

ENHANCING EDUCATIONAL TECHNOLOGY IN MSU-SULU COLLEGE OF EDUCATION: ISSUES AND PROBLEMS

Author 1: ADAMEL K. LUKMAN

Lukmanadamel56@gmail.com

Adamellukman@msusulu.edu.ph

ORCID: 0000-0001-9419-443X

MINDANAO STATE UNIVERSITY-SULU

Author 2: ANDRADA AJIJUL OMAR

MINDANAO STATE UNIVERSITY-SULU

ABSTRACT

The lack of sufficient trainings, seminars, consultations, and evaluation is a probable cause for the unsuccessful integration of Educational technology into the curriculum of the College of Education at Mindanao State University-Sulu. To effectively equip students with necessary skills and knowledge to meet the challenges of the modern era, it is crucial to have the ability to make modifications to the methods employed in teaching and learning. The utilization of technology can facilitate the construction of knowledge. Information can serve as a means to delve into the realm of knowledge. Learning by doing can be achieved through the utilization of content. Social and media platforms can be employed to foster interaction with others. Intellectual partners can aid in the learning process through reflective practices. The objective of this study is to investigate the incorporation of various types of educational technology into the instructional methodologies utilized by the faculty members of the College of Education at Mindanao State University-Sulu. The present study adopts a phenomenological methodology in conducting qualitative research. The objective of this study is acquired a more profound comprehension of the subjective encounters and integration of participants concerning a specific event, topic, or occurrence. The current study was conducted with the objective of gaining a more comprehensive of these specific experiences and interpretations. Standard data analysis techniques were employed to derive both universal and specific themes from the data. The findings presented in this section showcase the themes that surfaced from the feedback, responses provided by the eight faculty members affiliated with the College of Education at Mindanao State University-Sulu.

Keywords: Technology education, Educational technology, Technology integration, Learning Process, Mindanao State University-Sulu

CHAPTER 1 INTRODUCTION

Background of the Study

Numerous technological advancements that emerged in the latter part of the 20th held the potential to revolutionize the approaches and efficacy of pedagogy in the subsequent century. Among the most auspicious advancements in the field, one can count the provision of internet connectivity and the implementation of programmed instruction, which entails the delivery of educational material in a sequential manner, typically facilitated by a computer or analogous apparatus.



The advancement in computer and communications technology has the potential to facilitate greater access to information and social connections for students, thereby enabling a more personalized approach to learning.

However, in pursuit of providing high-quality education to Filipino students in the 21st century, the present Philippine education system was geared towards the enhancement adoption of educational technology in the Philippine Curriculum

In the local mainstream, the integration in the present MSU-Sulu College of education curriculum was specifically fostered by. According to CHED Memorandum Order No. 30 series of 2004, the quality of pre-service teacher education plays a crucial role in determining the quality of education in the Philippines. The teacher education curriculum is designed with rigorous standards in mind, encompassing the objectives, components, and processes involved.

The recent years after its implementation however, did not show encouraging results for the college of education in Sulu. The last LET (Licensure Examination for Teachers) results was even more discouraging than the previous years before the integration of modern educational technology. With this situation at hand, one may ask if the integration of educational technology in the local arena such as Sulu was really considering the fact that its implementation is one of whom may call blitzkrieg.

Their argumentation were founded on the proposition that; there was not enough trainings, seminars, consultations and assessments regarding whether or not the faculty of the college of education are more than ready to integrate educational technology in their teaching; thus, creating a vagueness in perception of what educational technology really is. And since there is the so-called a gargantuan decrease of the MOOE (maintenance of operating expenses) with absolutely no-capital outlay decrease by the administration of MSU-Sulu, the latter in effect, could not provide ample financial support for the procurement of educational facilities and equipment such as computers, PowerPoint projectors, a functional audio-visual room, and other materials needed in the implementation process. And neither do they exert extra efforts to augment this predicament.

If such alleged notions are true even in the slightest sense, then it is the belief of this writer that a research is very timely to evaluate first; the perception of COED instructors on how they enhance its present educational technology; are the faculty members ready to introduce educational technology to students; Is there an opportunity for students to develop their proficiency in educational; does the management give appropriate funding for the improvement of educational technology in the college; and is there adequate equipment and facilities for the implementation of educational technology.

On one hand, this humble work will also be beneficial not only to the students but for the administrators of the college of education to determine the needed cure for the seemingly continuous deterioration of quality education by national and international standards.

LITERATURE REVIEW

Integrating technology into teaching and learning is an old concept that was not properly implemented and utilized by teachers in the field. During the 17th century, the term “technology” was employed to denote a methodical investigation of the arts or the nomenclature specific to a given art form. Teachers of technology education, in tertiary levels, are in a unique position to directly influence the administrators, peer, and student perceptions of technology’s function in contemporary society. Although technological advances are not likely to replace teachers, computers, software, and access to the internet have become important aids to children learning (Greenfield and Suzuki, 1991).

The field of educational technology has experienced significant growth, particularly in relation to computers and computer-related peripherals. These technologies have become ubiquitous and are now integrated into various aspects of our daily routines. It is difficult to fathom that in the present day, there are individuals who advocate for reduced usage of technology in various sectors such as banking, healthcare, and other industries. It has been observed that a significant proportion of young individuals may struggle to comprehend the rationale behind the

proportion that educational institutions should restrict the use of technology. The utilization of the internet is a significant factor in the social interactions of individuals, particularly in their associations with peer, kin, and academic institutions. According to Valdez's (2005) research, there is a widespread belief among students and their parents that utilization of the internet has a positive impact on the social life and academic performance of teenagers.

The integration of educational technology in educational settings has been shown to have a positive impact on students' motivation levels, particularly in specific subjects' areas. Educational technology has been identified as valuable tool for augmenting the learning process. In the realm of education, the term primarily pertains to diverse resources and software tools that are made available on the computer platform, as posited by Wang and Woo (2007). The incorporation of contemporary technology has been a topic of debate. According to Jhuree (2005), there are those who contend that technology will revolutionize the educational sector and lead to a significant improvement in learners' performance (Papert, 1997). Through computers, it is expected we could work on something faster and a lot better. With that these tools are capable of processing; definitely it's worth having in like manner as the basic physiological needs at this point of time.

According to Fox (2005), there is an increasing trend of schools providing access to new and current technologies, with many countries now implementing such technology for the benefit of students, teachers, and administrators. In recent times, educators have increasingly incorporated technology as a valuable tool in their instructional practices.

In the Philippines, Presidential Decree 1480 created the National Computer Center (NCC). The central computer policy body which is directly under the Office of the President in coordination with the Department of Education (Dep.Ed) supervises and regulates private computer training institutions, sets up the standards for curriculum development, and formulates rules and regulations for the operation of the existing and future trainings in the different institutions. Furthermore, the use of computer in teaching is very much substantiated by the Republic Act (RA) 7722 otherwise known as the "Higher Education Act of 1994" (cited in the CHED Memo No. 16, series of 1999).

The following provisions of the Act enunciate the above mentioned policy:

In accordance with the guidelines set forth by the Commission on Higher Education (CHED), Article V Section 2.1 mandates the inclusion of a comprehensive general education program in institutions of higher learning. This program shall encompass a range of subjects, including but not limited to the Humanities, Natural and Behavioral Science, Computer literacy, Mathematics, Logic, and Ethics. The primary objective of this program is to cultivate a well-rounded, innovative, cultured, ethically sound and industrious individual.

Article VI Section 1. Teacher education institutions shall maintain high standards of instructions, utilizing a variety of appropriate emerging institutional technology procedures where contribute to the effectiveness of the teacher education students.

As stipulated in Article X Section 1, the maintenance of a multimedia instructional center is required either as a distinct entity or as an integral component of the library. The facility is intended to function as a laboratory for the creation of educational materials and media, such as maps, charts, curricula, computer-based instructional materials, and other related resources. The center will be administered by personnel who have received professional training and possess experience in both instructional and educational media.

In addition, CHED Memo No. 16, series of 1999 requires all higher education institutions to provide their Regional CHED with the official data pertaining to Information Technology. Such data would serve as the bases for making sound decisions on policies regarding information and also planning by the stakeholders of the higher education and the government's legislative bodies in connection with the projects and computerization programme of the government.

The Teacher education Curriculum, as outlined in CMO No. 30 series of 2004, has set forth the objective of improving the integration of Information Communication Technology (ICT) in the teaching process. The incorporation of information, communication, and technology (ICT) into professional education courses presents unparalleled prospects for the education system. This is



due to its ability to facilitate integration and interaction among learners and educators across vast geographical distances in a purposeful manner, thereby enabling the attainment of instructional goals. According to Majumdar (2006), the proliferation of communication and computer systems, coupled with their user-friendly interfaces and robust information transfer capabilities, has expanded the educational landscape beyond the confines of the traditional classroom. As a result, both educators and learners now have unprecedented access to a vast array of resources and knowledge.

According to Fouts (2000), the current generation of students exhibits several distinguishing characteristics, one of which is their increased exposure to technology in comparison to their predecessors. The contemporary society has evolved into a highly technological realm. According to Fouts' (2000) research, technology had had a significant impact on virtually all facets of society. According to conventional perspectives, technology functions as both a provider and a presenter of knowledge. According to Johanssen et al. (1999), the incorporation of technology in education is manifested in various forms such as the content conveyed through films and TV programs, as well as the instructional sequence in programmed instructions. The technology serves as a medium for delivering knowledge to students.

The investigation conducted by Checkering and Ehrmann (1996) examined the outcomes of effective practices in technology-driven education, both in terms of innovation and delivery. The researchers identified a minimum of seven critical factors that were instrumental in demonstrating effective implementation of educational technology practices. These factors are as follows:

1. The promotion of interactions between students and faculty members has been advocated, particularly those who may be hesitant to participate in traditional classroom settings.
2. The cultivation of reciprocity and cooperation among students has been observed to facilitate peer learning, thereby enhancing the overall learning experiences.
3. Active learning techniques were employed to facilitate student engagement and promote active learning.
4. Prompt feedback was provided.
5. The importance of dedicating a significant amount of time to a task was emphasized.
6. The establishment of high expectations was effectively communicated.
7. The acknowledgement and appreciation of a wide range of abilities and learning styles were highly valued.

Computers, among other technological advancements, are widely recognized as a means of enhancing productivity. The advent of the internet during the mid-1990s has resulted in a significant shift in the utilization of technology in the classroom, with a particular emphasis on communications and multimedia in recent years. The integration of computer technology in education has been observed to enhance the acquisition of computer literacy skills among learners. Similar to the act of reading, contemporary students are now capable of engaging with computer-generated messages, including responding to queries or executing computer directives. As Lucido (2007) suggests, learners have the ability to create messages through the use of computer language or programming, similar to that of writing.

The advent of technology has had a significant influence on the daily lives of individuals. The impact in question has had a pervasive effect on all facets of society. The present student body has been affected by it. The growing complexity of our world has resulted in a shift in the demands placed on individuals seeking to enter workforce. The aforementioned alteration has prompted the need for the establishment of educational settings that facilitate the cultivation of advanced cognitive abilities.

The introduction of computer-assisted instruction (CIA) marked a significant milestone in the field of education. This approach is based on the principle of individualized learning, which aims to create a positive learning environment that incorporates realism and appeal, to achieve this, drill exercises are utilized, which incorporates color, music, and animation. The novelty of Computer-assisted Instruction (CIA) remains relevant, particularly in the context of basic education, where it is predominantly utilized by private school equipped with computer



technology. The rapid pace of innovation in the Information Age has resulted in significant advancements in computer technology within the first decade of the 21st century. As a result, computer technology has evolved into an educative information and communication technology in education, as noted by Lucido in 2007.

The integration of technology has been shown to have a positive impact on both the teaching and learning processes, as well as on the overall quality of life. The phenomenon can be considered a fortuitous occurrence. Improper usage of it can impede instruction and hinder human progress and development. The fundamental purpose of technology is to serve humanity, rather than the other way around. It can be inferred that technology has been designed to cater to human needs across various domains including education. The utilization of technology in the classroom setting and its potential benefits are largely dependent on the decisions made by the instructor, who serves as the primary authority figure. As such, it is the responsibility of the instructor to determine the most effective ways in which technology can be employed to achieve optimal outcomes. According to Corpuz (2008), it is widely acknowledged among educators that technology has given rise to various tools that can provide assistance. Ficklen and Muscar (2000) acknowledge that assertive technology encompasses both basic tools such as pen grips and overhead projectors, as well as advanced software and adaptive hardware. This allows for a diverse range of pathways to be made available to students at varying levels, thereby enhancing the teaching and learning experience through multisensory engagement.

According to Jonassen et al. (1999), the constructivist perspective posits that technology plays various roles in the process of learning.

In order to facilitate knowledge construction, technology must be capable of representing the ideas, understanding, and beliefs of learners. This enables the production of organized, multimedia knowledge bases by the learners themselves.

The utilization of technology as a means of conveying information has been explored as a method of supporting learning-by-constructing. This involves the use of technology to access necessary information, as well as to compare and contrast differing perspectives, beliefs, and worldviews.

The use of technology as a tool to facilitate learning-by-doing has been recognized as an effective approach to support students' acquisition of knowledge and skills. Specifically, technology can be utilized to represent and simulate real-world problems, situations, and contexts, as well as to represent beliefs, perspectives, arguments, and stories of others. Additionally, technology can provide a safe and controllable problem space for students to engage in critical thinking and problem solving activities.

The utilization of technology as a social and interactive medium has been recognized as a valuable tool to facilitate learning. By engaging in conversations and collaborating with others, individuals are able to discover new ideas, engage in constructive arguments, and build consensus within a community. To facilitate productive communication within communities focused on knowledge construction. The integration of technology as an intellectual partner has been proposed as a means to facilitate learning-by-reflecting. This approach aims to assist learners in articulating and representing their knowledge, reflecting on their learning experiences and cognitive processes, supporting their internal negotiations and meaning-making, and constructing personal representations of meaning to facilitate mindful thinking.

Research suggests that technology can enhance student learning, understanding, and achievement, as well as increase motivation to learn, promote collaborative learning, and facilitate the development of critical thinking and problem-solving skills. These benefits have been observed both from traditional and constructivist perspectives when technology is utilized effectively. Schacter and Fagnano (1999) conducted a study. According to Russell and Sorge's (1999) research, the effective integration of technology in educational settings empowers students by granting them greater autonomy over their learning experiences. This shift in instructional approach is characterized by a transition from teacher-centered classrooms to more learner-centered environments.



The integration of technology has become a crucial aspect in the lives of students. The elucidation of the rationale behind the necessity for a modification in the approach to teaching and learning is also beneficial. Given the extent to which students are absorbed in utilizing technology beyond the confines of the classroom, it is evident that they place a high degree of importance on it. According to Fouts (2000), the integration of technology in the classroom would result in a more relevant learning environment for the present-day student population.

The impact of information technologies on various segments of society is a significant phenomenon that cannot be overlooked. It is evident that this impact has been substantial and will continue to be so in the future. It is imperative that educational institutions are integral to the implementation of technological advancements. Research endeavors should operate under the premise that technology is an ever-expanding facet of the educational landscape. The utilization of technology is a primary factor that has piqued the interest of the student population. In today's world, the pervasive nature of technology makes it nearly impossible for individuals to avoid its influence as they mature.

The demands of the contemporary era are markedly distinct from those of preceding epochs. Contemporary education demands that students possess advanced learning skills in addition to core subject knowledge. According to Honey (2003), the contemporary era necessitates that individuals in their early adulthood possess the ability to utilize their knowledge and skills effectively. This includes the capacity to engage in critical thinking, apply acquired knowledge to novel situations, analyze information, comprehend new concepts, communicate effectively, collaborate with others, solve problems, and make informed decisions. The acquisition of high-level learning skills is imperative in the 21st century, as they are essential for achieving success in our constantly evolving world.

The contemporary world is characterized by a growing level of sophistication, multifacetedness, and nuance. The acquisition of advanced learning abilities is essential for individuals to effectively adapt, comprehend, and react to dynamic situations. According to Stratham and Torell (1996), success and prosperity in today's complex world are closely tied to individuals' adaptive action, and effective communication. To adequately equip students for the challenges of the 21st century, it is imperative that a shift in the approach to teaching and learning is implemented. The enhancement of learning environments is imperative for the cultivation of authentic learning experiences. This can be achieved by providing students with opportunities to engage in higher order thinking and problem-solving skills that are directly linked to real-world applications. According to Fouts (2000), the aforementioned source provides relevant information on the subject matter.

The integration of educational technology in the teaching and learning process remains a persistent concern. The integration of technology in instruction cannot be assumed solely based on the use of computers. Computer games may not have any direct correlation with education, let alone with classroom pedagogy. Consequently, it is imperative to offer instruction on the utilization and incorporation of educational technology in the pedagogical process. To facilitate clarity on the matter at hand, Pisapia's (1994) definition proves to be useful: The integration of technology in education refers to the utilization of educational technologies to introduce, reinforce, supplement, and extend skills. The distinction among classrooms of exemplary users lies in the manner in which they conduct their classes. In the model classroom, the incorporation of computer usage among students is seamlessly integrated into the pedagogical approach, with software serving as a logical extension of their learning resources.

The following are external indications of technology integration into instruction, should one seek them:

- A shift in the conventional approach to conducting classes has been observed.

The utilization of educational technology has led to a notable improvement in the quality of instruction, surpassing what could have been attained through traditional teaching methods.



The teacher engages in planning to determine the appropriate integration of technology into the teaching and learning process. This involves careful consideration of when and how technology can be effectively utilized.

The educator implements targeted instructional approaches to effectively tackle identified instructional challenges or concerns.

The utilization of technology presents a means to address instructional challenges and difficulties.

In certain cases, technology assumes a role within the instructional process, either in a simplistic or intricate manner.

According to Fouts (2000), the integration of technology has demonstrated the potential to establish authentic learning environments that foster student motivation, communication, collaboration, and utilization of higher order thinking and problem-solving skills in real-world contexts. When technology integration is executed effectively, it has the potential to facilitate the development of authentic learning environments and more. According to Fouts' (2000) findings, a technologically rich learning environment has the potential to enhance self-esteem and foster a greater enthusiasm, for learning.

Numerous studies have reported similar results. The potential outcome of this phenomenon is the cultivation of optimistic dispositions towards education, coupled with a decrease in absenteeism and student attrition rates. According to Stratham and Torell's (1996) research findings, a technologically advanced learning environment can significantly increase the likelihood of students attending college and receiving scholarships. The current development is highly beneficial for contemporary students, provided that they have access to educational settings that offer a wealth of technological resources. Research indicates that learning environments that are rich in technology facilitate the development of life skills to a greater extent. The set of skills in question encompasses organizational, problem-solving inquiry, and collaboration skills.

According to Stratham and Torell's (1996) research, the learning environment can be enhanced through the implementation of cooperative learning strategies and a decrease in competitive elements. According to Keengwee et al. (2008), research has demonstrated that the integration of technology enhances interaction within learning environment. The advent of interactive technologies has facilitated the development of learning environments that enable students to engage in hands-on learning, receive prompt feedback, and progressively enhance their comprehension and knowledge acquisition. According to Fouts (2000), the aforementioned source provides relevant information on the subject matter.

The evolution of technology has resulted in alterations to the conventional educational paradigm. As per Seattler's (2004:4) assertion, the role of educational technology in history has been more a process than a tangible outcome. During the early 1990s, the blackboard emerged as a pedagogical instrument that as a pedagogical instrument that fostered collaborative efforts among students and facilitated one-on-one interactions between educators and learners. According to Adelsberger et al. (2008), the emergence of media-richness during 20th century was primarily attributed to mass media. During that period, microcomputers incorporated the characteristic of being composed of relatively large particles. The topic of technology's impact on students' academic performance and learning has been a subject of discussion since the 1970s, as noted by Edens (2008). According to Williams et al. (1999), there has been a significant expansion of internet-based tools and methods since the 1980s to support both campus-based and distance-based educational systems.

The term "educational" in the context of modern schooling encompasses a range of activities that vary according to the subject being taught. A computational support is available for the majority of them. In developed nations, the vast majority students, regardless of their level of education, exhibit proficiency in utilizing computers as a means of accomplishing general tasks. These tasks may include composing reports and assignments through the use of text editors, conducting research via internet search engines, and creating presentations with slide show software.



The findings from UK indicate that the prevailing sentiment among educators is one openness and receptiveness towards technological advancements. According to Smith et al. (2010), educators at the secondary level concur that the use of information and communication technology (ICT) has a beneficial effect on the student engagement. According to their report, the feedback received from the teacher suggests that a significant number of individuals recognize the efficacy of ICT as a tool that facilitates the customization of teaching to suit the unique needs of their students.

The utilization of multimedia has become a prevalent practice in contemporary academic lectures. Educators employ various multimedia tools such as videos, audio recordings, and interactive demonstrations to facilitate the comprehension of complex concepts. The utilization of video presentations and tutorials has become increasingly prevalent in higher education, with students frequently employing these medium to convey their ideas and knowledge. In contemporary times, podcasts and YouTube clips have become increasingly convenient to integrate into websites, offering a vast array of information that can be applied even in educational contexts.

Video tutorials are a form of instructional media that can be utilized alongside the software application, providing the user with the ability to follow the demonstration in real-time. Screen video capture films are very a widely used tool in e-learning and courses that teach graphical software tools. The process of recording a video of on screen activity accompanied by an audio commentary, while performing a task, is a common practice among instructors. This technique enables the instructor to provide a visual demonstration of the task being performed, while also providing a verbal explanation of the steps involved. According to Marilouto (2010), the ability to follow instructions, take breaks, rewind, and fast forward in accordance with one's personal learning need is. Acquiring knowledge of intricate or theoretical ideas can prove to be a laborious task, particularly for individuals in their formative years. The authors Rogers and Scaife (1998) investigate the facilitative role of multimedia in the acquisition of knowledge. They delve into the underlying factors that contribute to the ease of learning with the aid of multimedia. The dynamic linkage of alternative presentations of an abstract can enhance the learner's comprehension of the subject matter.

The integration of educational technology within the context of the teaching and learning process is a crucial consideration. According to the constructivist perspective, educational technology functions as a means of facilitating learning whereby learners engage with the tools to acquire knowledge. The approach involves the active participation of learners in the learning process, with a focus on constructive, intentional, authentic, and cooperative learning. The integration of technology in the learning process offers a platform for learners to engage in interactive that enhance their comprehension and retention of knowledge. In this particular instance, technology will not function solely as a means of conveying information. According to Corpuz and Lucido (2008), the use of this tool serves as a means to facilitate the process of thinking and construction of knowledge.

The integration of educational technology into instructional plans has the potential to improve the teaching and learning process. This is achieved through the implementation of technology-based activities designed to enhance the educational experience. Corpuz (2008) suggests that the integration of technology into classroom practice can promote active student engagement in learning, problem-solving, and decision-making.

The present study aims to explore the various roles of educational technology in achieving the goal of learning for understanding. The study is motivated by the need to understand how educational technology can be effectively utilized to enhance students' comprehension and retention of academic content. The research will employ a qualitative approach to gather data from relevant literature sources and analyze the findings to identify the different ways in which educational technology can support learning for understanding. The study will contribute to the existing body of knowledge on the subject and provide insights into the potential of educational technology to improve the quality of education.



The utilization of technology offers assistance in addressing significant issues. The utilization of technology in classrooms serves a crucial purpose of addressing intricate issues. The worldwide web, also known as hypermedia, provides students with a convenient means of searching for specific information that aligns with their interests. Technology serves as a form of cognitive support. The utilization of technology offers cognitive assistance to individual engaged in the learning process. The assumption is that successful completion of various tasks requires the involvement of knowledgeable individuals who can provide coaching, modeling, guidance, and reminders.

The utilization of technology in education has been found to facilitate both collaborative and independent learning. The utilization of technology has facilitated opportunities for discourse and exchange of ideas among individuals engaged in the process of learning. When computers are interconnected within a given space, such as a room, building, or wider geographical region, it enables students to transmit and receive data. Goldman and Williams, along with their colleagues, published a research paper in 1999. Marshall's research has yielded compelling evidence that educational technology serves as a complement to the innate abilities of an exceptional teacher, thereby expanding their influence and enriching their students' educational experience beyond the confines of the traditional classroom setting. According to Marshall, the current proliferation of content and technology options, ranging from multimedia to the internet, has created an unparalleled necessity to comprehend the key components of success. This involves an examination of the learner, teacher, content, and technological environment.

Objectives of the Study

The primary purpose of this study is to look into the stories of College of Education faculty of the Mindanao State University-Sulu, specifically, this study aimed to:

1. To determine how MSU-Sulu College of Education enhance its present educational technology?
2. To find out whether or not the College of Education faculty members are ready to introduce educational technology to the student?
3. To identify opportunities for the students to hone their skills in educational technology?
4. To know if the management give appropriate funding for the improvement of educational technology in the college?
5. To know if there is adequate equipment and facilities for the implementation of educational technology?

SIGNIFICANCE OF THE STUDY

The integration of educational technology in teaching is highly pertinent to the MSU-Sulu College of education, as it endeavors to enhance the efficacy both its faculty and students.

Educational technology has been identified as a highly convenient tool for enhancing the teaching-learning environment. The present investigation aims to provide valuable insights into the advancement of educational technology at Mindanao State University-Sulu.

The aim of this study is to provide guidance to faculty members and students on the utilization of educational technology for research and teaching purposes.

The present study is expected to provide benefits to various sectors in the country, particularly the educators in the province of Sulu.

This study aims to provide insights to educational administrators regarding the adoption of technology in education. The study seeks to determine whether the current steps taken towards technology adoption are effective in improving the efficiency and effectiveness of educational administration.

This study aims to provide assistance to teachers in recognizing their strengths and weaknesses in utilizing educational technology to improve the teaching-learning process.

The findings of this study can potentially provide a foundation for students to modify and enhance their attitudes and engagement towards the incorporation of educational technology within their academic program.



SCOPE AND DELIMITATION OF THE STUDY

The present study employs a phenomenological approach to qualitative research with the objective of gaining insight into the subjective experiences and interpretations of participants regarding a particular event, concept, or phenomenon (Ary, Jacobs, Sorenson Irvine, & Walker, 2021). The aim is to explore and comprehend the ways in which participants experience and attribute significance to the aforementioned phenomena. This topic encompasses the varying degrees to which educational technology is applied, information technology is utilized, and educators function within the field. The present study will not delve into the investigation of computer hardware and software issues. The research will be conducted solely at the MSU-Sulu College of Education, which is the designated research site for this investigation.

Operational Definition of Terms

Operational definitions are utilized to imbue the following terms with a more profound significance.

Educational Technology- refers to the use of modern and technologically advanced equipment and facilities as aide to teaching and learning process.

Trained Faculty Member- refers to the faculty member who has acquired significant and ample knowledge of his field. In line with educational technology, he/she is someone who is wee-versed in the use of modern gadgets such as computers and the like as well as excellent in relating it to the learners.

Improved Students Performance- refers to the byproduct of the trained teachers efforts or instructions. Since the students undergo innovative and more advance learning processes with the aid of modern technology, students can be expected to have processed a more efficient and well-improved performance in his/her field of study.

Quality education- refers to the kind of education that will equip the students with a surmountable experience responsive to the needs of the community which educational technology may provide.

Chapter II

RESEARCH METHODOLOGY

This chapter outlines the methodology employed in the study, including a detailed account of the research design, participants, verification and validity measures, data collection procedures, and ethical considerations.

Research Design

The present study utilized a qualitative research approach with the aim of delving into the personal narratives of the faculty members of the College of Education at Mindanao State University-Sulu, as recounted in their own words. According to Creswell (2005), in the context of qualitative research, the researcher primarily depends on the perspectives of the participants, employs open-ended and general inquiries, gathers data that predominantly comprises verbal expressions to identify patterns, and conducts the investigation in a subjective and potentially biased manner. The study employed conducting interviews with participants to investigate the themes that shed light on the central phenomena, namely the narratives of the College of Education faculty.

Research Locale

The present study was carried out at the College of education of Mindanao State University-Sulu, which is one of the eight (8) departments that constitute the aforementioned university. The university is situated in the municipality of Patikul, Sulu and is approximately 1.6 kilometers away from the Jolo town center.

Participants

The study's participants consisted of the faculty members of the College of Education at Mindanao State University-Sulu. They were chosen through purposive sampling for the purpose of



conducting phenomenological research, as stated by Ariola (2013). The research utilized a purposive sampling approach, whereby participants were deliberately selected to provide data that was most pertinent to the study. The study's participants consist of licensed teachers who hold varying university ranks, ranging from instructors 1 to associate professors and professors who possess a permanent status within the university.

Methodological Theory

The present phenomenological study employed the method of individual interviewing, which was facilitated through the use of an audio recording device. The methodology employed in this study involved a process of identifying salient statements or quotes, which were then used to generate clusters of meaning and themes through a process of analysis. The textual description serves to provide insights into the experience that will be encountered, while the structural description sheds light on the environmental factors that influenced the experience, all as the conditions and circumstances under which it was experienced. Following a thorough analysis of the aforementioned descriptions and the researcher's personal encounters, a comprehensive depiction was formulated to effectively capture the fundamental nature of the phenomenon. This term was also referred to as. The concept being referred to is the essential structure, as discussed by Ary, Jacobs, Sorensen Irvine, and Walker, (2017). The data analysis protocols were taken into consideration in order to derive both common and individual themes. The transcriptions underwent multiple round reviews. The development of codes that facilitate the physical separation of, materials pertaining to a specific topic from other materials is a critical step in the organization of data. Following the completion of coding all data, the researcher proceeded to group together all units that shared identical coding. The task involved the reduction of a large number of individual codes into a more manageable set of categories. Categories, in contrast, represent a higher level of abstraction compared to initial codes. Upon completion of transcript coding, items that were assigned specific codes were subsequently group together. The possibility of grouping codes into broader categories was subsequently evaluated. Upon establishment of categories, it is advisable to interlinking one or more categories to form overarching categories or themes.

Method of Data Collection

The present investigation employed the phenomenological approach, which is a qualitative research methodology that centers on the shared experiences of individuals within a specific cohort. The primary objective of this approach is to generate a comprehensive depiction of the characteristics of the specific phenomenon under investigation (Creswell, 2013). As per Moustakas (1994), it is customary to conduct interviews with a cohort of individuals who possess direct familiarity with a particular occurrence, circumstance, or encounter. A comprehensive or individualized interview utilizing the employment of appropriate techniques. The utilization of an audio recorder device as a means of data collection is being considered. A series of semi-structured interview guides were created and refined through expert validation. The semi-structured interview was utilized by the researcher, which included a set of key questions that were designed to define the specific areas that were to be explored. The methodology facilitated the divergence of the researcher and participants, enabling them to delve into an idea or response in greater detail. Simultaneously, the study furnished the participants with structured prompts to facilitate discussion, which the investigator deemed advantageous. In addition, the adaptable nature of this methodology, particularly in contrast to formalized interviews, facilitated the identification or expansion of data that may hold significance for both the subject and the researcher.

In addition, the utilization of one-on-one interviews was observed to be a time-intensive approach. However, it facilitated the establishment of a rapport between the researcher and the participants, thereby enabling the generation of insightful responses, particularly with regards to sensitive topics. Furthermore, this enabled the researcher to ask follow-up and probing inquiries in order to obtain supplementary data.



Procedure of Data Gathering

The initiation of the investigation was carried out subsequent to obtaining the endorsement of the corresponding college dean. Upon receiving approval, the participants were provided with a consent letter. The participants were interviewed at a time that was most convenient for them, and an audio recording device was used to capture the interview. The researcher conducted a face-to-face interview, utilizing personal interaction and observing two-way communication. The participants were interviewed for duration of 30 to 60 minutes each. During the interviews, the researcher utilized a set of predetermined questions while also posing supplementary follow-up inquiries to obtain further elucidation relevant to the investigation. The interviews were conducted in a manner that allowed for a natural flow of conversation, resembling typical discourse. The researcher ensured that this was the case. The audio recordings of all the interviews were captured using a recording device. Prior to conducting the interviews, all participants were duly informed of the recording process. Upon completion of the initial interview, the participants were informed that the researcher may request a follow-up interview in the event that further clarification is required.

Validity and Verification

The data analysis procedure employed by the researcher involved following the guidelines outlined by Creswell (2005) for coding qualitative data. Creswell's (2007) methodology for coding qualitative data involves a five step process. The first step involves an initial reading of the text data. The second step involves dividing the text into segments of information. The third step involves labeling the segments of information with codes. Finally, the fifth step involves collapsing codes into themes. In order to gain familiarity with the data, the researcher engaged in a process of reading through each transcript on two separate occasions. Upon the third iteration, the researcher categorized segments of the text based on significant concepts and will subsequently assign codes. The credibility of the data collection process was ensured through the implementation of member checking, as described by Creswell (2005). The study's participants were provided with transcripts of their interviews to assess for precision, with the option to revise them in cases where certain details or ideas from the interview were ambiguous.

Ethical Consideration

Given that this investigation involved the involvement of human participants, specifically educators, specific ethical considerations were carefully considered throughout the course of this study. The ethical considerations pertaining to privacy and safety were deemed imperative in order to safeguard the participants' well-being. The research process involved careful consideration of several ethical issues, including those pertaining consent and confidentiality of participants, pseudonyms and codes were employed. The consent forms utilized in this qualitative study were implemented to guarantee comprehension of the study's confidentiality and limitations. The instructions were presented orally during the commencement of the interview and subsequently furnished in written form. The study's aim and purpose were thoroughly communicated by the researcher, along with all pertinent information enabled the participants to comprehend the significance of their research's culmination. The voluntary nature of participation was unambiguously communicated. By implementing this approach, the participants were compelled to engage in the study. The study will only include pertinent information that is deemed to be of significant value. Thus, the present study made every attempt to uphold the dignity of the participants who shared their insights and those from whom data was gathered. The researcher also demonstrated reverence for the knowledge acquired and for the research process itself.

CHAPTER III

FINDINGS

This section presents the themes generated from the responses of eight (8) college teachers from the college of education Mindanao State University-Sulu. To present in an orderly manner, the five (5) major problems were answered and their dominant themes are presented for each section.

SOP1: Teaching Enhancement through Educational Technology

The dominant themes generated when asked about how the College of Education enhances its present educational technology are (1) **Increased Collaboration and Communication**, (2) **align the Syllabus in the current situation**, and (3) **Revisit the Curriculum**.

Apart from this, the respondents were asked about how long they think educational technology will be relevant and supported; and how does educational technology align with their college vision and mission. Most of the respondent participants answered that their institution may enhance the existence of their technology through increased collaboration and communication. This theme was evident through the respondents' response, *"For me, Educational technology can foster collaboration. It's now the trend e."*-Teacher 1

"Not only can teachers engage with students during lessons, but students can also communicate with each other."-Teacher 3.

"Through online lessons and learning games, students get to work together to solve problems."-Teacher 4.

"This educational technology will be relevant for a very long period of time, I believe. Hindi na siya matatanggal sa sistema natin. It will be here forever. And institution and governments should support and adapt with it."-Teacher 6.

"Yup, with technology, there is really an increased collaboration and communication. But of course, we should still look at the students who can't also cope up"-Teacher 7.

These statements are backed up with the study in accordance with the International Society for Technology in Education (ISTE) in which a significant portion of the high-demand positions of today were produced in the previous ten years. Teachers can aid kids in developing the abilities they'll need to be successful in the occupations of the future as technological advancements fuel globalization and the digital transformation.

The second theme is about aligning their semestral syllabus with the current situation. This theme has been evident to,

"Kailangan relevant palagi yan eh.Kaya nga dapat aligned yung existing syllabus sa current situation"-Teacher 2.

"To be able to align with the college vision and mission, the college should initiate to revisit the syllabus in accordance with the current situation"-Teacher 6.

"Ganito kasi yan, Yung syllabu, Kailangan naka angkla yan sa contemporary world. Dapat may synchronous and asynchronous. Dapat kina-consider yung platforms na gagamitin, atsaka kung mahinaba o malakas yung internet. Dapat lahat ng aspects na pwedeng tingnan ay inaassess. Para sa kapakanan ng mga students yan lahat."- Teacher 7.

With the alignment of syllabus, the digital learning tools used effectively in the classroom can boost student engagement, assist teachers in creating better lesson plans, and promote individualized instruction. Additionally, it aids pupils in developing crucial 21st century abilities.

A very much related theme from the second is to revisit the curriculum. In line with checking if the syllabus is in accordance with the current situation, the respondents also mentioned that there is a need to revisit curriculum, especially when it is not yet aligned with the current situation, hence, a high demand to revisit their vision, mission and objectives is also recommended. This is especially evident in the responses from. *"Ang hirap kasi nagyon, hindi naman tugma yung visio, mission and objectives naming from the educational technology kasi very traditional ang teaching style ditto at need talaga na irevisit ang curriculum na meron kami"*-Teacher 8.

"I would strongly recommend to revisit the curriculum. And sana this will be an order from the higher up para magfollow lahat ng institution. It's high time to have a standard educational technology system- Teacher 5.

Virtual learning environments, video, augmented reality (AR), robots, and other technological tools can not only make classes more engaged but also more inclusive learning settings that encourage cooperation and inquisitiveness as well as give teachers the ability to gather statistics on student performance.

However, it's crucial to remember that technology is a tool and not an aim in itself in education. The potential of educational technology depends on how educators use it and how it can be used to best meet the needs of their pupils.

SOP2: Readiness of Faculty and Students in College of Education MSU-Sulu on Educational Technology

This portion presents the readiness of the faculty and students in the College of education on educational technology. The themes outlined on these findings are solely based on the responses of the college teachers and not from the assessment of the school. However, the researcher had an assumption that the college teachers (faculty) evaluated the readiness level of their students well based on their observations, and also that they are knowledgeable enough to conclude about their own readiness. Technology readiness is defined as "people's propensity to embrace and use new technologies to accomplish goals in home life and at work" (Parasuranam, 2000.p.308).

The content of the questions involved: are the faculty members ready to introduce educational technology to students: what types of training or seminars have you attended; and how frequently have you attended them in order to improve your readiness to use educational technology. The themes that emerged from this research are **(1) Ready, (2) Not yet Ready, and (3) It is not about readiness.**

Most of the College teachers were found to have a high level of readiness in terms of adapting from educational technology even if most of them are not yet implementing it. This is expressed through, *"So for my students to be ready, I, myself, should be more ready with the educational technology". I cannot say that they are ready because we are not yet implementing formal educational technology.*"- Teacher 1

"When the pandemic started, everything was clueless. But despite that, I think I have learned from it is the point that we should all be ready for all circumstances no matter what it takes. We will never get ready if we don't start thinking that we can do something."- Teacher 2

"Hmmm. I think I am ready naman. Kapag ready ka, your students will follow"-Teacher 3.

"Since our department CoEd is very much aligned with the goals of technology, my students are ready. Moreso, to me as their teacher. Even before the pandemic."-Teacher 4

"We are all ready. We are starting to implement the educational technology through visiting the syllabus and curriculum. My students and I are all ready and they are also following the instructions I am giving. So far, we don't have any challenges met about this".-Teacher 7

The second theme that emerged is that the teachers are not yet ready. Their response is evident though, *"Personally, I am not yet ready. There are so much to learn from and I am lacking, actually, I have no seminars related to educational technology. This is why kailangan ko munang bigyan sarili ko ng oras para matuto bago ko siya ibbuga sa klase ko. Nakakahiya naman kung ako pa yung may walang alam, di ba?"*-Teacher 6

"Well, the fact that we are not yet implementing this. I feel like I am not ready. Unless there will be a time when the government will give us time to have seminars like this. Kaso ang hirap e. Trabaho ditto, trabaho diyan. Ang hirap isingit ng seminars kaya dapat may order. Yung tipong mandatory seminar on educational technology."-Teacher 8 Another theme that emerged but is less relevant from the response is from Teacher 5 who said that *"For me, it is not a question about readiness. We all comply no matter what. As teachers or students, all we do is to follow what the management is telling us to do."* From here, the last theme, which is "It is not about readiness" became evident.

Today the community, including the teachers, has entered the digital era, an era that has surpassed the era of computer technology. One study in Indonesia which aims to describe Teacher's Readiness in Using Digital Technology for Learning in Samarinda City High School has been conducted. Based on the average value of the results of respondents' answers to the question

indicators on the variable technical readiness of teachers in the use of digital technology for learning is 2.48 classified as poor while the average value of the respondent's answer to the question indicator on the pedagogical readiness variable of the teacher in the use of digital technology for learning is 2.90 which is poor (Sholeh, 2019).

On the other hand, a study about the student's readiness level was also conducted. The findings showed that all 50 of the students owned a smartphone. While 82.6% of the students did not attend any training in how to use the smartphones, 80.4% of them have their own storing strategies and nearly 90% of them reported having technological skills in operating their smartphone such as accessing applications, ability to record, share and produce technological resources (Murugan et al., 2017).

SOP3: Opportunities in educational technology among students

This section involves answering the following questions: do the students have the opportunity to hone their skills in educational technology; how will educational technology empower students to control their own learning; and will educational technology help students think and learn more deeply. Two themes have emerged from the responses of the college teachers: **(1) Opportunities and (2) Challenges**. On each theme, subthemes are also in place.

1. Opportunities

From the responses of the college teachers (faculty), more opportunities have been shared according to their experiences and observations from other schools since they are not yet implementing educational technology.

2. It produces outcomes-based learning

Most of the responses shared that the educational technology have the ability to produce an outcome-based learning through the following observations from the college teachers (faculty):

"It helps students choose learning patterns that suit their needs or capabilities."-Teacher 1

"It also resulted in blended learning, which gave more responsibility to the student."-Teacher 2

"They must interact with teachers directly and engage in discovery-based learning."-Teacher 3

b. Personalized education

One of the impactful changes brought by EdTech is personalized learning. In every aspect, whether it is classroom, home study, or virtual session, students can get tailor-made learning experiences. This has been evident by Teacher 8, *"You see, these students have their own generation. And I think they will like it more even kasi in siya sa generation nila. It's more of a personalized education"*.

c. Interesting and fun-filled

Augmented Reality (AR) is enabling students to see science concepts as visual graphics on screen in the class or real-time environment. Virtual Reality (VR), on the other hand, let's students take an educational tour of places/destinations without leaving the classroom. In comparison to AR and VR, that *"Both technologies together are truly transforming the mode of teaching and creating immersive learning experiences for students"*, the same is true with Teacher 4 who said that *"It makes the lessons interesting and fun-filled for them."*

d. Eases teaching methods

The benefits of educational technology also include an easy teaching experience. The teachers can tutor the students from a distance or communicate easily outside the classroom. This enhances their ability to give instructions, improve the learning of students, and help them get better academic scores. This statement is evident by;

"Grabe yung convenience nung ganito na yung set up. Pero need talaga ng skill kasi in using this"-Teacher 1

"Sobrang dali ng buhay pag technology talaga gagamitin mo. Pwede kang mag synchronous and asynchronous. Very time efficient pa for both the students and teacher."-Teacher 5

e. Allows students to enhance their mental wellbeing

One of the significant benefits of digital technology in education is that it improves the physical and mental well-being of students. various digital tools eased their tedious learning courses and made them interesting. Teacher 5 additionally said,

“In many ways. EdTech methods improve your cognitive skills. Virtual learning sessions and the integration of AR are two prime contributors. They enhance the capabilities of your brain to read, interpret, learn, remember, think, and use logic. All these hugely impact your academic learning and performance in the long run.”

In connection to this, Teacher 3 said, *“As you can score good grades/marks due to the use of educational technology. It gives you confidence and a positive feeling. This boosts your mental health and helps you to concentrate better on your studies.”*

According to a BuiltIn report, nearly 90% of teachers agreed that technology helped them reinforce lessons and positively impact the performance of students. Other studies showed that a majority of middle-school students improved their test scores or grades after embracing technology and digital tools.

Despite this encouraging scenario, the use of technology in education comes with challenges. Educational technology can negatively affect the students’ focus by resulting in excessive screen time. Also, there are many doubts regarding the effectiveness of teachers in using the tools or technology concepts like AR, VR, and AI. Many schools could not afford the technologies because of the lack of resource support.

Teachers and students are facing a few challenges to thrive amidst the force of educational technology. Here is a summary of the challenges that they mostly face while adopting educational technology.

a. Resistance to change

The resistance to change has been evident by Teacher 6, *“Many teachers, parents, and educational institutes do not accept technology wholeheartedly.”* Teachers who do this most probably consider only real-time learning in classrooms through one-to-one interactions with parents to be effective.

b. Resource or infrastructure support

As Teacher 8 said, *“Any Educational Technology applications or devices need internet support for functions like video streaming, online chat, video calling, and so on”.* This is much true as the internet connectivity with higher bandwidth and reliable devices are necessary for operating any Educational Technology apps or tools. Thus, schools, teachers, and students need to have these resources. In addition, Teacher 6 said, *“Mahal kasi e kung yun talaga ang goal. Very costly”.*

c. Insufficient technical skills

The educational sector demands that teachers and students should have basic technical skills and know-how. They are primary users of educational technology tools and devices. So, they must have the necessary skills or gain them to leverage the benefits of educational technology. However, there still existing faculties who are not involved in educational technology or related seminars. This is evident by Teacher 6, *“There is so much to learn from and I am lacking, actually, I have no seminars related to educational technology.”* And Teacher 8, *“I am not ready. Ang hirap isingit ng seminars kaya dapat may order.”*

Technology is constantly changing the education system for good. While it is not at all replacing the traditional classroom methods of learning. It is blending with them to prepare students for situations in the technology-paced world.

SOP4: Involvement of the Management

This section provides the results from the transcribed responses of college teachers, specifically, answering the questions: does the management give appropriate funding for the improvement of educational technology in the college; what kind of educational technology support does the management provide; and how frequently does it supply educational technology to the college. Two (2) themes have been identified from their responses, namely, **(1) Support through workshops and conferences, and (2) Incentive support.**

Among the themes, the most dominant was “Support through workshops and conferences” since most of them who were already implementing educational technology in their schools were given free workshops and conferences related to educational technology. This is evident by multiple sources:

“Ang kagandahan talaga ay binibigyan ka ng opportunity para matuto”-Teacher 1

“Grabi yung support ng employer naming kasi may pa-free seminars and workshops kami para lang maka adjust kami sa mga pangyayari”-Teacher 2

“Very proactive naman administrator naming kasi they are giving us what we need so that we could be knowledgeable”-Teacher 3

“Bale binigyan kami ng opportunity to familiarize the online resources that we have”-Teacher 5

In a study in New York, administrators should support and encourage teachers who want to go to conferences and participate in the staff development.

Providing opportunities for staff development is an important part of the administrator’s role. Agrees Patrick Greene, a professor of education at Florida Gulf Coast University in Fort Myers, Florida.

In connection to the first theme, the incentives would also be helpful for the college teachers to help them be skillful. Incentive support is very much evident by:

“So when we go off-campus, our dean approves our request just so we can learn. With this, they are giving us incentives” -Teacher 3

“Our Chancellor also gives us an incentive when we have outstanding performances as teachers”-Teacher 5

School administrators, according to Fred Holmes, Webmaster at Osceola (Nebraska) Public Schools, can easily promote technology integration. They can encourage teachers’ curiosity about what can be done using technology, provide incentives for teachers to attend workshops and conferences, persuade teachers who use technology in the classroom to model that use for others, set up a mentoring system so teachers have someone to go to for help and ideas, and provide time for teachers to experiment with technology.

SOP 5: Educational Resources

This section presents various resources in the implementation of educational technology, especially, it answers: is there adequate equipment and facilities for the implementation of educational technology; what educational technology resources are available to faculty and students; and what educational resources are available in your college. Two (2) themes have emerged from the responses and these are **(1) Adequate and (2) Lack of Resources**.

Adequate resources have been identified by respondents who get all-out support, whether educational technology is fully implemented or not. This has become evident through: *“Because our administrators are supportive, the facilities are adequate. If there is one thing that is not adequate, it is the resources of our students. but to some extent, these are already out of control. And we only can lend them the computers inside the libraries, but of course, they are not allowed to bring these resources home”-Teacher 1*

“Despite challenges met, I could still say na hindi pa rin problema and mga resources”-Teacher 3

“Of course, problems would always exist but the good thing is our Chancellor has allotted a budget for equipment”-Teacher 5

This problem is a wicked problem-a problem that has many solutions but will ultimately take a while to be solved (Rittel, 1973). The wicked problem at hand is the lack of resources in classrooms. This problem affects students and teachers, which in turn can affect the parents of the children. The lack of resources in classroom can cause extreme distress on the students and teachers. Not only are the students and teachers in distress, but they are unable to learn to their fullest potential because they are not being given the proper resources.

Lack of resources have also become evident due to the shared experiences of two college teachers.

“Ito talaga and isa sa mga problema. Yung equipment. Hindi pa talaga ready”-Teacher 6

“Alam mo yung, feeling na kahit gusto mong mag exert ng effort, pero kulang talaga sa gamit,. Kaya hindi ko mabigay yung best ko kahit gaano ko kagusto na ipakita somehow yung eagerness ko to help them, wala talaga eh. Super lacking na talaga ang resources. I hope the government can do something with this”-Teacher 8

Study shows that funding is correlated directly with the resources in schools. “Schooling resources that cost money are positively associated with student outcomes. These include smaller class sizes, additional instructional supports, early childhood programs, and more competitive

teacher compensation (permitting schools and districts to recruit and retain a higher quality teacher workforce). “According to Baker (2018) this means that the ways schools spend money needs to change.

Overall, integrating technology into classrooms will benefit everyone. Students and teachers will have an easier time communicating when it comes to their assignments, and the parents won’t have to worry about buying as many books for their children

CHAPTER V CONCLUSION AND RECOMMENDATION

Conclusion

Five major questions were answered carefully through analyzing the responses of the college faculty of the college of education in Mindanao State University-Sulu. These are: (1) Teaching Enhancement through Educational Technology; (2) Readiness of faculty and students in the College of education at Mindanao state University-Sulu on educational Technology, (3) Opportunities in educational technology among students, (4) Involvement of the Management, and (5) Educational technology resources.

Through thematic analysis, results show that the educational technology, based from the perceptions of the most of the faculty of the college of education is that an increased collaboration and communication is the top most considered outcome of educational technology. However, not all Faculty in the College are implementing educational technology, hence, to most of their suggestions, there is a need to re-align the syllabus in the current situation and to revisit the curriculum tailored fit to the use of technology nowadays.

In the various modes of learning and platforms used by the College teachers (faculty) of the College of education, it can be seen that most of them are ready in terms of the delivery of teachings. This is because most of them are slowly implementing and incorporating educational technology in their college, not to mention that some of them are not yet fully implementing and are still conducting benchmarking from other schools. Those who are not yet ready to deliver educational technology are those who are not equipped with technological skills. One respondent said that the readiness is not an important factor to deliver proper education to students; rather, it is in the superiority of the administrators that are considered the sole reason why institutions are implementing educational technology.

With this, it can be seen that there are varied experiences among college teachers (faculty) in the college of education at MSU-Sulu, per se. opportunities and challenges are experienced and observed through vicarious learning by the respondents. The opportunities are producing outcome-based learning: there is a personalized education; interesting and fun-filled education is met; it eases teaching methods and allows students to enhance their mental wellbeing. The challenges considered by the respondents are: one’s resistance to change; resources or infrastructure support; and insufficient technical skills.

To some extent, the exposure to opportunities and challenges would depend on the managements’ support to its employees. And results show that the administrators shoulder the expense of their employees through attending seminars, workshops and training. Similar to this some of them were also given incentive based on their teaching performances.

A factor that brings opportunities and challenges are related to the resources of a specific higher education institution. Some institutions have adequate equipment and facilities. However, there are also institutions that lack of resources. In some cases, those that lack resources are those who are also not given incentives or other support.

Recommendation

By educational technology, it means the unity of technologies such as computers, web and multimedia, digital boards, and overhead projectors, and video integration. All these are truly influencing the education sector, assisting in the teaching and learning processes. From the conclusion stated above, the following are the recommendations for students, teachers, parents, the HEIs administrators and future researchers.

1. For Students

Connect with teachers so that communication may be enhanced. Reach out when needed especially when they have problems with regards to the use of technology (i.e., poor skills or poor connectivity). As much as possible, cooperate with group members for interaction and participation. The educational technology helps connect to the outside world in which it prepares students for the workforce. Additionally, it teaches punctuality and responsibility by not excluding the fun factor and high interest in learning.

2. For Teachers

In line, with the results, teachers' readiness should be high so that students can follow. Ensure that the teachers have basic knowledge on educational technology to fully implement the goals. They may enable themselves to engage with new methods of teaching that are attention-grabbing for the students.

3. For Parents

A high support system is highly recommended so that students may cope with the challenges brought by educational technology. Parents could set expectations for their students and track their children's activities. They could use technology to help their children face struggles in education and overcome them. In addition, parents could get help from available online resources and educational tools to help their children in completing a task. They can access educational videos and recorded class lectures to understand the learning experience of their children and support them. It is important to note that parents do not need to continuously keep an eye on their kids to help them focus on their studies and can relax or enjoy their own time.

4. For HEI Administrators

The administration should ensure that their faculty brings utmost importance to educational technology by being involved with seminars and trainings. The HEI administrators should initiate such activity so that it can be more cost effective for their faculty members.

5. For Future Researchers

Future researchers may opt to conduct a qualitative study to cross-validate the findings of this study. More number of participants are expected to answer to gain data trustworthiness.

REFERENCES

- [1] Brooks, J. G., & Brooks, M.G. (1999). In search of understanding: The case for constructivist classrooms. Ascd.
- [2] Cawelti, G. (1999). Handbook of Research on Improving Student Achievement. 2d ed. Arlington, Va. *Educational Research Service*.
- [3] Checkering, A., & Ehrmann, S.E. (1996). Implementing the seven principles: Technology as lever [Electronic version]. American Association for Higher Education, 3-6. Retrieved January 24, 2006.
- [4] Corcoran, T., & Goertz, M. (1995). Instructional capacity and high performance schools. *Educational Research*, 24 (9), 27-31.
- [5] Corcoran, T. B. (1995). Helping teachers teach well: Transforming professional development.
- [6] Corpuz, B. B., & Lucido, P. (2008). "Educational Technology 1. Quezon City." *Metro Manila: Lorimar Publishing Inc.* (2008).
- [7] Creswell, J. W., Hanson, W.E., Clark Pano, V.L., & Morales, A. (2007). Qualitative research designs: Selection and Implementation. *The counseling psychologist*, 35(2), 236-264.
- [8] Fenstermacher, G.D., & Richardson, V. (2005). On making determinations of quality in teaching. *Teachers college record*, 107(1), 186-213.
- [9] Fouts, J. T. (2000). Research on computers and education: Past present and future. *Seattle, WA: Bill and Melinda Gates Foundation*.
- [10] Goldman, S., Cole, K., & Syer, C. (1999). The Technology/ Content Dilemma.
- [11] Jhurree, V. (2005). Technology integration in education in developing countries: Guidelines to policy makers. *International Education Journal*, 6(4), 467-483.

- 
- [12]ISTE. (2016) ISTE Standards for Students. Retrieved from https://www.iste.org/standards/for_students.
- [13]Jackson, A. W., & Andrews, G. A. (2000). Turning points 2000: Educating adolescents in the 21st century. Teachers College Press.
- [14]Kaufman, M. (1997). A professional development stance for equity. *SSI Perspectives*, 2(3), 4-5.
- [15]Kennedy, M.M. (1998). Education Reform and subject matter knowledge. *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, 35(3), 249-263.
- [16]Marzano, R. J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Ascd.
- [17]Michigan Department of Education (2006). Michigan Merit Curriculum Online Experience Guideline Companion Document. Retrieved from https://wwwmichigan.gov/documents/mde/OE_Companion_Doc_12_184084_7.
- [18]Moreno, R., & Valdez, A. (2005). Cognitive load and learning effects of having students organize pictures and words in multimedia environments: The role of student interactivity and feedback. *Educational Technology Research and Development*, 53(3), 35-45. Moustakas, C. (1994). *Phenomenological research methods*. Sage publications.
- [19]Order, C. M. No 30 series of 2004. *Revised Policies and Standards for undergraduate teacher education curriculum*.
- [20]Oliver, K. (2010). Evaluating teacher readiness for the implementation of one-on-one computing based on national educational technology standards. *Journal of Literacy and Technology*, 11(3), 40-76.
- [21]Papert, S. (1997). Why School Reform is Impossible (with Commentary on O'Shea's and Koschmann's Reviews of "The Children's Machine").
- [22]Park, T. & Van de Merwe, A. (2009). The transformative role of ICT in higher education: a case study of the alignment of educational technology utilization with the vision of Stellenbosch University. *South African Journal of Higher Education*, 23(2), 356-372.
- [23]Rogers, Y. and Scaife, M. (1998). How can interactive multimedia facilitate learning. In *Proceeding on Multimedia Interfaces*.
- [24]Wang, Q., & Woo, H. L. (2007). Systematic planning for ICT integration in topic learning. *Journal of Educational Technology & Society*, 10 (1), 148-156.