

Accepting ICT Integration: A Challenge to School and Curriculum

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ABSTRACT

This paper documented the acceptance of Information and Communication Technology (ICT) integration as a challenge to school and curriculum. Qualitative approach was applied in which narrative was the principle in gathering data. The Pakwan Integrated School of Lanuza District, Division of Surigao del Sur was the scope of the study. The demographic profile of school as to distance, means of transportation and road features, communication and internet inaccessibility greatly affects to educators' attitudes and emotions that result to the delay of updates and submission of reports, and to any organizations (government or non-government) in delivering school's support and services to ICT integrations and projects. Thus, concreting the road may the first priority that government or any concerned agencies or organizations take an action to address the needs of the school in integrating ICT.

Keywords: *ICT Integration, School's Demographic Profile*

INTRODUCTION

The School is an important environment in which students participate in a wide range of computer activities (Kent and Facer,2004), while the home serves as a complementary site for regular engagement in a narrower set of computer activities (Shan Fu, 2013). On the other hand, Information and Communication Technologies (ICTs) changed the way of accessing and utilizing learning, teaching and research resources (Eligi and Mwantimwa, 2017). ICT is being integrated and part of curriculum as a tool for improving or discovering quality education. Hence, ICT has a complex role in recent societal transformation, either at home or at school or in society. Significantly, this study

determined how the schools accept technology integration, and examined how it influences to educational system.

As technology was introduced to the framework of education, there was a trouble perception of how it affects to the acceptance and implementation to schools and its curriculum. Though ICT has a positive impact to learners (Castro Sánchez and Alemán 2011; Brush, et.al, 2008; Chai, et.al, 2010) but many challenges of it needs to address and these been cited by different authors (Shan Fu, 2013); low teacher expectations and a lack of clear goals for ICT use in schools (Al-Bataineh et.al. 2008), lack of teacher collaboration and pedagogical support, as well as a lack of experience among cooperating teachers (Ertmer and Otterbreit-Leftwich 2010), and insufficient time to master new software or integrate ICT during a class period (Almekhlafi and Almeqdadi 2010). If a certain school leader could address the said challenges, the effective use of Information and Communication Technology (ICT) in schools can have an immediate positive impact on the schools' learning environments (Semih Summak and Samancioğlu, 2011). In the area of vocational education and training (VET), the integration of ICT is not only an option but also a necessity for making the education process more attractive (Paryono & Quito 2010). According to Tezci (2011), teachers should learn not only how to use technology to enhance traditional teaching or increase productivity, but also should learn from a student centered perspective how ICT can be integrated into classroom activities in order to promote student learning.

The ideas claimed by different authors support and reinforce the vein of targets in this study that ICT influences the educational trends. *The implementation of 2002 Revised Basic Education Curriculum (RBEC) of Philippine government recognize ICT as paramount of alleviating poverty and achieving competitive advantage in the global economic ground. Its salient features is the inclusion of basic learning competencies in computer skills both elementary and secondary education* (Camacho and Pintor, 2015). The acceptance of ICT integration brought challenges to schools' management for it created issues to the administrators, teachers, and students, and to school and curriculum. Particularly, in the District of Lanuza, Division of Surigao del Sur, four secondary schools works collaboratively, aiming for an excellent performance of the district. Besides mobile communication, educators used online communication, and Group Chat (GC) box was applied as a strategic action in meeting up reports deadline, but, some school affects the

performance of the entire district. In this study, Pakwan Integrated School was the subject of the study, one of the schools in Lanuza District that affect the delivery of ICT integration. This paper documented to present the factors influencing the acceptance of ICT Integration as challenge to school and curriculum.

The acceptance of ICT to educational system was still needs investigation to deepen the understanding on its application to schools' performance and curriculum. This study was undertaken to document how the school accept ICT integration, and to determine the factors influenced its performance. Thus, 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.



Plate No. 1 from left, The Site of the study (Photo courtesy by Rudy F. Daling), and The researcher on the site of the study (Photo courtesy by PIS Faculty)

RESEARCH METHODOLOGY

This study utilized qualitative approach in which narrative type of research was applied. The actual teaching as means of immersion of the researcher to the site was an opportunity to give insights and reveals in this study. It involved collecting qualitative data through actual survey and observation, and documentation. To address the objectives of

the study, data were presented through photos of actual experiences and observations of the site.

RESULTS AND DISCUSSIONS

ICT in Curriculum Development

ICT is one of the inevitable demands of globalization. Specifically, the internet in the Philippines allows the person to know and update what is happening to the rest of the world by simply browsing the Google (Aldama, 2018). ICT was just introduced in Home Economics and Livelihood Education (HELE) and Technology and Home Economics (THE) subject, this was because ICT was studied in separate subject and applied as tool for learning in different disciplines (ICT in Education, UNESCO, Bangkok, 2007: Cajilig 2009).

The persisting fact of ICT in economic development greatly contributes how ICT transform and influence the society and educational system of Lanuza District, Division of Surigao del Sur. The rapid growth of modern advances in technology and global competition initiated and motivated the educators to adapt this advances to meet and to succeed the demand of time. On the other hand, the effective utilization of intangible assets, such as knowledge, skills, and innovative potential are the key resources of Economic success (Economic and Social Research Council, 2005). As part of curriculum development schools" administrators need to consider ICT integration to prepare students in "a knowledge society" (Ghavifekr, et. al., 2012). It aims to capacitate individuals in a new set of skills that known as the 21st Century Skills. Many educators in the District of Lanuza were challenge to design and employ a unique skills and learning through the use of technology which known as the 21st Century Skills that enhances greater collaboration, efficiency, effectively, flexibility and innovative, and assimilates a changing perspectives and new technologies that equip everybody in the 21st Century. The lack of infrastructure for connectivity and accessibility, and teachers need for more training on ICT integration in curriculum are major task in current educational system in Philippines (Daling, 2016). The full implementation of the K to 12 curriculum in 2016 offers students more opportunities to experience technology-supported learning that is interactive, interdisciplinary, collaborative and authentic (UNESCO, 2008). Particularly, the Division of Surigao del Sur conducted ICT training for ICT coordinators, who could give technical assistance to its respective

school, to capacitate every educator in teaching-learning process with ICT integration, and planning responsibilities and duties that ICT requires in achieving goals.



Plate No. 2 Teachers on Division Training of Trainers for ICT, Taken last September 2016 (Photo courtesy by Jonathan Cale Villason)

This implies in the claim of theory Technology Acceptance Model (TAM), “the perceived usefulness, and “the perceived ease of use” (Davis, 1989; Long, 2009). Aiming and capacitating the educators in ICT skills is the claim of “the perceived usefulness”, and adapting the required ICT skill, as it helps in teaching and job performance as efficient and effective, is the assertion of “the perceived ease of use”. Thus, the claims are the affirmation of teachers’ attitudes in embracing technology in his/her job performance.

However, some challenges were observed on the ICT training provided to the trainers. One was the inconsistent trainees attended or the different person attended in every phase of training conducted by department, in which they were the trainers who will train in their respective stations’ colleagues. Investigations showed that there were inconsistent trainees attended in every training because of the conflict of time, such as school’s activity that need to accomplish and comply, and there were seminars or trainings that need to be attended in same schedule of ICT trainings. Secondly, the unavailability of ICT resources or materials in school in which ICT trainers were found difficulty to realize the knowledge and skills gained in trainings. Thus, it could effect to the attitude or mode of ICT trainers in the realization of trainings’ objectives. Lastly, the attitude or interest of teachers to be trained in utilizing ICT in classroom or in jobs’ task that affects to ICT trainer in transferring the ICT skills and knowledge. Investigations showed that teachers were not interested because they found that some ICT skills were not applicable to their classroom,

such as, Microsoft Excel in which for a Grade 1-teacher was not much using it, and some old school teachers were not interested anymore to learn ICT, they found difficulty to adapt the ICT.

Teachers' Profile

Teacher has been the change agent and plays a critical role in the success of teaching and learning in VET programs (Buntat et al. 2010). Staples,et.al (2005) stated that good planning for technology integration requires a special understanding of specific hardware and software related to the curriculum. Staff development and teacher training are also indispensable to supporting the curriculum with technology integration (Shan Fu, 2013).

As shown in image, there were more young professionals than classic teachers. These young teachers were locally known as the millennial educators. It was evident in the study of Daling (2016) showed that most of the teachers were still new in teaching profession and more female teachers integrate ICT to lessons than male teachers. It stresses that new teachers were efficient and effective in delivering ICT because they are exposed to modern trends. Millennial educators were evidently equipped and exposed ICT knowledge and skills. Daling (2016) added that seasoned teachers were more on traditional instruction that greatly affect to effectiveness in employing ICT to job performance.



Plate No. 3 from left: Teachers and Administrator of Pakwan Integrated School, Date taken October 2016 (Photo courtesy by Pakwan IS Staff), and Teachers coping the deadline reports at night, despite in the lacking source of electricity. Photo courtesy by Nikki John S. Bruzon

The institution should provide educators with trainings and enhancements for they are the agents in the process of educational innovation and the implementation of ICT. The changes of teachers training depict a profile of development and ongoing changes that have taken place in different training programs in the perceived role of the teacher and in the field of the teaching profession (Back, 2012; Avidov-Ungar, & Iluz, 2014).

Thus, in collaboration of preparing students for the 21st Century skills, administrators and teachers are expected as the innovators in using ICT in their schools"

curriculum. This was due to the capability of ICT in providing dynamic and proactive teaching-learning environment (Arnseth & Hatlevik, 2012). Hence, it was observed in the study that teachers using ICT in delivering curriculum, students expect and motivate to seek new sources of knowledge as skills in using ICT which learning is a meaningful process.

Teachers' Competency

Teachers need to feel confident in their ability to facilitate student learning with technology in order to integrate technology into their classrooms. To achieve this goal, more professional development is required with a focus on increasing teachers' skills so that they are able to overcome apprehensions associated with using technology (Ward and Parr, 2010). This fact supports to the evidence of Cajilig (2009) that majority of the teachers were highly favorable attitudes towards the use of new technologies in instruction. Hence, implementing effective teaching with ICT integration requires changes in teachers' knowledge, beliefs, and school culture (Ertmer and Otterbreit-Leftwich 2010).

The acceptance of modern technologies is one of the reformation processes in an existing environment in order to provide learners knowledge in specific subject areas, to promote meaningful learning, and to enhance professional productivity (Tomei, 2005, as cited by Buabeng-Andoh, 2012). Teachers' competencies have an important role to bridge this adoption. According to Plair (2008), as cited by Daling (2017), teachers' competencies in ICT strongly influence the efficiency and effectiveness of teachers towards his/her works that constantly develop through actualization.

In factual observation teachers were trying to apply a unique teaching-learning process with the use of ICT just to change traditional teaching approaches (teacher-centered) to modern approaches (student-centered). This implies the broadening development of technology is inevitable because each function is very important in different fields such as entertainment, business, engineering, commerce, research, and education (Gever, 2012; McDermott & Gormley, 2015). In connection, administrators and teachers must be capacitated enough to introduce and utilize these different technology in administrative and curricular aspect.

Learners' Competency in ICT

The ICT based technological and pedagogical framework helps engage students' curiosity and initiate learning to critical and analytical thinking. ICT-based learning linked to constructivism paradigm today (Kharade & Thakkar, 2012). The claim of Kharade & Thakkar (2012) is anchored to Bruner (1977) that the curriculum should be designed from simple to complex and requires revisiting prior knowledge. Its knowledge is considered to be socially as well as individually constructed. The focus of schools' management should be on the development of a suitable environment for constructing knowledge rather than for its transfer. Thus, the efficiency and effectiveness of schools' management and students' academic performance in integrating ICT are the basis of schools' performance.



Plate No. 4 Students on the process of learning (Photo courtesy by Rudy F. Daling)

Hence, learners were actively involved in the learning processes in ICT classrooms, they were authorized by the teacher to make decisions, plans, and so forth (Lu, Hou and Huang, 2010). Learners' illiteracy in ICT affects also in teachers' ICT integration. Teachers find difficulty in giving performance task through ICT integration. As it claims in the theory of constructivism, school should design a curriculum that processes simple to complex opportunity of learning (Bruner, 1977). Though, learners were oriented in modern gadgets but observation showed that they have least competency in computers, such as computer encoding. Investigation reveals that students were least competency in ICT because ICT was not introduced during their early learning. Computers were not introduced in the absence of electricity, it was not relevant to their daily living because the main source of

living of their family is farming, and previous teachers failed to integrate ICT. Hence, the influences of ICT could be observe in socio-economic background of individuals

Basically, schools cannot truly prepare students to function within society if the curriculum fails to cover the equipment and skills that can actually use in the real world. Schools cannot expect a higher academic or school performance of the programs without sufficient and effective integrating technology; everybody must be digitally literate, both educators and learners, to be a productive citizen (Semih Summak and Samancioğlu, 2011). Thus, administrators, staffs, teachers, students, and stakeholders may use technology if they want to work successfully in an increasingly complex and information-driven society.

The abovementioned scenario was one of issues that Philippine government realizes the national policies. Philippine DepEd mandated the integration of ICT in all learning areas, both hardware and software. Hence, electronic-learning and the use and application of ICT were encouraged in all subjects as most viable intervention in educational reform. It was expected that all public elementary schools in the country would have computer laboratories (Mansagca and Londerio, 2008). Recently, the absence of ICT infrastructure is very much evident in far flung schools.

School's Geography

In actual experience, teachers stay in school in whole weekdays and stay in their homes during weekends or holidays. Teachers find tired if they will use to get back home every day. The profile of school as to distance, means of transportation and road features, communication's and internet inaccessibility, and armed conflict greatly affects to educators' attitudes and emotions that result to the delay of submission of reports (print and online), and to any organizations (government and non-government) in delivering school's support to ICT implementation.



Plate No. 5 From left: a selfie of the researcher at Kilometer 8, a road going to site of the study, and teachers' riding on Habal-habal (Photo courtesy by Cheryl B. Agustin)

The Southern part of the municipality of Lanuza, Surigao del Sur, Philippines, riding through "Habal-habal" (motorcycle), about 22 kilometer and 2 hours to travel from Barangay Puyat of Carmen, the neighboring municipality of Lanuza, people can reach Barangay Pakwan, Lanuza, Surigao del Sur where Pakwan Integrated School (PIS) is located. Among the four secondary campuses of Lanuza District, Pakwan Integrated School (PIS) is located in remote and most risky place because of its rocky, rough, and slippery road. It takes 3 kilometers from the barrio before you can reach the area with phone signal. Different Non-Government Organizations provided electricity of this place through solar, such as MERALCO Foundation, and PAMANA Project (Daling, 2016). As to experience, the road going to the site is prone to landslide when rainy season.

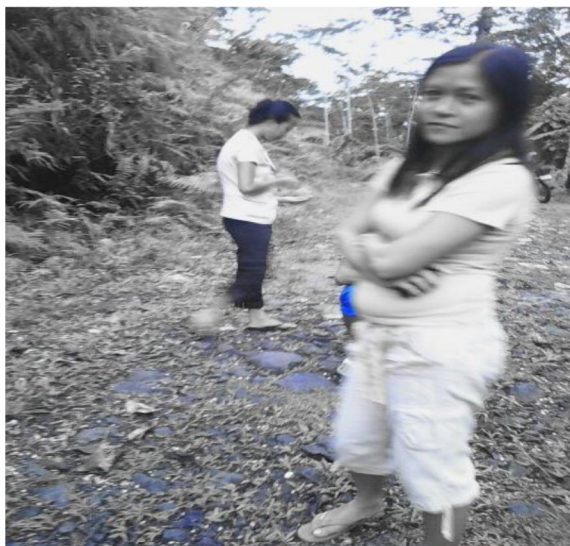


Plate No. 6 from left: Teachers on Text Mountain Site, 3 km. from the main site of the study (photo courtesy by Rudy Daling), and a school building of Pakwan Integrated School installed with solar panel, Date taken Feb. 07, 2017(photo courtesy by Rudy Daling)

School's ICT Equipments, and Facilities and Infrastructure

Evidently, few teachers integrate teaching methods models that meet the progressive requirements for adapting teaching to the skills and needs of students of the 21st century (OECD, 2010; Avidov-Ungar & Iluz, 2014). In investigation, teachers and administrator were trying to apply the said requirements. Teachers were potential and competent in implementing teaching-learning process especially when they integrate ICT but the lack of equipments is still presence in the school. There were two big flat screen TV uses by teachers, one is use for media updates and TV programs, and another one was shared by different grade levels as intervention in the absence of Over Head Projector

(OHP). There were few laptops that shared by teachers, and some have personal laptops in preparing lessons and paper works, such as monthly reports.



Plate No. 7 a flat screen television ready for teacher's class presentation which was commonly intervention in the absence of OHP (Photo courtesy by Cherry Abne-Bruzon)

The area of the school is wide enough to build ICT facility and infrastructure. These ICT facility and infrastructure were presented already in School Development Plan (SDP). Thus, government may allocate budget for additional infrastructure such as computer laboratory or e-classroom which is strongly recommended (Daling, 2016). It was supported by the respondents' responses that these are attainable measures that advances in curriculum competitiveness. Furthermore, electricity was the main energy resources in operating ICT implementation, but the school depends only to the solar energy which is recently in needs of repair and maintenance. Government may link to the energy company (e.g., SURSECO) to assess the electricity needs of the community.

CONCLUSION

The evolution of technological age has certainly created an impact in school's 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. The school's profile as to distance, means of transportation and road features, communication and internet

inaccessibility greatly affects to educators' attitudes and emotions that may result to the delay of updates and submission of reports, and to any organizations (government or non-government) in delivering school's support and services to ICT implementation and projects, such as building ICT infrastructures and facilities, and delivering ICT equipments. Thus, implementing ICT curriculum standards in the Philippines requires a long decision process, yet it is a need to the modern lives of Filipino as they are facing the challenges of globalization. As, ICT curriculum success lies in the hands of Filipino educators who were committed to make their education system work in the midst of many obstacles to learning.

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