Living with the Digital Divide: Exploring Internet and Computer Technology (ICT) Accessibility and Digital Inequality through the Experiences of Educators & Students

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ABSTRACT

This phenomenological study aimed to look into how educators and students negotiate lack of access to digital computer technologies in a school in Tacunan District, Davao City, Philippines. By using in-depth interviews and focus group discussion, the study found that the lack of ability to manipulate computers and navigate the internet as well as having no access to internet technologies caused difficulty among students in their learning, making them feel inadequate compared to those who had internet access. The study also found that for teachers instead of adding and enriching learning, the use of digital computer technology became a source of anxiety among learners. The lack of funding of the school for computer units and computer laboratory also added to the struggle of the educators and students. In order to deal with the Digital Divide that is evident in their school, the teachers would utilize their own money to buy portable Internet devices, buy credits for these devices and even lend their own personal laptops to students in order for them to have “hands on” experience with computers and the Internet. Students shared that they would have to travel long distances in order to be able to use the Internet when these facilities should have been available in their school so that they could learn how to use them for course work and in their future professions. The students added that they feel they are inferior as compared to students in private schools who are well provided with computer and Internet facilities. The study’s findings bear significant implications to education and learning as well as policy formation for educational institutions in the public sector in order to address the presence of the Digital Divide.

KEYWORDS: Digital divide, media studies, qualitative phenomenology, Philippines
INTRODUCTION

The term Digital Divide has been applied to the gap that exists in many countries between those with ready access to the tools of information and communication technologies and the knowledge that they provide access to, and those without such access or skills. People who lack the access usually experience difficulty in adapting to a mediatized environment and those who do not have ICT skills are at huge disadvantage in a world that is powered by computers and the Internet.

There are several factors that contribute to the Digital Divide. These factors include age, gender, ethnicity and motivation, low income and other financial limitations, lower quality or high-priced connections, low level of education, lack of digital literacy, poor technical assistance, and limited access to Information and communication technology content. Since technology is advancing at a fast pace, there are many third world countries being left behind. (Cronin, 2011).

Having access, however, is not enough to destroy Digital Divide between students and children in schools. A new digital divide can also arise not from a lack of access to technology, but from a lack of access to the right people, helpful connections and correct information (de Dios, 2012). Lack of knowledge on how to access digital technologies may be considered as a new disability for the reason that people do not know how to operate Internet and communication technologies.

This study endeavours to describe the experience of students and educators and to understand the plight of their lack of access and experiences to Internet and Computer Technology (ICT). Gaining an understanding to this phenomenon will allow light to be shed on their struggles and help those who do not have access. This is turn will give them the chance to also have knowledge and experience the era of advanced technology and serve as a basis for the allocation of the needed funding in areas that are isolated in terms of technology.

In this digital era, the lack of access to computer and Internet technology affects the teaching and learning process of educators and students. The lack of facilities and the remoteness of an area acould serve as contributing factors of Digital Divide. This is a heavy problem because the students and educators experience unequal privilege to access of ICT that limits their knowledge and skills.

This study aimed to gain insight into the Digital Divide in the Philippine context through the experiences of students and teachers. Specifically, the study sought to examine the lived experiences of the students and educators pertaining to the use of ICT and digital devices and how the participants view their experiences relative to the teaching learning process.

The study anchored itself primarily on the Diffusion of Innovation Theory proposed by Everett Rogers in 1986. The theory states that people with more resources are first to adopt technologies and that new interactive technology creates a series of successive knowledge gaps. (Mason & Hacker, 2003).

As a secondary theoretical anchor to the study the researchers also ground their investigation in the Resources and Appropriation Theory of Van Dijk (2005). This theory is centered in the core argument categorical inequalities in society produce an unequal distribution of resources (Ragnedda & Muschert, 2013). The theory supposes that unequal distribution of resources causes an unequal access to digital technology that will cause unequal participation in the society.

The adaptability of culture plays a very relevant role wherever the theory is applied. Following the model of the theory, if the school has more resources or facilities the students and educators can easily adopt new technologies that would help them in their teaching and learning process. If there is difficulty in providing enough facilities, more students and teachers are behind in adoption of technology placing them most probably in the category of late majority adopters of technology. People also need to be motivated in order to appropriately use the new technology. When sufficient motivation is developed one should be able to acquire physical access to a computer, the Internet or another digital medium.

This study was limited only to the perceptions and experiences of the high school students and teacher of a public high school in Tacunan, District in Davao City, Philippines. The study included 10 students from grade 7 to grade 11 and five teachers from the faculty who shared their views and experiences about ICT accessibility and its effect to the teaching-learning process.

METHOD

This study used a qualitative research design in which it sought to learn the significance of audiences’ experiences and views about Digital Divide by using in-depth interviews with members of the faculty and focused group discussion with the students. These methods were used so the participants could share their common views, sentiments and experiences on the particular topic being investigated. The interview focused on the personal narratives of the participants that helped describe the phenomenon on Digital Divide that as experienced by
The method of this study was the phenomenological method. Creswell (2003) defined this as a method where researchers identify the essence of human experiences concerning a phenomenon, in this case the Digital Divide. This method provides an understanding of lived experiences of their lack of access to computers and internet technologies as well as their inability to apply these technologies to the teaching and learning process. The study's chosen methodology included only a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning wherein the researcher brackets his or her own experience in order to understand the participants of the study (Moustakas, 1994; Nieswadomy, 1993). We conducted In Depth Interviews with 5 educators and we also conducted FGD with 10 random students from Tacunan in Davao City, Philippines. We hired a facilitator with a track record in qualitative research.

The study was done in Davao City, the Philippines’ fourth most populous city located in the Southern part of Mindanao. Davao City is the largest city in the country in terms of land area and currently serves as the main trade, commerce and industry hub of Mindanao.

Barangay Tacunan, which is the research locale, is one of the 18 barangays of Tugbok District under the Third Congressional District. It is located some 18 kilometers away from Davao City Hall and around 4 kilometers away from Davao-Bukidnon Road. The public high school where the study was conducted was established last 2011 on a 2.2 hectareparcel of land. It currently has 12 classrooms which is composed of three classrooms each for grade 7, 8 and 9, two classrooms for grade 10 and one classroom for grade 11.

Participants of this study were students and teachers from the public school in Tacunan. We used purposive sampling, a type of non-probability sampling technique known as judgmental, selective or subjective sampling. We selected voluntary, willing subjects particularly 10 students from grades 7 to 11 and 5 teachers from the faculty. They were the chosen participants for this study since they are most readily available and willing participants to share their views and experiences on this study.

Since the teachers were busy, we conducted In depth Interview with them. Five teachers were selected for in depth interview. We also conducted a focus group discussion, which composed of 10 students, 5 from senior high school and 5 from grade 10 participated in this study. We asked the teachers to recommend students with communication skills to be part of our study.

The technique we used was an in-depth interview to gather knowledge from individuals in the community on the extent of their capability in using these new digital technologies. Therefore, the primary data source of this study were transcripts of the Focus Group Discussions and In-depth Interviews that was conducted by our facilitator. We hired a facilitator with a track record in qualitative research. The interviews and discussions were held in conducted installment sessions, 4 for the IDI and 1 for the FGD. Each session lasted for a minimum of one hour and were subject to the availability of the participants.

We documented the questions and information that we gathered in the actual focus group discussion and in depth interviews to also learn more about the experiences of the students and teachers that we have chosen as participants in our study. We also took notes of the processes that we did in the field.

We designed an interview guide and focus group discussion (FGD) guides that were congruent with our research questions. Both guides were our subjected to validation of faculty researchers from the University of the Immaculate Conception in order to ensure that our line of questioning was consistent with the objectives and purpose of the study.

For permission, we wrote a letter to the School division Superintendent of Davao endorsing us to the School Principal. Consent forms to be signed by parents and guardians were provided for the students who were minors. After being granted with permission to conduct the study we coordinated with prospective participants and scheduled the FGD and the interviews. In our study, we strive to gather a group of students and teachers in this same number. We also arranged the logistics such as venue, documentation and other such matters. The participants of the FGD were gathered at the venue and were first given a participant briefing in order to inform them of their rights and also to gain their consent and voluntary participation. Then the FGD facilitator took over and began the interviews among the participants. We asked help from the principal of the school to select students to be our respondents and asked permission to use one of their classrooms to conduct our interviews. For the IDI, the researchers met the interviewees at a time and place of their convenience.

We also recorded a video and audio conversation from the interviews. After the study, we revised according to the recommendations of the technical panel, we submitted the study for ethical review since the study involves human participants.

The recorded video and audio conversation from the focus group discussion and in-depth interview were transcribed in order for us to determine and make codes for the data analysis. When transcribing, we transcribed the interviews word for word and analyzed the original transcripts. There was no translation of...
the words of our participants until after we completed our analysis. This was to ensure that we did not miss any of the important contexts in their statements in translation so we analyzed them as the participant said them. We went through the transcripts and tried to look for emergent themes in the participants. After we went through the transcripts we generated the themes that are the same across participants. We described and analyzed the themes that were found and identified commonalities in their thoughts and opinion that determined the implications of the findings.

In order to increase the credibility, conformability, transferability and dependability of the study we will utilized member checking which was done both formally and informally. Informal member checks were done during or immediately after the interviews or FGD. Formal member checks was done by testing the data, analytic categories, interpretations and conclusions with members of those groups from whom the data were originally obtained (Lincoln & Guba, 1985; Morse, 1994; Sandelowski, 1993).

We arrived to provide thick description, which is described by Lincoln and Guba (1985) as a way of achieving a type of external validity. By describing a phenomenon in sufficient detail one can begin to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people. Thick description refers to the detailed account of field experiences in which the researcher makes explicit the patterns of cultural and social relationships and puts them in context (Holloway, 1997). In order to do this, we spent significant time in the school or community where our participants are found. Spending time within the environment of the school allowed rapport and trust to develop between us and our participants as well as give us, as researchers, an intimate orientation to the situation we were examining so that we were not only confined to our own preconceptions and biases.

Our role in the study is we were the interviewers during our IDI. As interviewers we recorded the interviews on digital recorders. We also took down notes during the interview. Creswell (2013) recommends that proper recording of interviews and group discussions must be done in order to be able to review what was discussed by the participants and also for purposes of confirming information later once the discussions or interview is done. During our FGD, we served as documenters since we enlisted the aid of an FGD facilitator.

In this study, only willing and voluntary participants were included in our focus group discussion and in depth interviews. The participants were oriented properly about the gist and purpose of the study and they were assured of confidentiality. Informed consent were given to each participant, which explained the purpose and objectives of study. They also explained how significant the role of our participants was in the research. The “Do No harm” is the main ethical standard considered in this study. There were participants who were minors, so we obtained parental permission and assent forms for them to be secured. Since the rights of our participants are important to us we made it clear to them that if they feel like they want to back out at any time they have the option to do it. Understanding that the discussion could cause potential discomfort among our participants, it was made clear to them that they could back out of their participation any time and that they could decline from answering if they felt the questions would cause them emotional unease. As part of our ethical considerations, confidentiality agreements were signed between our informants and us. In publishing our findings we concealed participant identity by using code names to identify them each (Participant 1, 2, 3, and so on).

As researchers, we are responsible in keeping safe of all the information gathered pertinent to this study. We also made it a point to maintain objectivity as much as we could specifically towards respecting their perceptions and opinions. To do this we took on more of a “listening” stance careful not to react to what they said but instead document everything without injecting our own reactions or opinions. Aside from us, only the panelists and advisers are the only allowed people to have access to the data that will be gathered. We kept all our materials safe by keeping the raw data transcripts and copies of the coded data in portable data files stored on data disks. The same safekeeping goes for documents were done for our research process notes.

RESULTS

One evident Digital Divide Experience that is common among all of our informants is the lack of access to and the lack of availability of Internet and computer resources. None of the students included in our study have computers of their own based on our focused group discussion. For the teachers, they have their own personal laptops and computers at home that they use in making school reports, daily lesson plans, and grading records especially that they use the new Electronic record wherein they simply encode the grades in their personal laptops.

During our initial visit in Tacunan, we have noticed the lack of computer laboratory in the school. The computer units were placed at the corner of a classroom that is regularly used for classes. The computers are there but they are
not in use. The teachers shared that they are using a classroom as their temporary computer laboratory because they still lack room to be used as a computer laboratory. For the teachers, the importance of having a computer laboratory is necessary for them to catch up on the 21st century skills where technology use is greatly demanded. They said it would be a great help for them to monitor the students in their learning process and that they would be able to identify if the students are doing their research properly instead of playing online games or engaging in social media. It would also be a big help for those students who walk long distances to reach Internet Cafes so they could do their research. All the teachers shared that the school has been planning on building a laboratory, but it will depend on the budget of the school, and as of the moment, the establishment of facilities for learning and using internet and computer technology not on their priority.

Most participants related that although there are computer units in their school, they have not tried using it yet because only the Senior High school is allowed to use them. If this is the case, there is an unequal privilege to access of computer facilities between the students considering that as soon as they entered grade 7 the use of Internet and computer for researching is part of their requirements. The possibility for them to learn about ICT will only start when they reached Senior High school. One participant shared that she never tried using computer at school, not even once, so there is no chance for her to learn about ICT from school. While some participants related that they have had experience and knowledge about ICT because they were taught from their previous school but their skills may change or get rusty because of the situation of having to experience ICT access to not having ICT access at all. Their learnings about ICT have stopped because of this.

One participant shared that although there are 21 units of computer available, there’s only one unit that is installed for them to use. During their ICT class, they take turns in using one computer, one person at a time. Their ICT teacher would have to teach them one by one. In cases like this, there is only limited time for each of the student to learn about the subject, one participant shared that there are 47 students in their ICT subject, the one a one hour and thirty minutes would not be enough for a student to learn, considering on how well and good they are at manipulating computer.

One factor that can also help in teaching-learning process is the Internet Connection. However, participants shared that their computer units do not have Internet connection. For the teachers, their way of coping with the Digital Divide is through pocket Wi-Fi. The teachers used their own money to load the pocket Wi-Fi and they do not expect any refund from the school. The amount spent in loading their pocket Wi-Fi’s would already be a great help to add up in paying their daily expenses.

Another prevalent experience among the informants was their self-admitted lack of Internet and computer skills. Participants also shared they’re having difficulties in manipulating computer especially when they are outside the school or in the Internet shops. According to one of their teachers, some students do not even know how to turn on or off a computer. If students still need to go outside the school premises, then no one knows what might happen to them. No guardian will go with them outside so there is a risk in the safety and security of the students. It would be easier for the students and safer if only they can do their research at school.

In the focus group discussions, almost all the participants referred to themselves as ignorant on using the computer for work. For someone to refer to himself or herself as “ignorant” is a reflection of feelings of inferiority. This could probably have an effect on their self-efficacy, influencing their decision to learn more about ICT. One participant could relate to this as she shared that she would tremble whenever she touched a computer or the keyboard because she is not used to it.

As to the ICT education in school, the students shared that only the Senior High school students have an ICT subject. They also do not have any book that can be used as their reference. ICT education is not just about how one can operate or manipulate a computer. It also includes their knowledge, on the basic uses and applications of ICT for professional use and productivity. So it is important to have learning references they can study at home. Most participants related that they do not have ICT books in their school.

When it comes to their skills about computer application, most participants related that they have limited knowledge on the basics of using Microsoft Word when making an assignment or project. One teacher shared, that even she is not really good in using Microsoft PowerPoint and she does not know how to install or download materials online and she seeks help from other teachers. Participants shared that the difficulty they experience even in the basic use of Microsoft Word was due to the lack of hands-on experience whether in school or at home.

Participants shared that not having regular access to computers was very evident in their school. They said they were not the only ones experiencing the difficulty. Some even shared not being able to touch a computer since their days in elementary up to the time they entered in high school. As a result of this, whenever they were asked to do tasks that had anything to do with computers
they would become nervous. One even shared that that sometimes her hand would freeze or tremble whenever she touches the mouse that is why she just asks other to do it for her. Even some of the teachers, who had more experience with computers than their students, echoed that they have some anxiety when it comes to computer use. One of the teachers said that in terms of her knowledge and skills, she cannot really say that it is high and even shared that some of the teachers from school are really not proficient in manipulating ICT and admitted that they still lack in ICT skills and knowledge. One teacher said that some students really do not have access because some come from poor families. They would do their assignments and projects in the traditional way, meaning hand written. Some know how to operate but when it comes to typing they have a hard time.

In contrast to this, in terms of the use of social media and online games, the students admitted that they know how to use social media fairly well, in fact, they all have accounts on Facebook. They shared that it is easy for them because they have memorized everything on Facebook. The teachers related that in their observation, the students really know how to use social media and online games. Sometimes, it could be the reason why students also go to Internet shops to play online games or use their mobile phones to use social media. It seems that difficulty comes to the students only in terms of the use of computer applications like Microsoft Office or just simply manipulating the computer. Participants shared that they still need assistance in using the computer when using it for completing work related tasks.

When making projects and assignments, they usually use Microsoft Word. When asked about what the most difficult application for them to use, most of the participants shared that Microsoft Power Point is where they are having a hard time using while others have difficulty in using Microsoft Excel. Some participants shared that apart from Microsoft word, they had no idea about other applications on Microsoft Powerpoint and Excel.

The informants had various coping strategies for coping with the Digital Divide. If they have projects in school or tasks that require computers and the Internet, they would have to find these facilities elsewhere. Most of the participants related that they would ask someone else to do the assignment or task for them instead of doing it themselves since they do not have the means to do it themselves. Another way by which the students cope with the Digital Divide is they travel to the nearest urban area in order to be able to use the computer and get on the Internet. For residents in Tacunan this is difficult because a person would have to travel about 1 kilometer before reaching the first Internet café, which they would usually have to cover by foot because they do not have private vehicles and public utility vehicles seldom go to that area. For other informants, they would still have to travel this same distance to go to the house of their classmates who had their own connection. Once participant shared that she would utilize the connection at her workplace. Another way by which the students cope with the Digital Divide is going to their neighbor or classmate’s house to be able to use their computers and connect on their Internet. This could cause a lot of inconvenience to the students since they are depending on others’ computers not to mention some embarrassment on their part. They shared that they could not always do this because they did not want to intrude on others for their needs. If this is the case, the students are often unable to make their assignment affects their grades and performance.

When the teachers would give assignments and projects that require computer or internet what they usually do is group the students so that other members who have access of ICT can do the research while those who do not have access or having a hard time accessing resources will have to do other task. In this way also, it could help students lessen their expenses. However, if the task is divided to students because only few has access, then those who do not have access will only depend on their group mates and would not have the chance to do their own research since others are doing it for the group. They would do other tasks not related to accessing the computer and Internet, which in return does not give them the experience or learning on how to use it.

The school lacks ICT facilities as compared to other schools in Davao City who have their computer laboratories with functional computer units and Internet connection. Teachers said that the students at schools where ICT is present are more advanced than their students. They also think that although they have students who can match students from other schools, there is a vast number that lag behind compared to others because they do not have enough facilities. A teacher said that students in private schools have a big advantage compared to the students in their school. She notes sadly that some of their students only engagement in computers is just to play games which they cannot use for work.

Since some students are hesitant to seek help from their teachers. Their ICT learning is gained basically from student-to-student learning. The students also shared that they do not get help from other family members as well since they are also not capable when it comes to ICT. The students share that they choose to keep it to themselves and not approach anyone because they are ashamed to do so. Teachers also try their best to help the students in coping up so what they do
is they extend the submission of their assignments or they give in to the students’ requests such as doing other tasks instead or teachers would give activities to be done on activity notebooks only. They are even willing to lend their laptops especially to the 10th grade class where they have their research subject and they need to use computer to use a Microsoft application and they do not refuse because they know how much the students need their help.

Another coping mechanism employed by the teachers for dealing with the Digital Divide is to give the student long periods of time to complete a project. Knowing that they do not have easy access to internet and computer technology. One of the teachers said he gives them a whole month since they still have to research it and it would take them a lot of time to do that. The fact that a teacher would give a month for the students to complete an assignment implies that they really have difficulty in doing their research. This also further implies that given the one month time frame, the learning experiences of the students are also limited by their lack of ICT access. Some teachers limit the amount of technology-based homework they assign and others even print hard copies of all the readings so students will not have to struggle to access them later online. Teachers had the initiative to conduct workshops but they never had the chance to because if they do tutorials, they will have a problem about the conflict of time when it comes to class hours and the teacher’s subject load.

When asked about how they feel that some public schools within the city has more access to computer and internet as compared to them, all of the participants said that it is unfair. They felt that they lag behind in terms of technology which make it hard for them to make their assignments. One participant compared their situation with private schools that are provided with everything, although she can feel that the teachers are trying their best, she felt that it is still not enough. One participant also felt that it is unfair because they are all working hard to study yet they were not given the equal opportunity in accessing the technology. She could not understand why the government could not give them enough attention especially that they in a remote area.

Given the shared experiences among the students, it is evident that the Digital Divide they are in has implications to their learning and their future skills. There is a possibility that the students will graduate and go to college without any solid knowledge of ICT that can affect their careers in the future. They will have to live being behind from others who are advanced and are literate in terms of ICT.

DISCUSSION

As observed, Digital Divide is present in the school where we conducted our research. It is our impression that the primary driver of digital divide in their case is their lack of facilities. The very obvious disparity is that there are people who have computers and Internet connection in the area and there are some who do not have it at all. In the case of students who ask others to do their assignments or projects because they do not have access at home, they will not be able to maximize the learning that they should be getting out of their assignments because they are not doing the tasks themselves. Also, the grades that they get for these assignments do not accurately reflect the students learning or their capacity because it was done by someone else. For the students who still need to go to their neighbor or classmate’s house to use a computer, this could cause a lot of inconvenience to the students since they are depending on others’ for their needs. If this is the case, the student cannot make their assignment, thus affecting their grades and performance.

The findings of this study echo the findings of the Pew Internet & American Life Project, the use of Internet for the teenager’s ages 12-17 years old, is essential as their study aid outside that classroom and the increasing use of Internet in the classroom. In this case, the participants have also shared similar indespensibility of Internet and computer technologies to keeping up with the workload of present times.

According to a recent study from the Hispanic Heritage Foundation, Family Online Safety Institute and My College Options, nearly 50% of students say they have been unable to complete a homework assignment because they didn’t have access to the Internet or a computer. Furthermore, 42% of students say they received a lower grade on an assignment due to lack of access (Mclaughlin, 2016).

As mentioned, they lack computer laboratories at school and only Senior High School students can use the computer units means there is an unequal privilege to access of computer facilities between the students considering that as soon as they entered grade 7 the use of Internet and computer for researching is part of their requirements. The possibility for them to learn about ICT will only start when they reach Senior High school.

The world is changing and the skills that students need to thrive are changing, and at the end of the day we have to do what we can so that the children will thrive in a global economy. It would be doing them an extreme disservice if we didn’t prepare them and it is essential that students have access to the proper materials 24/7 (Mclaughlin, 2016).
The lack of access found in the school is similar to the thoughts of Mclaughlin (2016) who said that the “lack of access to broadband is robbing millions of students of their full potential.” As some of the participants have alleged they find this disparity between the situation in their school and other schools to be unfair as they feel that they are less capable than those students who are not having the same lack of accessibility as they are.

There is only one unit available for the use of the Senior High School as of the moment so they need to take turns in using it. Each class has at least 47 students so there is only limited time for each of the student to learn about the subject and one hour and thirty minutes would not be enough for a student to learn, let alone master ICT skills. If there were enough computer units available to accommodate all students, then they would not have to take turns and would have enough time to learn ICT skills.

The students shared their difficulty in using computers because they do not have enough facilities to learn about computers. Some students would call themselves ignorant because of their incapability of accessing computers. For someone to refer to themselves as “ignorant” is quite alarming. It will effect on their self-efficacy and how it will influence their decision to learn more about ICT. Self-efficacy is essential to overcome the fear many novice users experience. Compeau and Higgins (1995) empirically verified the relationship between computer self-efficacy and computer use. Staples, Hulland, and Higgins (1998) found that those with high levels of self-efficacy in remote computing situations were more productive and satisfied, and better able to cope when working remotely. According to Bandura (1997), people who have little confidence in their ability to use the Internet, who are dissatisfied with their Internet skills or who are uncomfortable using the Internet may be said to have weak self-efficacy beliefs. Those with low self-efficacy should be less likely to perform related behaviors in the future (Bandura, 1982), in this case, adoption and use the Internet, than those with high degrees of self-efficacy.

The findings of the study imply that there is a need to increase ICT funding for public schools. Classroom computers are so low on the budget priority list that some teachers have no choice but to teach without technology. District money is not there for classroom computers and shared labs are just too busy. This is echoed by Price (2002) who observed that many teachers with classroom computers have spent countless hours on their own to seek sources for funding, write grants, or solicit local businesses for equipment and money. This is a large commitment of time out of an already very busy day that not all teachers can give.

Though technology became more affordable and Internet access seems increasingly common nowadays, the Digital Divide between rich and poor still exists. According to the Pew Internet & American Life Project, the rich and educated are still more likely than others to have good access to digital resources. SOltan (2016) explains that the Digital Divide has its far-reaching consequences when it comes to education. For children in low-income school districts, inadequate access to technology can hinder them from learning the technology skills that are crucial to success in today’s economy. For those who do not have accessibility of Internet and Computer technology at home, they should be able to have it at school. However, even in their school, they do not have any access at all. To address this problem, the school must be provided with enough facilities such as computer units with Internet connection.

The secondary driver of digital divide is the remoteness of the area. The school is located in an area where students need to travel a minimum of 1 kilometer in order to find an Internet shop. The distance not only entails considerable time, effort and expense to get to an Internet shop but also poses potential safety hazards as well. It would be easier for the students and safer if they can do their research at school. Mclaughlin (2016) explains that the homework gap forces students in households where they do not have high-speed Internet service at home to head to go somewhere else to squeeze in a few more hours of homework instead of going home. Some may decide to forgo the safety and warmth of their home to venture out to the places with free Wi-Fi access in order to complete and submit their assignment. Or many students are simply unable to finish the work.

In terms of improvement of the student performance, the teachers should also take into consideration that the students have limited knowledge and skills about ICT because of the gap that exists in the school. Because of this, the teachers cannot expect the students to do tasks that they are not capable of doing. Even some teachers have difficulty in accessing ICT. If this is the case, even if they want to help the students in improving their knowledge about ICT, it would be impossible in terms of their means to teach the students. First is because they themselves still need to have training on how to use beyond the basic applications of computer. Before they teach the students, the teachers must have enough knowledge on it themselves. They cannot teach their students ICT when they themselves also need help in accessing it. Second is because there are really not enough units to accommodate even one class at a time and they are composed of 50 students in one class. They would not be able to learn altogether if it can only cater 20 to 21 out of 50 students in a given span of time. In order to give the appropriate and right education about ICT to the students, the teachers
should be equipped and knowledgeable enough in imparting information to them. Price (2002) explains that some teachers may not have enough exposure to computers to feel comfortable using them in a classroom. In order to acquire technology, training often is too little too late and one training course is not enough. Early adopters know the changes that take place and the need to be updated on equipment and software is constant. This results in a competition for teachers’ time with the other myriad changes in policies and curriculum that require workshops. Teachers are still waiting for the support infrastructure to catch up with the demand. Some schools do not have the internal support staff to maintain large numbers of classroom computers in addition to all the other administration computers, and shared labs.

ICT should be one of the focus of the schools. Krueger (2016) pointed out that the gap caused by barriers students face when working on homework assignments without a reliable Internet source at home has widened as an increasing number of schools incorporate Internet-based learning into daily curriculum. However schools are not doing anything about ensuring outside of school access to broadband (Melaughlin, 2016). It is sad to note that though technology has become more affordable and Internet access seems increasingly common nowadays, a “digital divide” between rich and poor still exists as evidenced by the experiences of the students and educators in Tacunan. DiMaggio and Hargittai (2001) suggest that the term “digital inequality” better captures the complexity of inequalities relevant to understanding the differences in access and use of information technologies. Digital inequality considers variation on five dimensions: differences in the technical apparatus people use to access the Internet, location of access, the extent of one’s social support networks, the types of uses to which one puts the medium, and one’s level of skill.

Our findings also suggests that digital divide exist not just in school but in the community as well. The school should collaborate with public sectors to find ways and means of their problems in bridging the gap. The barangay should build an ICT Center that serves as a training ground for the individual’s improvement in knowledge and skills about ICT. The education sector should also look into the fact that although there is an ICT subject in the curriculum for the Senior High school, it is not uniformly implemented in all public schools. In line with this, the school should also be well equipped with computer and internet facilities before professing to offer it in their curriculum. If the school is not capable of providing these facilities, they should look for donors or sponsorship from private sectors. Any means of bridging the gap could spell a positive change for them.

Since one of the drivers of digital divide is the remoteness of the area, attention should be placed in providing far areas with Internet access. Since location matters in terms of accessing ICT, the government should allot resources that provide ICT facilities in community, so that individuals will be digitally literate regardless of the remoteness of the area.

In this digital era, being computer literate can help them to be more productive now and in the future. It will give them the opportunity to compete in the intellectual workforce rather than being left behind in today’s fast ICT and information driven economy. With that being said, there should be long-term sustainable ways in bridging the Digital Divide in schools and in the community. Access should be available wherever in the community. In order to do this, the government should endeavor to provide at least basic ICT infrastructure in schools and at the community level. Allocating for these infrastructures should be done as part of government budgeting and should be prioritized as an investment in empowering students and people in the community.

The findings of our study are still limited to the research locale in which it was conducted. This type of study should be replicated in other areas so as to gain more data into how Digital Divide is experienced in different communities in the country. More studies should also be done using a quantitative design in order to empirically quantify the extent of the Digital Divide specifically in terms of measuring the ICT skills of students and teachers. For this purpose, adequate testing tools will have to be developed. In addition, it would also be helpful if long term research could be conducted on the implications of Digital Divide wherein its implications to participants could be seen in terms of their performance as professionals or members of the workforce.

REFERENCES


