Digital Rise: The Pro's and the Con's in the Lives of Sterling Teachers

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Abstract: *As the world is jam-packed with technology today, education system fast- track its approaches when it comes to the teaching and learning process through information and technology infusion in every program and curriculum instructions. The purpose of this research was to discern teachers' perceptions especially, those sterling ones, on the advantages and disadvantages of the digital rise in this time of new normal situation. This study also sought to know the literacy level of the sterling teachers, their teaching experiences in these virtual online classes, and also their coping mechanism to upgrade their capabilities to accommodate the so called digital natives. The study used the phenomenological qualitative research design and open- ended questions in the focus-grouped discussion and interview. Data collected from the FGD and interview were interpreted in words and discussed based on the statements of some cited authors in support to their arguments. The study limits the regular permanent teachers aging between 45- 56 years old, and most of them render 25 years in the service or more. In the result, teachers were determined minimal in terms of their literacy level. They also emphasize the importance of professional training to upgrade their abilities regardless of age. Reiterating the fact that there are positive effects of technology in all aspects of teacher's related work, however, there are some points to consider in using this technology. This study also reported that, with technology, educators would be able to better connect content to real-life experience to better serve the 21st – century learning styles.*

Keywords: digital rise, technology-infused education, sterling teachers, digital natives
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1. Introduction

In this 21st century, the term "technology" is an imperative matter in many fields including education. Technology integration nowadays revolutionized our societies that has totally transformed the way people live. As part of this, schools and other educational institutions which are supposed to prepare students to live in a revolutionized society need to contemplate the integration of technology in every school curriculum. As Collin & Halverson in 2009, stated that technology today is now often touted as the savior of education.

As technology has become a major component of our educational system, the Philippine Government has shown serious commitment to technology in education in announcing a series of initiatives to integrate technology in teaching and learning process especially nowadays amidst Corona Virus Disease 19 (COVID 19) pandemic. Here comes the implementation of the No Child Left behind Act in 2002, and, more recently, The Every Student Succeeds Act of 2015, schools have changed the way they teach from the more "traditional" teacher-centered approach to a technological, hands on environment. These were aligned to the Millennium

Development Goals and the Education for All Movements in preparation to the so-called "Digital Rise" in education.

Teachers from all disciplines have widely integrated technology to improve their teaching styles (Liu, 2011; Liu and Velasquez Bryant, 2003; Hew and Brush, 2007; Donnelly et al., 2011). For teachers it helps a lot to make things easy and accessible. It is the way of going beyond the limit like creating, discovering, communicating and exploring, thus making teaching-learning more fun and productive to cater the 21st century learners. The effective use of technology can facilitate student- centered active learning (Ellis et al., 2008), engage students in collaborative learning as well as enhance their social interaction (Dodge et al., 2003). Use of modern technologies in learning and teaching processes is an inevitability because developing these technologies contributes to transformation of knowledge in a useful way. With technology, it engages learners to more active learning that helps in developing higher –level thinking skills.

Teachers, as an agent of transferring knowledge and information it has been a priority and the Department of Education mandated that teachers must be tech-literate to properly use these technologies as a substantial requirement today. Full length in the use of technology to facilitate learning and cope with the digital natives needs. Technology cannot be effective in the classroom without teachers who are knowledgeable about both the technology itself and its implementation to meet educational goals.

The role of technology in traditional school setting is to facilitate teaching-learning process through increased efficiency and effectiveness to cope up with the trends of education in this 21st century world. Learners mostly view technology as a blessing thus making learning easier, fun and effective. Digital natives, the net-generation, the digital-generation, and millenniums are all labels to identify today's learners. Marc Prensky (2001) created the term digital native in his work *Digital Natives, Digital Immigrants* to describe the generation of learners growing up interacting with digital technology. As part of this technology-rich world, learners are texting, tweeting, blogging, posting each other's wall and videoing themselves for YouTube. For this, education has to move with the time adapting to the 21st century world that our student-learners are living today.

Technology-based teaching and learning can make many changes in school that requires for proper planning and policy making. With the massive advantages brought by technology in facilitating teaching and learning, there's always the so called drawbacks on the teachers part especially those sterling ones. Teachers need sufficient ICT skills to implement the technology and to have high confident level to use it in a classroom setting. Besides, teachers require insight into the pedagogical role of ICT, in order to use it meaningfully in their instructional process (Hennessy et al., 2005). According to Winzenried, Dalgarno and Tinkler (2010) teachers who have gone through ICT course are more effective in teaching by using technology tools as opposed to those that have no experience in such training.

In this time of pandemic in which technology plays a vital role especially in teaching and learning, the study Digital Rise: The Pros and Cons in the Lives of Sterling Teachers talk on the different perspectives of teachers regarding technology-infused education. In light with these circumstances, the researcher interestedly conducted this study to question whether or not the use of technology in the classroom is beneficial with the intent of weighing the advantages and disadvantages of a technology-based teaching and learning process and to reach a conclusion supported by the collected data.

2. Literature Review

Teachers' Belief on Technology-based Teaching and Learning

With the development of learning technologies in the late 20th century, education system has changed rapidly. This is due to the capability of technology to provide a proactive, easy access and comprehensive teaching and learning environment. (Albirini, 2006).

Teachers' efficacy in urban schools changes as the years of experience of working and age of teachers (Cuban, 2001). It shows that the teachers' efficacy are decreasing as the years of experience and age increases but somehow the decrease and the efficacy belief depend on the school management. School management here means the opportunities for collegial interaction, and the use of the instructional resources. Schools that could provide opportunities for teachers to reflect on teaching and learning with their colleagues and for administrators and teachers to collaborate and communicate, as well as support the use of instructional resources. From this research, the teachers efficacy belief is depend on the school management and culture. Therefore, if the school has always implant the culture to change and teachers are always sent for training for upgrading themselves, and then the integration of ICT in classroom will be easier to be enhanced in the classroom.

Technology-infused education

According to the latest insights as to how exactly modern students of today prefer to use technology and how does their learning get an impact if they use technology, it was revealed that the use of modern equipment technology and tools, the learning and interactivity of students increases. They also find it much more interactive, as well as full of interesting areas, when aided by technology. The transfer of knowledge becomes very easy and convenient, as well as effective. What this means is, that our minds now tend to work faster when assisted with the use of modern technology, be it any part of life, here we talk about education. The reliance and dependence of such an innovation, that simply makes life an easy, smooth journey is completely unavoidable these days even in schools, universities and colleges (Raja et al., 2018).

Technology has a positive impact on student learning. Technology causes students to be more engaged; thus, students often retain more information. Because of the arrival of new technologies rapidly occurring globally, technology is relevant to the students. Technology provides meaningful learning experiences. Technology also provides hands-on learning opportunities that can be integrated into all school curricular areas, including mathematics, reading, science, and social studies as well as other academic subjects. It gives students opportunities to collaborate with their peers resulting in learning from each other (Costley, 2015).

Many studies have shown the advantages of using technology in classroom instruction. Technology can be used as a tool for establishing meaningful projects to engage students in critical thinking and problem solving. Technology can be used to restructure and redesign the classroom to produce an environment that promotes the development of higher-order thinking skills (Kurt, 2010). Technology also increases student collaboration. Collaboration is a highly effective tool for learning. Students cooperatively works together to either create projects or they can learn from each other by reading the work of their peers (Keser, Huseyin, & Ozdamli, 2011).

The Role of technology in the 21ˢᵗ Century's Teacher Education

Addressing the needs of the 21ˢᵗ century learners is one of the goals of the K to 12 curriculums. The transition of the paradigm shift from traditional teaching-learning process to the 21ˢᵗ century strategies is indeed a challenge to the department. It seeks to understand and provide appropriate strategies to address the needs of the 21ˢᵗ century learners (Baishakhi Bhattacharjee and Kamal Deb,2016).

In addition, technology has played important roles in the field of education which are as follows: CT helps teachers in both pre-service and in-Service teachers training; ICT helps teachers to interact with students; It helps them in preparation their teaching, provide feedback; It also helps in effective use of ICT software and hardware for teaching –learning process; It helps in improve Teaching skill, helps in innovative Teaching; It helps in effectiveness of classroom; It also helps in improving professional Development and Educational management as well as enhances Active Learning of teacher Trainees; It is now replacing the ancient technology. As we know now-a day's student are always have competitive mind. So teacher must have the knowledge of the subject. This can be done through ICT(Social Science, 2017).

Positive Uses of Technology in the Classroom

The use of technology by both the classroom teacher and students, will improve the students' academic performance overall. As discussed in an article by Enriquez (2010), studies have proved not only the benefits of using technology in the classroom, but have also proven the ineffectiveness of what is considered the "traditional" teacher centered classroom setting. Taking the classroom from a traditionally structured, lecture class to a flipped classroom environment, makes learning "active", and therefore more effective.

Using technological devices and online programs, according to Hawks (2010) will make it easier for teachers to make "real life" connections to the content, encouraging students to think more critically, and gain a deeper understanding of the material. According to the article, taking the classroom from a traditionally structured, lecture class to a flipped classroom environment, makes learning "active", and therefore more effective. By requiring the students to do their own investigative research and reason abstractly in regard to the topics being discussed, the flipped classroom fosters the skills students will need to solve problems in and out of the classroom. In addition, a flipped classroom setting encourages students to work together, maintains active engagement, and dramatically increases knowledge retention.

Negative Uses of Technology in the Classroom

Pierce and Ball (2009) believed that some classroom teachers and school staff that the use of technology in classrooms is difficult and undermines to the instructors in the class. Among other conclusions surrounding enabling factors and potentially feared barriers, the study revealed that most teachers' attitudes toward the use of technology in the classroom depended on how they felt it would influence the education of their students.

The major issues with using technological devices in classes were the effects it could have on the extra time needed by the teacher and the students to learn effective skills and the assumed cost restraints associated with supplying devices to all students. Many teachers reported that they did not feel comfortable requiring students to use devices that they may not be able to afford. Another popular fear among teachers was in relation to their own level of self-efficacy. Many teachers believed that they were not properly prepared to use the devices themselves, let alone teach their students to use them (Pierce and Ball,2009).

Teacher's Self-Efficacy and Professional Development
According to an article by Koc (2014), one answer lies in teachers' attitudes toward the devices available to them. To arrive at this conclusion, researchers closely examined the relationship between a group of classroom teachers and their available technological devices. The author found that the educators studied had, for the most part, a positive attitude toward the idea of technology in the classroom. However, they did not feel comfortable using it and working it into their pre-existing lessons. Additionally, although the majority of the teachers involved in the study felt positively about using the technology, some felt that relying too heavily on it would eventually undermine the role of the teacher. Taking all of the results of this study into account, Koc found that a more positive attitude toward the use of technology in the classroom leads to an increased frequency of use, and, similarly, that a negative attitude toward the use of technology leads to a decrease in its frequency of use.

The authors also pointed out that as teachers should have an awareness that the use of technology is an ongoing commitment to maximize opportunity and minimize constraints for students, as well as an ongoing commitment to learn more about the technology, the devices, the software and the tools through expert advice, and the advice of peers. Exposure to these courses, and to the general understandings necessary to optimize the use of technology, made it clear that teachers could easily and quickly improve their level(s) of self-efficacy, and found that once they had, the teachers were more likely to integrate the devices into their day-to-day lessons, as well as maintain their knowledge and use of the technology they have available to them.

3. Methodology
This chapter presents the research design, the research locale, the participants of the study, the data gathering tools, and the data gathering procedure.

Research Design
The study utilized the phenomenological study of qualitative research design. The method of conducting focus group discussion (FGD), interview and document analysis demonstrated the authenticity of the information gathered from the participants.

Research Locale
The researcher conducted the study in the mother school under the district of Kalamansig II, Sultan Kudarat, with the population of twenty-six regular teachers and eight hundred three learners. A full pledge school principal managed this school.

This school belongs to the big school category among sixteen schools under the banner of Kalamansig II district. It has an extension classes at Sitio Nalugadas with 4 regular assigned teachers and Sitio Tesing with 2 regular assigned teachers. The school has 1 master teacher, 6 teacher III, 6 teacher II, 13 teacher I and 6 local school board items. This school is situated at Barangay Sta. Clara of the municipality of Kalamansig.

Participants of the Study
The participants of the study were 8 female teachers and 2 male teachers handling different advisory classes. All of them are regular permanent in teaching position belongs to the age bracket between 45 to 56 years old and serves the school for more than 20 years. They are teacher II, III, and master teacher in position. Most of them are grade chair-person, school coordinators and district coordinators of different DepEd programs.

Data Gathering Tools

Upon identifying the participants of the study, questionnaires was then formulated. The researcher formulated sets of questions to be utilized during their focus group discussions and then an interview as a follow through. The content of the data gathering tool went through validation with the help of some school principal with master's degree.

Data Gathering Procedure

The researcher asked permission from the school principal to conduct the study in her school. After the school authority granted the request, the researcher requested the participants to select their most favorable time on the time schedule given to them. Upon deciding the time, the focus group discussion was then facilitated. FGD were completed in 2 sets because the participants chose different free time schedule. Interviews was done also for follow up questions. The questions were thrown one-by-one and each participants were given a change to answer the questions either in English or in their vernacular language. The researchers also asked permission to the participants to record the foregoing interview and let them sigh a letter of consent proving that they allow the recordings of the said conversation.

Ethical Standard

Following the research protocols, the researchers conformed to the given set guidelines and standards. First, the researcher asked permission through a letter signed by the school administrator. Consent was then distributed and discussed to the participants. This consent letter ensured that the researcher informed all the participants of the nature and purpose of the study, the researcher assured the participants of the study that all of their answers to the questions would be treated with utmost confidentiality and that the participants have the right to refuse since they were not force to answer.

Significant findings

This part presents, analyses and interprets the data gathered from the answers of the participants during the focus group discussion and interview. The analysis of the data and their interpretation follow. The discussion of the result is presented based on the specific problems of this study.

On the level of digital literacy.

> *Teacher 1:Of course I know how? I am on the moderate level even though I am old already. I could testify that to you.hahahahaha.. kidding aside, but true.*
> *Teacher 2: Moderate Ma'am. Yes I know how to surf the net, I know how to use laptop computer etc. ……… that's because we use to have it in our school*
> *Teacher 4 : " yes I am. To those applications we usually use inside our classroom. Beyond that I don't know how already. Just basic..*
> *Teacher 6: "minimal. We lack in trainings for us to be upgraded. Reason? No budget allocation "*

Frame 1: Responses of the research participants in terms of the level of being digital literate.

The FGD with the teachers revealed that most of them were moderate in terms of digital literacy. They were technologically oriented regardless of their age status. Self –learning strategies were the common reason why they were computer literate because they were used to have it in their classrooms already. However, they reiterated on the proper trainings that they should have. Trainings that would be beneficial and would also develop more their capabilities in terms of technology. With those appropriate trainings teaching and learning process will be effective.

According to Winzenried, Dalgarno and Tinkler (2010) teachers who have gone through ICT course are more effective in teaching by using technology tools as opposed to those that have no experience in such training. In the recent survey of 21st Century Classroom Report of 2011, the biggest challenge of classroom technology were teachers' competence because they lack in proper trainings.

The teacher participants responded also that if only school management has more budget allocations, proper trainings and orientation would be of great help to level up teachers' efficacy in technology. Sending teachers to training for self-development, the integration of technology will be easier to enhance in the classroom (Cuban, 2001).

The teacher participants also believed that learning technology is no limit regardless of the age. It's the eagerness to learn and the positive attitude towards the use of technology matters. And this is true to the article presented by Koc in 2014, that the teachers' attitude underlies the extent of the effectiveness of technology in the classroom. The more you engaged in the use of technology the higher the teachers level of self-efficacy in teaching learning process.

How's teaching in this digital rise situation?

Teacher 4: " Oh, I find it very easy when it comes to teaching. So easy, children understands easily. They find it fun and interesting. According to them, TEACHER will again show something again today. "
Teacher 7: "Todays situation, I feel it easy compare to yesterday. Less effort so far when it comes to working.
Teacher 5: Fun, interactive and easy. Less effort. Goodbye traditional classroom teaching welcome to the flipped classrooms.
Teacher 1: compared to traditional way of teaching, todays classroom environment is much more effective.

Frame 2: Answers of the research participants regarding their perceptions on their teaching situation in this digital rise situation.

During the FGD, most of the teachers gave positive feedbacks on the rise of technology in the present situation. The teachers believed that their work related obligations such as, school forms, class records, demonstration teaching, and even everyday teaching, technology makes it fast, easy, productive and effective. Fast access to all the forms, easy to submit, they can do multi –tasking and effective in teaching process. Teachers also revealed that the use of modern equipment technology and tools, the learning and interactivity of students increases. They also find it much more interactive, as well as full of interesting areas, when assisted by technology.

Using technological devices and online programs, according to Hawks (2010) will make it easier for teachers to make real life connections to the content, encouraging students to think more critically, and gain a deeper understanding of material. According to the article, taking the classroom from a traditionally structured, lecture class to a flipped classroom environment, makes learning active and therefore more effective. In addition, as discussed in an article by Enriquez (2020), taking the classroom from a traditionally structured, lecture class to a flipped classroom environment, makes learning active, and therefore more effective.

What are the advantages and disadvantages of the rise of technology in teaching and learning process?

> *Teacher 6 " technology has many benefit, but you can't be able to appreciate those advantages if you don't know how to use it.*
> *Teacher 9: "No budget, No gadget" not economical*
> *Teacher 6: Location problem. That's the disadvantage some areas cannot access internet because of their locations*
> *Teacher 8. Less effective if no proper trainings. Useless.*
> *Teacher 3: It makes us internet addict.*

Frame 3: Excerpt from the FDG responses of the research participants on the pros and cons of the rise of technology on their teaching and learning process.

The teachers numerated various benefits, advantages and effectiveness given by technology especially in the nature of their work. However they put emphasis on the disadvantages of the use of technology.

In spite of all the advances of technology, teachers apparently view technology as less effective because of teachers were not the expert and familiar to the new technology in the market today. Most of the teachers are confined on the basic computer applications because of unavailability of gadgets being used in school. With this ever-advancing industry of technology, it has been difficult for schools to keep up with that technology advancements because of limited capacity on budget allocation and outdated computer models and soft wares (Schifter, 2008). In its perspective, it is not economical.

Money is a particularly important issue this time. School management identify limited funding to supply the needs of the teachers and even failed to send them for higher trainings. The budget constraints hinder this integration of technology. It requires money to spend to have a gadget and money to in order to surf the internet and money to keep them professional updated on different applications.

Teachers also believed that too much exposure to internet could result to internet addict and thus making as web dependent. According to Hashim (2016), allowing ourselves to frequently use technological devices may enable us to rely on the internet too heavily for answers, eliminating the need to learn on our own. In this case, self-discipline should be taken into consideration.

How did you cope up with the rise of technology?

> *Teacher 9. As teacher, it is my personal choice and decision to go with the technology, otherwise I would be left behind if I don't exert efforts to learn and develop my digital skills….. Self-learning and refer to the experts and seek help.*
> *Teacher 10: Continuous learning. We seek assistance of the knowledgeable especially the millennial who are more advance in terms of technology.*

Frame 4: Common theme of the research participants answers on different ways in coping the rise of technology today.

According to the teachers answers in this part of the discussion, they were all certain that regardless how advance technology and how vast change applied in education system as long as they were making themselves aware, updated and adopt the changes being offered nothing could be impossible even though they are old in age already. They put emphasis on the self-

development in order to fast track their capabilities and upgrade their skills in terms of technology instructions.

Addressing the needs of the 21st century learners is one of the goal of the K to 12 curriculum. Switching the mode of teaching from traditional teaching – learning process is very challenging special on the part of sterling teachers. The fast track change should be applied to suit the needs of the digital native learners today. Training and professional development is necessary. As we know now-a-day's student are always have competitive mind. So teacher must have the knowledge of the introducing learning that fits the learners' ability.

Technology is less effective if you as a teacher don't know how to use it. The awareness of technology is constantly being updated therefore that skills that we had should be updated and change. According to Morsink, et.al, (2011), educators should also be open to ongoing professional development and reflection opportunities, a willingness to apply new methods and strategies to instruction, innovate use of devices in new and exciting ways, and an acceptance that in spite of all that technology offers, it also has constraints, which effect and could change the educational experience for teachers and students alike.

In addition, Demmon (2001) has identified that the lack of available technology, inadequate technology support and training are the barriers that hinder the use of technology. Providing teachers with more training will make them feel more comfortable using new technology in their classrooms (Croxall & Cummings, 2000)

4. Conclusion

Therefore, the use of technology in the classroom, and in academic settings, has a positive influence most especially to sterling teachers, on their school-work experience.

- Teachers must be provided with substantial professional development courses, and opportunities to deepen their knowledge.
- This study also reported that educators will be able to better connect content to real life experience through the use of technology.
- Constant access to the newest and most advanced resources, and access to updated data content and research expertise will improve the learning experience of the teachers, which will encourage them to do the same for their students.
- It is believed that if teachers have access to interesting, engaging, and up to date information, they will be better able to create models and demonstrations that will foster a connection between content and life.
- Above all, regardless of age status, sterling teachers could be at par in terms of the use of technology if they were given proper trainings to improve their own performance.

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