partnership started with ABS-CBN Foundation's *Sine 'Skwela, Mathenic, and Bayani*.

To align to the Millennium Development Goals and Education for All movements, the Philippine Government has shown serious commitment to apply ICT in education in announcing a series of initiatives to apply ICT in teaching and learning. Republic Act 10844 also known as Department of Information and Communications Technology Act of 2015" declared in one of its policy and planning instructing Department of Education (DepEd), Commission on Higher Education (CHED) and Technical Education and Skills Development Authority (TESDA) to formulate policies and initiatives to develop and promote ICT in education consistent with the national goals and objectives, and responsive to the human resource needs of the ICT and ICT-ES sectors. (*RA10844_DICT.pdf*, n.d.).

Despite the increased availability and support for ICT integration, relatively few teachers intend to integrate ICT into their teaching activities (Sang, Valcke, Braak, & Tondeur, 2009). The educational potential of ICT is stressed in a variety of ways (Becker, 2000; Cooper & Brna, 2002; Godfrey, 2001). For instance, Godfrey (2001) stresses the potential of ICT to present rich learning environments, allowing learners to adopt multiple perspectives on complex phenomena, to foster flexible knowledge construction in complex learning domains, and to cater for individual differences.

There is a growing challenge in the Philippines in the appropriate and efficient use of information and communication technology (ICT) in teaching and learning. With the multitudes of programs launched by both private and public sectors there are questions of what happened, present status, and where the program is heading. (Héctor John T. Manaligod Thesis, 2012).

Globalization has made both teaching and learning intricate and the transformation in part has been driven by technological innovation (Tinio 2002). Technology has given society a wide array of choices, making a scarce resource abundant. With computers and Internet technologies, more people can now have access to available information more quickly, and make the world a reachable global village in just a snap of a finger. Together with this technological revolution is the emergence of one of the most viable technological reforms in education, the use of Information and Communication Technology (ICT) and the sample of this is the use of E-learning educations(Iwakura & Nonami, 2013).

According to Rennie and Morrison(2013) the predictions that students who have grown up with digital media will learn differently and demand a more engaging form of education, have led to a number of studies and surveys of student attitudes, behaviors and uses of technology. An e-learning course should not be designed in a vacuum; rather, it should match students' needs and desires as closely as possible, and adapt during course progression (Graf & List, 2005).

Summary

From the beginning, research has been centered on audiovisual media, but given the development of other technologies and, particularly, the inclusion of computers in school classrooms, new studies have been carried out on the impact and effects of the use of these technologies in schools (Sarkar, 2012).

According to the study of Francis, (2014) As ICT adoption and use in the wider socio-economic context of countries becomes more prevalent, it becomes clear that ICT adoption and policies in education are areas that require further study. In this regard, all aspects of the ICT in education ecosystem, such as content (e.g. open educational

resources (OER), free and open-source software (FOSS), and other open learning solutions), access to and use of hardware (e.g. new devices, including mobile technologies, one-to-one computing options etc.), connectivity, ICT issues related to pedagogy and learning (including digital literacy, and issues of assessment), as well as teacher training, need to be explored in greater detail to have a fuller picture of the contribution of ICT to quality teaching and learning. He concluded that the help of policymakers to set national priorities and develop policies more effectively is urgently needed so that the demonstration of meaningful impacts on learning and student outcomes in general can be successfully implemented.

While Daling, (2018) as technology was introduced to the framework of education, there was a trouble in perception of how it affects to the acceptance and implementation to schools and its curriculum. The findings of this study informed how ICT integration played a crucial factor in school and in curriculum to give perception and understanding as basis for continual improvement of the whole educational system. Teachers were competent enough in integrating ICT but the least learned ICT competencies of the students were observed in their socio-economic background that affect to its school's academic performance.

Conclusion:

The following definition is suggested to emphasize the new and different aspects of e- Learning as compared with traditional learning: We will call e-Learning all forms of electronic supported learning and teaching, which are procedural in character and aim to effect the construction of knowledge with reference to Individual experience, practice and knowledge of the learner. Information and communication systems, whether

networked or not, serve as specific media (specific in the sense elaborated previously) to implement the learning process.

Today's learners represent the first generations to grow up with this new technology. They have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age. Computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives.

Despite the fact that e- Learning exists for a relatively long time it is still in its infancy. It is found out that individual content and learner specific interaction are the media specific value software based systems could contribute to learning (Tavangarian et al., 2003). So therefore as an educators it is now a challenge to us how to create an exciting and technology-based learning environment.

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