

DIGITAL IMMIGRANTS MEETS DIGITAL NATIVES: ACCOUNTS OF ELEMENTARY SCHOOL TEACHERS

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ABSTRACT

The main objective of this study was to explore and investigate the lived experiences, problems encountered and insights learned by elementary school digital immigrant teachers in handling digital natives in the classroom. Four themes in figure three were mentioned by the ten (10) selected teachers of Buhangin District who were handling digital natives in their classes. The themes mentioned in figure three were the digital immigrants' adaptability to the new normal in the educational system, collaboration, engaged in authentic problem-based activities, and maintained student teacher collaboration; and finally digital divide, the gap between people who have adequate access to ICT and those who have zero or poor access to IC.T Meanwhile, figure four with themes described by the teachers as problems encountered; limited technical knowledge, a lack of knowledge and understanding of how to use technology; inadequate technology; where students want to use technology more, but, reality is that the resources are just not available to all, time consuming; much time was consumed on technological learning, lastly, lack of relevant professional development; provide teachers with professional development opportunities. These were the theme observed during the discussion and was described by the elementary school teachers. Lastly, figure five which were insights, four themes were learned and observed during the interview these were the following; constant practice and training, self-efficacy, teachers' digital mindset and patience in acquiring knowledge on digital technology were essential in the development of the learners. These were themes generated as insights of the digital immigrant teachers handling digital natives.

Keywords: Digital Natives, Digital Immigrants, Digital Divide, Education And Technology

I. INTRODUCTION

In the second half of the last century, the Information and Communication Technologies progressed unprecedentedly and influenced all social structures so much deeply that the impact has created a gap in between the life styles of generations and their view of life. Employing ICT in teaching is appealing to the new generations (Al-Mahrooqi & Troudi, 2014) as the integrations of interactive graphics, audios and videos match well with their learning schemata (Yang, 2010). The role of teachers and technologies has evolved to meet the context of these current times. Teachers are no longer the primary knowledge providers as their role has now become multi-faceted by facilitating their students to explore and guide their own learning process using technology (Smeets, 2005; Rosnaini & Mohd Arif, 2010; Cakir, 2013).

As a result, the learning environment becomes more student-centered and was able to cater more to the needs of individual differences in order to motivate and increase the student's interaction with the target lesson (Al-Mahrooqi & Troudi, 2014). But there are teachers who are immigrants in terms of new technologies available that would boast the teaching and learning process inside and outside the classroom.

A new digital language evolved and is increasingly prevalent with technical savvy individuals as a normal means of communication, creating a communication lull between generations affecting both the digital natives and digital immigrants. This communication barrier extended beyond the casual day-to-day endeavors but reaches into learning environments. The survey indicated that the younger the respondent, the more favorable that person is to wanting technology in the learning environment.

In order for effective learning to occur both teachers and learners must be able to match both instructional strategies and learning styles consistently. In addition, those who are responsible for aligning educational and learning strategies should meet the training and development programs being deployed. There was a need to examine possible rationale correlating with native and immigrant lifestyles that support their cognitive process. These processes related to how natives and immigrants receive information and how it stimulates the

brain to connect the inputs with previously learned data – how an individual's brain becomes “wired” to manipulate stored data to be used during problem-solving and critical thinking activities in both life events and training sessions.

Studies on technology acceptance and its associated factors in the area of IS and end-user computing have proliferated, and a variety of theoretical models had attempted to explain the determinants of individual acceptance and use of information technologies. In these studies, however, little attention had been paid to end users of technology in classrooms, where the impact of technology depended on both the teachers and students who use it. Between these two groups, a new kind of digital gap is emerging.

Current students were more knowledgeable than their teachers when it comes to ICT. Given this phenomenon, Prensky (2001) coined the terms “digital natives” to describe students and “digital immigrants” to describe teachers. Today's students have also been called the “Net Generation” (Oblinger & Oblinger, 2005) and “new millennium learners” (Pedró, 2007). These students had been raised in a digital environment that has shaped how they think, behave, and act. Therefore, the nature of technology usage in and out of schools and the acceptance of technology between digital natives and digital immigrants were presumably radically different.

Like the role teachers play in the integration of technology, students were also actors in ICT integration in the classroom. Academic commentators argue that the computer is the “children's machine” (Papert, 1993), and that the ICT integration in classrooms is done for the kids (Selwyn, 2003). As mentioned earlier, new millennium learners are not only more skilled and adept at using ICT than their teachers; they have also been shaped by it (Prensky, 2001; Oblinger & Oblinger, 2005; Pedró, 2007) in terms of their patterns of thinking and communication, notions of learning, needs for control, and even their personal and social values. For instance, multitasking is taken for granted by new millennium learners as a normal social practice.

Hence, I am prompted to do this research to unearth and find out the result when the digital immigrant meets the digital natives in the classroom. In searched for better way as benchmark on how the digital immigrants should go with the digital natives in the classrooms in the different schools within Buhangin District; Division of Davao City.

In 21st century classrooms, where teachers often have not grown up with the technology being used, it follows that teachers often assume the role of digital immigrants and students often assume the role of digital natives. Since both digital natives (students) and digital immigrants (teachers) work together in the K-12 classroom, it is vital that both groups use their strengths to enhance each other's knowledge pertaining to technology. However, the stigma associated with each group (i.e. digital natives are comfortable with technology and digital immigrants are not) may keep reciprocal learning from occurring.

To harness the strengths of both digital natives and digital immigrants in the K-12 classroom, the characteristics that make both digital natives and digital immigrants unique are outlined below. Given these distinctive qualities, the learnings that digital natives can teach digital immigrants in terms of using, navigating, and harnessing the efficiency of technology, and the learnings that digital immigrants can offer digital natives in terms of learning to use, troubleshooting, and operating without technology are discussed. Additionally, various examples of technology tools that appealed to digital natives and digital immigrants are identified in an effort to demonstrate the importance of informed technology selection. Finally, to overcome the stigma associated with digital immigrants and digital natives, the mindset of each group is discussed, with an emphasis on how to overcome the stigma and allow for reciprocal learning to occur.

Digital Immigrants

Digital immigrants are considered individuals who were born prior to the influx of technology, specifically computer use, the Internet, and smartphones. The term immigrants corresponds to their adoption of web technologies or “immigrating” to the technological environment. Their preference is to speak face-to-face as opposed to texting or using an instant messenger service. Similarly, they would rather interact with one individual or a few people rather than a large group. These patterns focus on the importance of human connection in person as opposed to connecting to an individually electronically. Within the K-12 classroom, digital immigrants are often the teachers or instructors. They may prioritize face-to-face interactions among students over implementing technological educational aids. For example, utilizing in-person group work as opposed to allowing students to collaborate within the classroom via Google drive. The latter is a file-sharing

program which allows users to virtually edit and share documents. Digital immigrants' learning patterns focus on logical rationale. An example would be if a digital immigrant was speaking to technical support via the telephone. If the call was regarding an email app on their phone to send an email, they may not understand that an arrow represents "send" as opposed to being specifically labeled as such (Riegel et. al.2015)

The divide between natives and immigrants occurs for a variety of reasons. Immigrants may lack a basic understanding of the new forms of socialization in which the native's participate (Palfrey, Gasser, & Boyd, 2010). Additionally, constantly changing technology hinders the technical abilities of or time for immigrants to keep pace with the natives. In essence, there is both a knowledge and technical skill gap between natives and immigrants which perpetuates the disconnect in how each participates in online activities. Based on the proposed differences between digital immigrants and digital natives, both cultural and linguistic divides exist. How immigrants perceive and address these divides necessitates the research and study of means for bridging such chasms.

On the other side is the oversimplification of the place that technology plays in the lives of Digital Immigrants. Prensky kept this at the level of an ever present accent that can be detected by the native speaker. This interpretation is not common and the term Digital Immigrant carries with it an assumption that members of this group just don't get technology and that the older you are the less likely you are to use technology. The reality is that it is not one's age which determines one's level of engagement with technology but one's disposition towards it. Some of the most successful integrators of technology I have encountered are (in my politest voice) 'older members' of the profession.

Until very recently, it was the norm for digital natives and immigrants to come together in the classroom with fairly well-defined roles: the natives as students and the immigrants as teachers who instructed the group with the same methods that their own teachers used with them.

Digital Natives

Digital natives were individuals who were born during or after the integration of technology within the classroom, or the "digital age." A list of their characteristics is outlined in Figure 2. Prensky originally defined a digital native as being born on or after 1980, however, some scholars define individuals born between 1980 and 1990 as the "first generation of digital natives" (Helsper & Eynon, 2009, p.7). For these researchers, a second-generation digital native is born after 1990. Therefore, one may argue that teachers may include digital natives and digital immigrants.

Digital natives are "fluent in acquiring and learning all sorts of new technology" (Mete et al., 2017, p.69). They are categorized as intuitive learners as they grew up with technological jargon and can quickly adapt to technological advances. An example would be the use of iPads within the classroom. iPads are becoming more common within the K-12 classroom to help promote learning and often younger students can surpass the teacher's knowledge within a few weeks (Grant & Barbour, 2013; Reid & Ostashewski, 2011). Digital natives' intuition also stems from their consistent use of electronic devices – it is estimated that in America, nearly 60% of 12-year-olds own a personal cell phone.

Due to their multi-use of many of the tools, digital natives are comfortable with the quick transfer of information and multi-task with ease, in comparison to their digital immigrant counterparts. Within the K-12 classroom, the digital natives, who are most likely the students, are more comfortable with the integration of multimedia such as audio, video, and images to promote learning.

The increased usage of social media among digital natives, specifically Facebook, Twitter, and Instagram, as well as Snapchat provided them with quick and easy methods for communication (Williams, Crittenden, Keo, & McCarty, 2012). This also highlights their preference for electronic interactions as opposed to face-to-face interactions. Digital natives enjoy social interactions, however, would prefer to use social media and other apps to facilitate communication. This is also evidenced in their usage of emoticons or emojis (small graphics in text) and slang in text (Williams et al., 2012).

Today, learners can access information from anywhere at any time from any source and share this information with others from any part of the world. Digital natives preferred sprite graphics to texts while reading a text, and they also prefer to progress by randomly jumping from one place to another in modules rather than linear progression (Prensky, 2001b; Tapscott, 2009). Moreover, as the digital natives were so engaged with

technology, their learning approach has suffered some radical changes. As highlighted by Bayn and Ross (2007), the most prominent differences were related to access speed, instant pleasure, impatience in linear thinking and multitasking or continuous partial attention.

Douglas Adams' (1999, quoted in Madden et al 2005: 1) his observation encapsulates many people's attitudes to new technologies: our acceptance of them has always been determined by age, with younger generations more likely to embrace them than their parents' generation. For Marc Prensky, however, the introduction and spread of digital technology over the last 30 years has created a fundamental, unalterable generational schism: Today's students have not just changed incrementally from the past as has happened between generations previously. A really big discontinuity has taken place. One might even call it a "singularity" – an event which changes things so fundamentally that there is absolutely no going back (Prensky 2001: 1, emphasis in original).

Consequently, traditional assumptions about education are no longer valid. Since it is highly unlikely the digital natives will go backwards, the onus is on teachers to change both their methodology, style and the content of their lessons: "going faster, less step-by-step, more in parallel and with more random access teaching both Legacy and Future content in the language of digital natives. Under legacy content, Prensky includes ideas of the past reading, writing and arithmetic all of our 'traditional curriculum'; future content, by contrast, is largely "digital and technological. But it also includes the ethics, politics, sociology, languages and other things that go with it. Perhaps conveniently for Prensky, a games designer and marketing executive, the new curriculum will be delivered most effectively through the medium of computer games.

His claims are therefore twofold: digital natives constitute a distinct, homogenous generation; and their needs can only be met by radical changes in education. Indeed, Prensky forecasted an alarming scenario if we choose not to "Listen to the natives" (2005), and retain our predigital instincts and comfort zones. Schools, already increasingly moribund and irrelevant institutions, risk becoming mere holding pens for students, held in against their will for fear that they might vote with their feet and leave, like bored business people walking out of a dull presentation . To guard against this, teachers must create opportunities for students to educate themselves using digital technology, such as blogs, wikis and 3D worlds. Students should be consulted not only before schools decide to invest in new equipment but also on matters of curriculum development, school organization, discipline and assignments (Ibid.: 2). Tapscott (1999, quoted in Selwyn 2009: 8) takes a similar standpoint.

Digital natives were accustomed to immediate access to information, are able to process several things at once, prefer graphics to text, function better when connected, blossom in a context of instant gratification and prefer play to serious work.

The experiences of digital immigrant teachers in handling the digital natives in the classroom.

As technology continued to evolve, the gap between those who had grown up with technology (digital native) and those who don't (digital immigrants) continued to widen. This gap was very present in the K-12 classrooms where both digital natives (students) and digital immigrants work together. Teachers existed to work with students, together they jointly play choreography in order to achieve their goal, one wants to teach, the other wants to learn. There was no teaching process disconnected to learning process. Technology was a powerful tool but it is a tool to be learned as any other tool.

Adaptability. Teachers were told to have a duty to adapt their methods to the new way of learning as required, in fact to re- constitute themselves according to the terms of the natives (students) in order to remain relevant and presumably employable. Prensky (2001). The distinction between digital native and digital immigrants had become a common accepted issues within education and its broader cultural context, a way of mapping and understanding the rapid technological changes which are re- forming our learning spaces and ourselves as subject in the digital age. Young people had grown up with computers and the internet and are naturally proficient with new digital technologies and spaces while older people will be a step behind or apart in their dealings with the digital.

Prensky (2012) .He further added that digital wisdom means not just manipulating technology easily, or even creatively; it means making wiser decisions because one is enhanced by technology". (Prensky, 2012, p.212)

Giraffa, (2012) in unison also added that teachers who simply refuse to consider the use of technology in their activities with his/her students will face a huge risk to speak without being heard. Technologies were used all

times, methodologies were adapted but a professor who teaches and understands his role remains, therefore should also be adaptive to respond to the call of time in the new era of change.

Maton and Bennett (2010) study supported the notion that technology is highly accessible and therefore potentially well-integrated where young people live. Students' behavior regarding ICT (Information Communication and Technology) skills ability varies with the environment in which they live and their personal goals. The impact of ICT resources caused a revolution in our society. We have changed the way we communicate, we do information retrieval, we spend our leisure time, and of course the way we can teach and learn. Whatever it is they agreed with Prensky that technology can drive educational process to changes. It means ICT resources can be used as supported tools to lead teacher's to think about the necessity to change and to adapt them to this new scenario and to be technologically competent.

Collaboration. Many teachers were still exploring the potential of technology. Some effectively involved pupils in exploiting the interactive possibilities. It is believed that computers can improve the quality and quantity of teaching and student learning. Early studies revealed the increase of interest and participation in all classroom task and activities when teachers adopt the use of computers. (Marcinkiewicz, 2004).

Such developments pointed to a need to identify the level of technical skills acquired by students and their tutors in order to help the teaching community take important educational design decisions over the appropriateness of available tools to use for collaborative purposes in the classroom.

For Berk (2011) digital natives preferred teamwork and collaboration; these characteristics indicate that these students crave in-class and out-of-class experiences that are active, participatory, visual, collaborative, fast moving, quick thinking, rapid responding, emotionally freeing, and spontaneous.

According to the Partnership for 21st Century Skills, (2006). Educators need to rethink what and how we teach today's students, A pedagogical shift is beginning to occur. The teacher is no longer simply the transmitter of knowledge, but facilitates a classroom engaged in authentic and situated problem-based activities, advises students, creates structures to scaffold student activities, and maintains student teacher collaboration.

Prensky (2011) claimed the partnership pedagogy where teachers and students can collaborate to create a better educational environment where student's skills and knowledge can guide the teachers to find a way to explore ICT resources to do their job which is to teach. Prensky (2012) further added that we need to improve our teaching "meta" skills in order to aid students to develop critical thinking, to integrate video, and programming, just as the integration of reading and writing. To make this happen he postulates the "pedagogy of partnership". Students do their best: use technology, find information, and create products that demonstrate their state of knowledge of something. Teachers also do their best: guide the students, ask right questions, put the information into proper context, and ensure quality and rigor on the process.

In conclusion, Galaviz, J. M. (2016) strongly believed that teachers should acknowledge collaboration, the potential for enhanced teacher-student relationships. He further believed that learners who are geographically dispersed are offered excellent opportunities for collaboration and communication by the Internet.

Digital literacy. Thoman and Jolls (2000) pointed out that the concept of 'literacy' meant having the skill to interpret squiggles on a piece of paper as letters, which when put together formed words that conveyed meaning.

Berry (2012) said that if teaching is to become the results-oriented profession that students truly deserved, then classroom practitioners, must weigh in on what it means to be an effective teacher with digital literacy and expertise.

Based on History of Literacy (2010) literacy was constantly being shaped by social influence and the newer technologies and interaction among society. The desire to make connections and the implementation of media and technology which could include anything from figure painting to printing press to computer marries literacy to technology and extending literacy outward to others, in essence teaching.

Prensky (2008) pushed further by stating that programming literacy distinguish a literate person. He asserted that this literacy is the ability to make digital technology do whatever possible one wants to do—to bend digital technology to one's needs, purposes, and will.

According to Carroll (2000) and Sawyer (2006), preparing students for a global economy requires 21st century skills which include digital literacy, inventive thinking, effective communication, teamwork and the ability to create high quality products

In addition, Lee (2016) consequently believed that blogging and podcasting enhance digital literacy and participation, including online content creation and sharing, thus, leading to the conclusion that language learning is reinforced via online collaborative tools.

Digital divide. Referred to the gap between people who have adequate access to ICT and those who have zero or poor access to ICT. The existence of gap between groups related to education such as among teachers and students should be considered as a matter of concern. Prensky (2012) had suggested in his study that in everyday life, all participants use many of the same technologies (e.g., mobile phone, tablets, Web), but the types of activities they undertake and the concerns they had are very different. This difference was clear when approaching the educational environment issue. For some students, the idea of using technologies for language acquisition was stimulating, but not essential. The others perceived the opposite.

(Lai & Hong, 2015; Thinyane, 2010), suggested that the digital divide is not based on age alone but rather that it stems from an array of one's personal technology experiences. The use of technology as a medium of instruction was necessary in the 21st century classroom. However, there exists an inter-generational digital divide between students, who are digital natives being more adept with the use of technology and teachers who are digital immigrants.

The findings of the study showed that digital immigrant English teachers considered social media as a distraction in learners' studies and they also experienced with their students the copy-and-paste phenomenon.

However, in dealing with digital native learners, private school digital immigrant English teachers cope with the challenges of teaching digital native learners through encouraging the use traditional strategy in teaching. On the other hand, public school digital immigrant English teachers cope with the challenges of teaching digital native learners through increasing the use of modern strategy in teaching, with the use of technology including social media. All participants aim to balance the use of modern and traditional strategies in teaching digital native learners

Accordingly, studies on the digital divide was defined in terms of conventional access, computer ownership, and youth participation (Lynch, 2001; Jenkins, 2006; Cheong, 2008). These studies demonstrated disparities in social media and technology usage. Research on usage based on gender differences (Lenhart, Madden, Macgill, & Smith, 2007), after investigating patterns within student's technology use, the researchers found a positive and significant correlation between academic year and technology use. The students who had longer personal experience with the technologies scored higher on the DNAS, leading researchers to conclude that one could become a digital native with more experience using technology (Akcayir et al., 2016).

Problems encountered by the digital immigrant teachers handling the digital natives in the classroom.

Digital technologies can enhance learning through accessing information and improving communication, as well as providing self-directed and collaborative learning opportunities. Information Communication Technology skills can also help develop capable, future-ready citizens. Being digitally literate will include a fundamental knowledge base surrounding skills that allow having the ability to adapt to and use technology.

So over the past decade, teachers had been expected to integrate digital technologies in their classes. What teachers require is a clear concept of what it means to be digitally literate in today's society and knowledge of the means and methods use to not only promote but also cultivate digital literacy in themselves and their students. Students might be digital natives, comfortable with and immersed in technology, but they depend on teachers to learn through digital means.

This is a common vision about the role of Information Communication Technology in education. Without holistic improvements to teacher support, there is the risk of creating a generation of ill-prepared students for a digital future and having an established understanding of literacy provided a direction for pedagogy, teachers may then move literacy and learning, supplemented with technology, toward critical digital literacy.

Limited technical knowledge. Despite significant resources allocated to integrating technology in the classroom, many teachers have struggled with disruptions that devices can bring, had their work negatively impacted or

have not used technologies effectively. And many pre-service teachers perceive introducing new technologies as a future teaching barrier. A wide range of research has established that if teachers don't believe in using digital technologies they will fail to transform classes, align with learning goals and integrate technology into curricular content. Some studies continue to demonstrate a lack of usage on the part of teaching staff for developing their teaching practices, especially at the university level.

Mercader, (2019) said that at the institutional level, deficits are detected in the non-existence of a common, unified practice. In general, there are no institutional plans or models for integrating digital technologies into the classroom. It is therefore common for teachers to establish their own practices individually, meaning that the frequency and consistency of technology usage depends solely on the given teacher's interest, which leads to sporadic and inconsistent integration.

A common struggle of teachers attempting to integrate technology into their classrooms is a lack of knowledge and understanding of how to use technology, or discomfort with using it.

In most schools, technical difficulties sought to become a major problem and a source of frustration for teachers and cause interruptions in teaching and learning process. Jamieson-Proctor et al. (2013)

Wilkerson, Andrews, Shaban, Laina, & Gravel, (2016). Indicated in their research that simply providing teachers with professional development opportunities related to using technology does not translate into higher levels of integration in the classroom. It is only when they are provided the knowledge, skills, resources, and support that they will integrate technology in the curriculum to maximize its effects on teaching and learning.

Inadequate Technology. Technology provided the platform, and the tools to engage via numerous media with other individuals and groups beyond the immediate reach of the learner (Pittman & Gaines, 2015). There was an obvious need for students to be prepared to use technology. In 2013, 71 percent of the US population age 3 and older used the Internet (Snyder, de Brey, & Dillow, 2016). However, due to limited funds and budgets schools don't have the resources to provide adequate technology for every student.

In the Student Mobile Device Survey National Report: Students Grades 4-12 conducted by Pearson (2015) found that 14% of elementary students attend a school with a 1:1 initiative. However, most students access to technology is through a computer lab (37%) or shared in a classroom (33%). Sixty-two percent of students want to use technology more in the classroom, but the reality is that the resources are just not available. In schools that implemented Bring Your Own Device (BYOD), it is assumed students had the devices to fill in gaps where schools lack the resources. However, only 8% (elementary) and 13% (middle and high) school students bring their own devices to school for personal use. The opportunity to engage broadly and deeply with virtual environments made possible by technology continues to lag in education. The practical applications for learners as they create knowledge for themselves are numerous and growing, as can be evidenced by a simple Internet search on the subject. As districts continually move toward 21st-century classrooms, it is important to bridge the gap between utilization and adequate resources.

Time consuming. According to survey conducted by Morrison (2015) developing classes using technology was more time consuming. Though the time required declines when the same instructor develops a second or third online course, much time spent included developing content, assessments, assignments, and time associated with course design.

Another point of consideration was the time consume on technological learning which was found to be of equal importance as the pedagogical learning. Instructors required more time to determine how to implement pedagogical methods, how to create learning experiences and deliver content appropriate for the platform than they did learning about the features of the technology used to deliver the course. The time it took to get used to the technological features should have an equal time to knowing the course elements and the methods and approaches of teaching. (Freeman, 2015)

Consequently, the familiar factor that needed ample time to consume is the time dedicated to grading and assessing students. The time dedicated to grading students' work actually will take somewhat more time since the instructor must be very heedful in giving comments considering that he could not actually see the reaction of the children hence, his feedback of students' work is a critical component that can motivate students, deepen their knowledge and push them to think critically (Getzlaf et al., 2009)

Sellani, and Harrington (2002) said that many of the unique challenges that administrators and faculty face when teaching using digital technology was that the delivery was more labor-intensive in the amount of time spent to respond to questions. The increased time commitment has been found to be a major challenge to faculty. (Schifter 2000, Berge et al. 2002, O'Quinn and Corry 2002).

In addition, based on a study by Kenny and Fluck (2017) they asserted that teaching with the use of technology is more time-consuming. The study found that it took instructors an average of 10 hours to plan an hour long lecture. Increasing time constraints and demands are continually placed on students and educators alike, driving them to find new ways of providing a more personalized, self-directed learning experience. Dromey et al (2018).

Student-teacher interactions were integral to student learning opportunities in the classroom. A teacher's dedication, acceptance and understanding bridge the gap in meeting the needs of these learners.

Lack of relevant digital professional development. Even with adequate technology access, effective professional development remained a reason that makes it difficult to increase the level of technology integration in classrooms. Little is understood about what these experiences might look like for teachers on the ground during implementation of technology-integrated professional development (Wilkerson, Andrews, Shaban, Laina, & Gravel, 2016). Research indicated that simply providing teachers with professional development opportunities related to using technology does not translate into higher levels of integration in the classroom. It is only when they are provided the knowledge, skills, resources, and support that they will integrate technology in the curriculum to maximize its effects on teaching and learning.

According to Rotermund, De Rocje, & Ottem, (2017) schools were providing technology-related professional development. But, of those that participated in training, 59% only received 8 or fewer hours indicating teachers are left on their own with the daunting task of choosing the most appropriate technology tool to support teaching and learning.

Johnson et al., (2016) noted that teachers use digital technologies in their personal lives, but that, when applied in classrooms, they encounter serious technical, logistical, and pedagogical problems. In support to Johnson, Mercader (2020) supported Johnson and emphasized professional aspect that affected teachers' attitude towards application of technology in their classes; personal and professional. Teachers' professional characteristics referred to obstacles that are linked to their profession that is teaching, such as lack of digital training, pedagogical conceptions of teaching with digital technology, lack of experience with digital technology in class, and knowledge of the didactic use of digital technology.

Accordingly, Cuhadar (2018) inferred that the technological competency level of teachers is intermediate or lower. He associated the problems stemming from the integration of digital technologies or with their mechanical and educationally pointless use.

Gumbau et al., (2016) added that the lack of a common approach on the part of the educational center negatively impacts innovative teachers because they do not feel supported by their institution

According to Valverde, Garrido, & Sosa, (2010) Plans to incorporate technologies into trainings had focused their policies at the operational level and not at the strategic one. Improvements are implemented in the allocation of equipment and in teacher training, but not in plans that tackle the different dimensions affected by the change, with policies that correspond to the detected needs.

II. METHODOLOGY

This study is anchored in The Technological Acceptance Model (TAM) it was developed by Davis (1989), has actual system use (ASU) as the main variable. Davis defined ASU as an individual's observable usage of a particular system (e.g. technology). ASU is a direct function of behavioral intention to use (BIU) a technology, which Davis defined as the degree to which a person has formulated conscious plans to perform or not to perform some specific future behaviour. BIU is in turn, a function of attitude toward using (ATU) and perceived usefulness (PU).

ATU is an individual's positive or negative feeling about performing the target behaviour (Davis, Bagozzi & Warshaw, 1989), while PU is the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). Accordingly PU is influenced by perceived ease of use (PEU),

which Davis defined as the degree to which a person believes that using a particular technology would be free from effort. Figure 2 further suggests that ATU is determined jointly by PU and PEU.

According to TAM theories that in turn, each of PU and PEU is influenced by external variables (e.g. system characteristics, development process, and training). However, other explanatory variables notwithstanding, the proponents of TAM (e.g. Davis, 1989) posit that PU and PEU are the two fundamental determinants of ASU. They argued that if users find a technology useful (i.e. having PU) and easy to use (i.e. having PEU), then they develop a positive attitude toward using (ATU) this technology. All these will eventually lead to the behavioural intention to use (BIU) the technology and finally the actual use of the technology (ASU).

Several researchers had carried out literature reviews on the TAM model. For example, Chuttur's (2009) review provided a historical overview of the TAM in the information system (IS) literature from 1985 to 2007, by focusing on its evolution, applications, extensions, limitations and criticisms. However, he never revealed how he selected the papers for the review, and how he went about the analysis. In terms of findings however, Chuttur reported that the TAM model had indeed been very popular for explaining and predicting system use. However, most of the studies he reviewed had the weakness of only concentrating on self-reported data as opposed to observed measures, which was a gap for future studies.

Also, according to Chuttur (2009) most of the studies he reviewed had focused only on voluntary environments with little consideration for mandatory settings thus leaving a gap to be filled by future researchers on TAM by extending to mandatory settings. He also found out that several studies on the TAM had made use of students as participants, yet according to him, the results obtained from such studies could not be generalized to the real world because students may have peculiar motivations in performing a given behavior (e.g. use of ICT) such as the need to obtain good grades and rewards among others. Furthermore, Chuttur established that most of the studies he reviewed had been conducted in the US, and UK and very few in other parts of the world particularly in Africa, hence a contextual gap that needed attention by future researchers on the TAM.

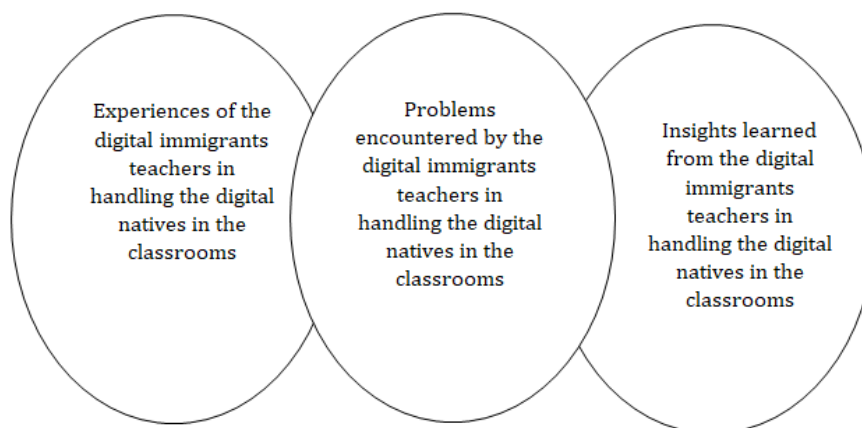


Figure 1: Conceptual Framework of the Study

Apart from those who reviewed literature on the TAM, researchers had conducted meta-analytic reviews on the model. For example, King and He (2006) conducted a meta-analytic review of 88 published articles to examine to effectiveness and robustness of the TAM in research. Using online search and the Social Science Citation Index (SSCI), they obtained empirical papers on the model. In terms of findings, King and He established that the TAM had been widely used in information system (IS) studies.

According to King and He (2006), both perceived usefulness (PU) and perceived ease of use (PEU) had been relevant measures that could be used in a variety of contexts. They also revealed that the correlation between PU and behavioural intention to use (BIU) different technologies had been stronger than that of PEU to BIU; and that both PU and PEU had jointly explained about 50% of the variance in BIU. However, they noted that while TAM correlations had been strong, they had had considerable variability suggesting that moderator variables if added could help to explain the effects.

This study was conceptualizing the idea that determining the problems encountered by the digital immigrants teachers in handling the digital natives will quickly address the basic problem in dealing digital native learners and their learning needs. Through the teacher instructional technology integration innovativeness for digital

native learners would deliver more effective teaching and learning process that can process globally competitive citizen that can compete in the global market. The figure 1 shown below the conceptual framework of the study in which shown the connection of each circle. The series of activities emphasize the interaction between circles that contents experiences of the participants of the study.

III. MODELING AND ANALYSIS

In this study, thematic analysis was utilized to analyze the gathered data. The researcher analyzed the answers of the participants from the conducted interviews with the use of Creswell's Model specifically the identifying of themes approach. According to Creswell (2012) themes in qualitative research are similar codes aggregated together to form a major idea in the database.

Familiarization with the data was common to all forms of qualitative analysis, the researcher immersed herself in, and became intimately familiar with, their data; reading and re-reading the data and noting any initial analytic observations.

Coding was also a common element of many approaches to qualitative analysis, involves generating pithy labels for important features of the data of relevance to the (broad) research question guiding the analysis. Coding was not simply a method of data reduction; it was also an analytic process, so codes capture both a semantic and conceptual reading of the data. The researcher coded every data item and ends this phase by collating all their codes and relevant data extracts.

Searching for themes was coherent and meaningful pattern in the data relevant to the research question. The researcher ended this phase by collating all the coded data relevant to each theme.

Reviewing themes. The researcher reflected on whether the themes tell a convincing and compelling story about the data, and began to define the nature of each individual theme, and the relationship between the themes. For these, Thematic Content Analysis was employed by the researcher. Thematic Content Analysis was a descriptive presentation of qualitative data in which a detailed analysis of each theme was made by identifying the 'essence' of each theme and constructing a concise, punchy and informative name for each theme (Andersen, 2013). In addition, to enhance validity and to create a more in-depth picture of the phenomenon, Environmental Triangulation was also employed by the researcher. It was a technique to analyze the results of the same study using different methods of data collection. The key was identifying which environmental factors, if any, might influence the information that is received during the study.

These environmental factors are changed to see if the findings are the same across the settings (David, 2015). This type of triangulation uses different settings, locations and other factors such as time, day, season in which the study took place. The idea was to determine which of these factors influence the information received, these factors are then changed to see if the findings are the same. If the findings remain unaltered under varying environmental factors, then validity can be established (Naeem, Saira, 2019). In this study, such triangulation was used considering that the requirements as mentioned was the use of environmental triangulation best suited the environment of the research being conducted.

Writing-up involves weaving together the analytic narrative and data extracts to tell the reader a coherent and persuasive story about the data, and contextualizing it in relation to existing literature.

Analytical Framework

The framework analysis of this research was flexible to allow the researcher to either collect all the data and then analyze it or do data analysis during the collection process. In the analysis stage the gathered data was sifted, charted and sorted in accordance with key issues and themes. This involves a five-step process: (1) familiarization; (2) identifying a thematic framework; (3) indexing; (4) charting; and (5) mapping and interpretation (Ritchie & Spencer, 1994).

Familiarization refers to the process during which the researcher becomes familiarized with the transcripts of the data collected (i.e. interview or focus group transcripts, observation or field notes) and gains an overview of the collected data (Ritchie & Spencer, 1994). In other words, the researcher becomes immersed in the data by listening to audiotapes, studying the field or reading the transcripts. Throughout this process the researcher will become aware of key ideas and recurrent themes and make a note of them. Due to the sheer volume of data that can be collected in qualitative research the researcher may not be able to review all of the material. Thus, a

selection of the data set would be utilized. The selection would depend on several aspects of the data collection process. For example, the mix of methods used (e.g. interviews, documents, observations),

Identifying a thematic framework, the second stage, occurs after familiarization when the researcher recognizes emerging themes or issues in the data set. These emerging themes or issues may have arisen from a priori themes or issues however it is at this stage that the researcher must allow the data to dictate the themes and issues. To achieve this end the researcher uses the notes taken during the familiarization stage. The key issues, concepts and themes that have been expressed by the participants now form the basis of a thematic framework that can be used to filter and classify the data (Ritchie & Spencer, 1994).

Indexing means that one identifies portions or sections of the data that correspond to a particular theme. This process is applied to all the textual data that has been gathered (i.e. transcripts of interviews). For the sake of convenience Ritchie and Spencer recommend that a numerical system be used for the indexing references and annotated in the margin beside the text (1994). Qualitative data analysis tools are ideal for such a task.

The final stage, mapping and interpretation, involves the analysis of the key characteristics as laid out in the charts. This analysis should be able to provide a schematic diagram of the event/phenomenon thus guiding the researcher in their interpretation of the data set. It was at this point that the researcher was cognizant of the objectives of qualitative analysis, which are: “defining concepts, mapping range and nature of phenomena, creating typologies, finding associations, providing explanations, and developing strategies” (Ritchie and Spencer, 1994:186). Once again, these concepts, technologies, and associations are reflective of the participant. Therefore, any strategy or recommendations made by the researcher echo the true attitudes, beliefs, and values of the participants.

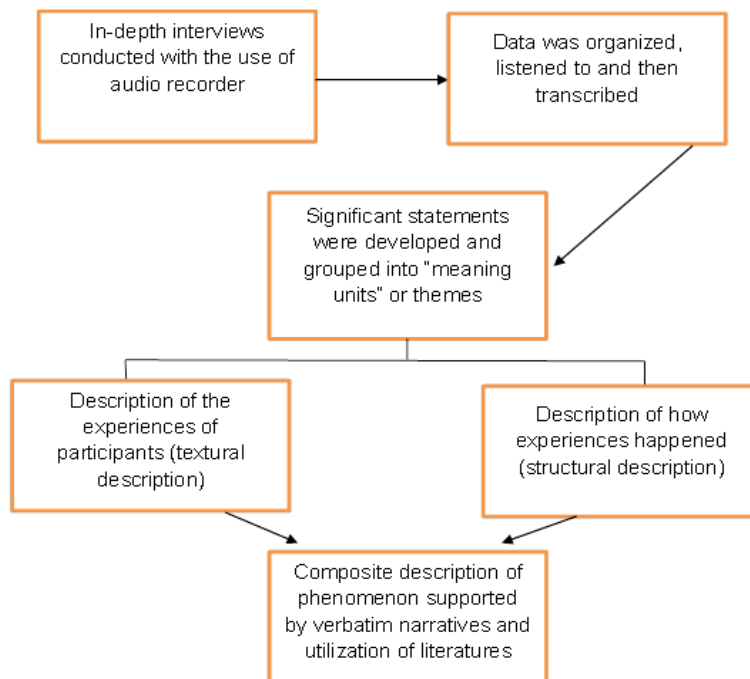


Figure 2: Analytical Frame Work Of The Study

IV. RESULTS AND DISCUSSION

It presented themes that emerged from the analysis. Along with the themes were comprehensive discussions, which answered the objectives of the study.

The themes that emerged from the data gathered were discussed in this chapter. Primarily, the result presented the description and background of the participants who were assigned to pseudonyms to conceal their identity.

The lived experiences of digital immigrant teachers in handling the digital natives in the classroom.

As technology continued to evolve, the gap between those who had grown up with technology (digital native) and those who don't (digital immigrants) continued to widen. This gap was very present in the K-12 classrooms where both digital natives (students) and digital immigrants work together. Teachers existed to work with

students, together they jointly play choreography in order to achieve their goal, one wants to teach, the other wants to learn. There was no teaching process disconnected to learning process. Technology was a powerful tool but it is a tool to be learned as any other tool.

The first objective of this study was to discover the lived experiences of digital immigrant teachers in handling digital natives in their classroom . It sought the personal hands-on experiences and feelings of the participants on their views. Participants' responses were grouped into themes such as requisite, and suggestions for improvement. Based on the interview data gathered the participants experiences of digital immigrant teachers handling digital native learners were coded and the following themes — the transcripts of participants of this focus-grouped discussion.

“I think I need to adapt. My learners are smart in using computers and browse in the internet. In my experience, innovativeness of technology nowadays plays an integral or vital part of the teaching-learning process. I need to keep pace.”(P1)

“I am more comfortable using handmade visual aid as teaching instructional material but my students seemed not interested in it. But when I showed up videos clips as part of my presentation they showed interest. I believe it's not working anymore, I realized I need to adjust and adapt to their choice of learning style” (P2)

“As a teacher I need to know how to use and apply the programs, software's, and other special functions of any available technologies such as a laptop, computer, wiFi, or internet connection, LCD/LED projector,etc .I need to learn all of this so I can use it in my classes”.P3

Adaptability. Teachers were told to have a duty to adapt their methods to the new way of learning as required, in fact to re- constitute themselves according to the terms of the natives (students) in order to remain relevant and presumably employable. Prensky (2001). The distinction between digital native and digital immigrants had become a common accepted issues within education and its broader cultural context, a way of mapping and understanding the rapid technological changes which are re- forming our learning spaces and ourselves as subject in the digital age. Young people had grown up with computers and the internet and are naturally proficient with new digital technologies and spaces while older people will be a step behind or apart in their dealings with the digital.

Prensky (2012) .He further added that digital wisdom means not just manipulating technology easily, or even creatively; it means making wiser decisions because one is enhanced by technology”. (Prensky, 2012, p.212)

Giraffa, (2012) in unison also added that teachers who simply refuse to consider the use of technology in their activities with his/her students will face a huge risk to speak without being heard. Technologies were used all times, methodologies were adapted but a professor who teaches and understands his role remains, therefore should also be adaptive to respond to the call of time in the new era of change.

Maton and Bennett (2010) study supported the notion that technology is highly accessible and therefore potentially well-integrated where young people live. Students' behavior regarding ICT (Information Communication and Technology) skills ability varies with the environment in which they live and their personal goals. The impact of ICT resources caused a revolution in our society. We have changed the way we communicate, we do information retrieval, we spend our leisure time, and of course the way we can teach and learn. Whatever it is they agreed with Prensky that technology can drive educational process to changes. It means ICT resources can be used as supported tools to lead teacher's to think about the necessity to change and to adapt them to this new scenario and to be technologically competent. Here are their responses:

“I accept I have to be literate digitally. I am not yet good at manipulating gadgets. Although we have gadgets at home but I just don't give time to browse and manipulate it my own.” (P3)

“As of my experience, some teachers go with the alterations of the instructional process such as the integration of technology inside the classroom. On the other hand, there are also teachers who are still on the process of adjustment as well as suffering from the intricate use of the said technology in the classroom”.P5

“To me literacy is not just knowing how to use a certain thing like computer, ipod etc but more on understanding its concept, and how it can be useful.” P6

Digital literacy. Thoman and Jolls (2000) pointed out that the concept of 'literacy 'meant having the skill to interpret squiggles on a piece of paper as letters, which when put together formed words that conveyed meaning.

Berry (2012) said that if teaching is to become the results-oriented profession that students truly deserved, then classroom practitioners, must weigh in on what it means to be an effective teacher with digital literacy and expertise.

Based on History of Literacy (2010) literacy was constantly being shaped by social influence and the newer technologies and interaction among society. The desire to make connections and the implementation of media and technology which could include anything from figure painting to printing press to computer marries literacy to technology and extending literacy outward to others, in essence teaching.

Prensky (2008) pushed further by stating that programming literacy distinguish a literate person. He asserted that this literacy is the ability to make digital technology do whatever possible one wants to do—to bend digital technology to one’s needs, purposes, and will.

According to Carroll (2000) and Sawyer (2006), preparing students for a global economy requires 21st century skills which include digital literacy, inventive thinking, effective communication, teamwork and the ability to create high quality products

In addition, Lee (2016) consequently believed that blogging and podcasting enhance digital literacy and participation, including online content creation and sharing, thus, leading to the conclusion that language learning is reinforced via online collaborative tools.

Here are transcript of participants

“It is fulfilling to know that my students are learning from me at the same time I am also learning from them.” (P1)

“In my class. I always emphasized that there is no monopoly of knowledge, everybody is welcome to express opinions and suggestions and whatever goal that we set as a group or class can be achieved through cooperation and collaboration.” P 5

“For me a collaborative class environment is where there is an active group learning with a teacher and everyone can freely communicate, think critically, solve problems and offer feedback to peers.” (P6)

Collaboration. Many teachers were still exploring the potential of technology. Some effectively involved pupils in exploiting the interactive possibilities. It is believed that computers can improve the quality and quantity of teaching and student learning. Early studies revealed the increase of interest and participation in all classroom task and activities when teachers adopt the use of computers. (Marcinkiewicz, 2004).

Such developments pointed to a need to identify the level of technical skills acquired by students and their tutors in order to help the teaching community take important educational design decisions over the appropriateness of available tools to use for collaborative purposes in the classroom.

For Berk (2011) digital natives preferred teamwork and collaboration; these characteristics indicate that these students crave in-class and out-of-class experiences that are active, participatory, visual, collaborative, fast moving, quick thinking, rapid responding, emotionally freeing, and spontaneous.

According to the Partnership for 21st Century Skills, (2006). Educators need to rethink what and how we teach today’s students, A pedagogical shift is beginning to occur. The teacher is no longer simply the transmitter of knowledge, but facilitates a classroom engaged in authentic and situated problem-based activities, advises students, creates structures to scaffold student activities, and maintains student teacher collaboration.

Prensky (2011) claimed the partnership pedagogy where teachers and students can collaborate to create a better educational environment where student’s skills and knowledge can guide the teachers to find a way to explore ICT resources to do their job which is to teach. Prensky (2012) further added that we need to improve our teaching “meta” skills in order to aid students to develop critical thinking, to integrate video, and programming, just as the integration of reading and writing. To make this happen he postulates the “pedagogy of partnership” .Students do their best: use technology, find information, and create products that demonstrate their state of knowledge of something. Teachers also do their best: guide the students, ask right questions, put the information into proper context, and ensure quality and rigor on the process.

In conclusion, Galaviz, J M. (2016) strongly believed that teachers should acknowledged collaboration, the potential for enhanced teacher-student relationships. He further believed that learners who are geographically dispersed are offered excellent opportunities for collaboration and communication by the Internet.

“I have been using my cellphone which is through keypad for quite a time now and I am comfortable using it than the touch screen commonly available today and used by many.” (P1)

“It is a pleasure to be teaching but I don’t understand why students are getting lazy. When I ask them to copy something on the board they would rather take a picture of it from their cellphone than copy those on their notebook”.(P2)

“:As a teacher, I think what I have to do with the present educational system and this onset of technological advancement is to equip myself through exposure to different technologies because I cannot acquire the skill to use it unless I have enough hands on experience”.(P4)

Digital divide. Referred to the gap between people who have adequate access to ICT and those who have zero or poor access to ICT. The existence of gap between groups related to education such as among teachers and students should be considered as a matter of concern. Prensky (2012) had suggested in his study that in everyday life, all participants use many of the same technologies (e.g., mobile phone, tablets, Web), but the types of activities they undertake and the concerns they had are very different. This difference was clear when approaching the educational environment issue. For some students, the idea of using technologies for language acquisition was stimulating, but not essential. The others perceived the opposite.

(Lai & Hong, 2015; Thinyane, 2010), suggested that the digital divide is not based on age alone but rather that it stems from an array of one’s personal technology experiences. The use of technology as a medium of instruction was necessary in the 21st century classroom. However, there exists an inter-generational digital divide between students, who are digital natives being more adept with the use of technology and teachers who are digital immigrants.

The findings of the study showed that digital immigrant English teachers considered social media as a distraction in learners’ studies and they also experienced with their students the copy-and-paste phenomenon.

However, in dealing with digital native learners, private school digital immigrant English teachers cope with the challenges of teaching digital native learners through encouraging the use traditional strategy in teaching. On the other hand, public school digital immigrant English teachers cope with the challenges of teaching digital native learners through increasing the use of modern strategy in teaching, with the use of technology including social media. All participants aim to balance the use of modern and traditional strategies in teaching digital native learners

Accordingly, studies on the digital divide was defined in terms of conventional access, computer ownership, and youth participation (Lynch, 2001; Jenkins, 2006; Cheong, 2008). These studies demonstrated disparities in social media and technology usage. Research on usage based on gender differences

(Lenhart, Madden, Macgill, & Smith, 2007), after investigating patterns within student’s technology use, the researchers found a positive and significant correlation between academic year and technology use. The students who had longer personal experience with the technologies scored higher on the DNAS, leading researchers to conclude that one could become a digital native with more experience using technology (Akcayir et al., 2016).

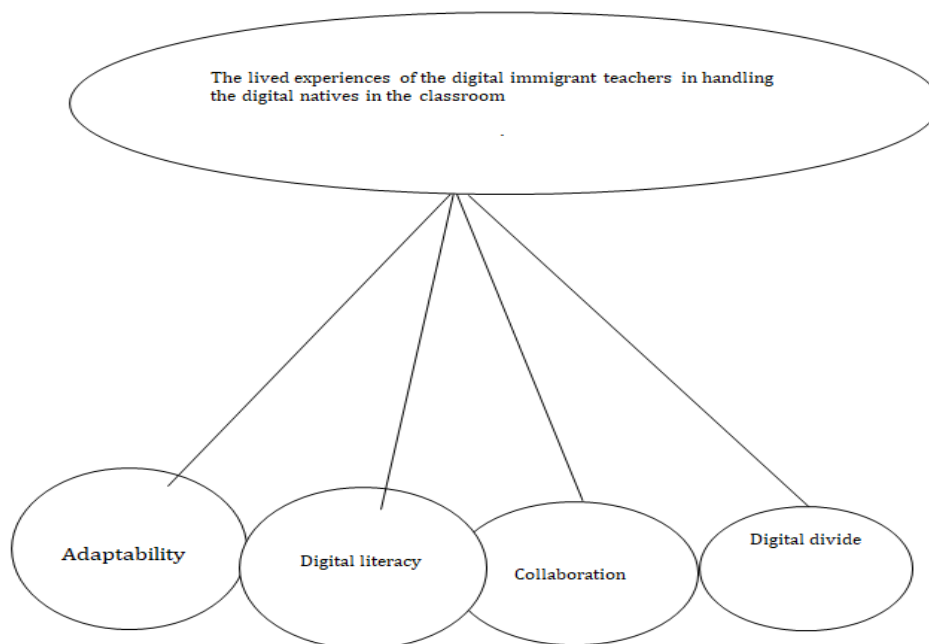


Figure 3. The emerging themes on the experiences of the digital immigrant teachers in handling the digital natives in the classroom.

Problems encountered by the digital immigrant teachers handling the digital natives in the classroom.

Digital technologies can enhance learning through accessing information and improving communication, as well as providing self-directed and collaborative learning opportunities. Information Communication Technology skills can also help develop capable, future-ready citizens. Being digitally literate will include a fundamental knowledge base surrounding skills that allow having the ability to adapt to and use technology

So over the past decade, teachers had been expected to integrate digital technologies in their classes. What teachers require is a clear concept of what it means to be digitally literate in today’s society and knowledge of the means and methods use to not only promote but also cultivate digital literacy in themselves and their students. Students might be digital natives, comfortable with and immersed in technology, but they depend on teachers to learn through digital means.

This is a common vision about the role of Information Communication Technology in education. Without holistic improvements to teacher support, there is the risk of creating a generation of ill-prepared students for a digital future and having an established understanding of literacy provided a direction for pedagogy, teachers may then move literacy and learning, supplemented with technology, toward critical digital literacy.

“Every time we have classes technical glitches happen .I usually call somebody to help me because I do not know what to do with those technical problems.” (P3)

“So far as of this ime, still I haven’t master yet the use of google meet. Sometimes there is no audio or at times no video or power point that will appear on screen. I usually panic” (P1)

“As a teacher it is deemed necessary to have knowledge on the use of technology because I believe works can be done easily and fast with the use of technological gadgets” (P5)

Limited technical knowledge. Despite significant resources allocated to integrating technology in the classroom, many teachers have struggled with disruptions that devices can bring, had their work negatively impacted or have not used technologies effectively. And many pre-service teachers perceive introducing new technologies as a future teaching barrier. A wide range of research has established that if teachers don’t believe in using digital technologies they will fail to transform classes, align with learning goals and integrate technology into curricular content. Some studies continue to demonstrate a lack of usage on the part of teaching staff for developing their teaching practices, especially at the university level.

Mercader, (2019) said that at the institutional level, deficits are detected in the non-existence of a common, unified practice. In general, there are no institutional plans or models for integrating digital technologies into

the classroom It is therefore common for teachers to establish their own practices individually, meaning that the frequency and consistency of technology usage depends solely on the given teacher's interest, which leads to sporadic and inconsistent integration

A common struggle of teachers attempting to integrate technology into their classrooms is a lack of knowledge and understanding of how to use technology, or discomfort with using it.

In most schools, technical difficulties sought to become a major problem and a source of frustration for teachers and cause interruptions in teaching and learning process. Jamieson-Proctor et al. (2013)

Wilkerson, Andrews, Shaban, Laina, & Gravel, (2016). Indicated in their research that simply providing teachers with professional development opportunities related to using technology does not translate into higher levels of integration in the classroom. It is only when they are provided the knowledge, skills, resources, and support that they will integrate technology in the curriculum to maximize its effects on teaching and learning.

"I am teaching in a remote area and my pupils are poor. They could not buy their own computer, good that the government provided us 10 units of computer to be used by the 200 pupils. Considering the number of users, it is not enough".. (P2)

"Generally I don't have much problem because we have computer room in our school and we do our computer/online classes there. However, the number of computers against the number of users is not balance. Five pupils will be sharing one computer in my class. We are hoping that the ratio will be 1:1 so that all our children can manipulate the computer one by one and on their own" (P4)

"I told my pupils (well off) to bring their own device in school like laptop hoping that those who don't have can use the computers available in school. But sad to note that only 3 brought laptops, still there is inadequacy of units." (P4)

Inadequate Technology. Technology provided the platform, and the tools to engage via numerous media with other individuals and groups beyond the immediate reach of the learner (Pittman & Gaines, 2015). There was an obvious need for students to be prepared to use technology. In 2013, 71 percent of the US population age 3 and older used the Internet (Snyder, de Brey, & Dillow, 2016). However, due to limited funds and budgets schools don't have the resources to provide adequate technology for every student.

In the Student Mobile Device Survey National Report: Students Grades 4-12 conducted by Pearson (2015) found that 14% of elementary students attend a school with a 1:1 initiative. However, most students access to technology is through a computer lab (37%) or shared in a classroom (33%). Sixty-two percent of students want to use technology more in the classroom, but the reality is that the resources are just not available. In schools that implemented Bring Your Own Device (BYOD), it is assumed students had the devices to fill in gaps where schools lack the resources. However, only 8% (elementary) and 13% (middle and high) school students bring their own devices to school for personal use. The opportunity to engage broadly and deeply with virtual environments made possible by technology continues to lag in education. The practical applications for learners as they create knowledge for themselves are numerous and growing, as can be evidenced by a simple Internet search on the subject. As districts continually move toward 21st-century classrooms, it is important to bridge the gap between utilization and adequate resources.

"I need to manage my time wisely in my online class. There are always discussions in which to read, review, and respond. There are questions to answer and announcements to be made, and there are always assignments to be graded. I have to devise a strategy or routine to follow so that all of these can be done well".(P3)

"When I have my classes. Preparing the online gadgets eats up most my time. I don't have ample time anymore to prepare and improve my teaching strategy" (P6)

"I experience many times that while the classes is going on loss of connection occur, so I need to restart the computer and repeat the same process to establish connectivity. It's really time consuming for me". (P8)

Time consuming. According to survey conducted by Morrison (2015) developing classes using technology was more time consuming. Though the time required declines when the same instructor develops a second or third online course, much time spent included developing content, assessments, assignments, and time associated with course design. Another point of consideration was the time consume on technological learning which was found to be of equal importance as the pedagogical learning. Instructors required more time to

determine how to implement pedagogical methods, how to create learning experiences and deliver content appropriate for the platform than they did learning about the features of the technology used to deliver the course. The time it took to get used to the technological features should have an equal time to knowing the course elements and the methods and approaches of teaching. (Freeman, 2015) Consequently, the familiar factor that needed ample time to consume is the time dedicated to grading and assessing students. The time dedicated to grading students' work actually will take somewhat more time since the instructor must be very heedful in giving comments considering that he could not actually see the reaction of the children hence, his feedback of students' work is a critical component that can motivate students, deepen their knowledge and push them to think critically (Getzlaf et al., 2009) Sellani, and Harrington (2002) said that many of the unique challenges that administrators and faculty face when teaching using digital technology was that the delivery was more labor-intensive in the amount of time spent to respond to questions. The increased time commitment has been found to be a major challenge to faculty. (Schifter 2000, Berge et al. 2002, O'Quinn and Corry 2002). In addition, based on a study by Kenny and Fluck (2017) they asserted that teaching with the use of technology is more time-consuming. The study found that it took instructors an average of 10 hours to plan an hour long lecture. Increasing time constraints and demands are continually placed on students and educators alike, driving them to find new ways of providing a more personalized, self-directed learning experience. Dromey et al (2018).

Student-teacher interactions were integral to student learning opportunities in the classroom. A teacher's dedication, acceptance and understanding bridge the gap in meeting the needs of these learners.

Here are some of their answer as transcribe

"I hope I will be able to gain advance digital literacy and acquire more knowledge skills, resources, and particularly support from my school administration to answer my lack of digital competence and prowess". (P1)

"The best remedy is to engage myself in various pieces of training, workshops, and seminars regarding the implementation of the integration of technology in the classroom." (P8)

"The hope our school will initiate school based training on operation and hardware servicing by inviting outsider expert to give training in computer servicing and other programs operation that useful for teaching". P8.

Lack of relevant digital professional development. Even with adequate technology access, effective professional development remained a reason that makes it difficult to increase the level of technology integration in classrooms. Little is understood about what these experiences might look like for teachers on the ground during implementation of technology-integrated professional development (Wilkerson, Andrews, Shaban, Laina, & Gravel, 2016). Research indicated that simply providing teachers with professional development opportunities related to using technology does not translate into higher levels of integration in the classroom. It is only when they are provided the knowledge, skills, resources, and support that they will integrate technology in the curriculum to maximize its effects on teaching and learning.

According to Rotermund, De Rocje, & Ottem, (2017) schools were providing technology-related professional development. But, of those that participated in training, 59% only received 8 or fewer hours indicating teachers are left on their own with the daunting task of choosing the most appropriate technology tool to support teaching and learning.

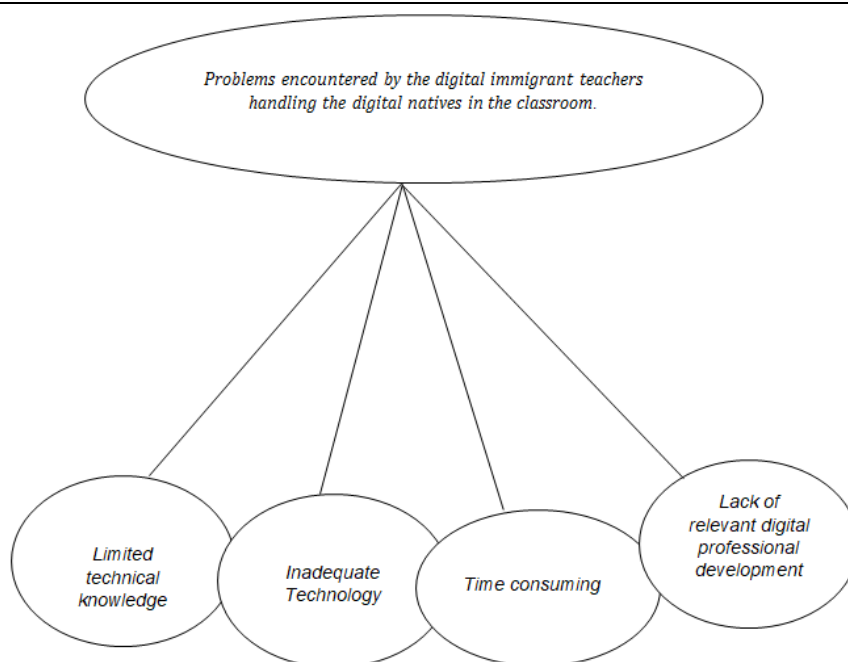


Figure 4. The emerging themes on the problems encountered by the digital immigrant teachers handling the digital natives in the classroom.

This means that the problems encountered by the digital immigrant teachers in handling digital native students in the classroom included; limited technical knowledge that hinders them from applying technology in their classes, inadequate technology which included lack of gadgets or computer units which will aid in the teacher-learner interaction, time consuming in the preparation of pedagogical presentation and hardware concerns and lack of relevant digital professional development.

The insights drawn by the digital immigrant teachers in handling the digital natives in the classroom.

In the virtual interview, there were a lot of things that we can realized when it comes to participants insights on being a digital immigrant teacher handling digital native in the classroom. One of the insights of the teachers in the detailed discussion was how to handle digital native learners being a teacher with only little knowledge on the use of technology. Some aspect or situation every teacher encountered was a shortcoming or struggle in the performance of their teaching function. The integration of technology in the classroom is a multifarious process. One of the greatest challenges for teachers was the link between educational technology innovations, promising practices for teaching and learning and integrating technology with increases in student achievement (Middleton & Murray, 1999). Successful student-use of technology in education hinges on knowing how to manage technology efficiently and overcoming barriers that come with integrating technology Constant Practice and Training. Training was proper avenues to learn. These were excellent opportunities to discover new things, gain new ideas and acquire new knowledge and skills. As I interviewed the participants, I discovered that they had attended one or two training, yet they stated that this was not sufficient. They said that they need more thorough practice on using digital technology. One participant even indicated that training was needed to improve skills in teaching but to perfect your skills; you need more practice. According to Kensinger (2016) many adults need training that focused both on how to use the technology and on their motivation to learn and the particular benefits the technology offers them. There is some evidence that participation in training itself can be a beneficial cognitive intervention, a finding consistent with research showing that mentally stimulating activities can benefit older adults' cognitive functions. For instance, training older adults to use tablet computers has been shown to help episodic memory and increase processing speed more than social activities do. Another study suggested that training older adults to use online social networking led to gains in executive function (Myhre et al., 2017). Indeed technologies provide access to a vast array of information, including digital libraries,. It can enhance the learning of teachers and administrators, as well as that of students, and increase connections between schools and the communities, including homes. Further it can support teacher learners in meeting a wide range of goals in different contexts.

Self-efficacy. Self-efficacy is the belief that a person can perform a task to achieve the desired outcome. Researchers in education focus on the principles of self-efficacy involving performance accomplishment, vicarious experiences, verbal persuasion, and physiological stress (Howardson & Behrend, 2015; Pan & Franklin, 2011). It is predicted that digital classrooms, which involve many technological devices, will improve students' success level. However, without effective technological integration, it is unreasonable to claim it is possible. To reach these goals, necessary online technologies self-efficacy is needed. (Ozerbas & Erdogan, 2016). (According to Li, Worch, Zhou, & Aguiton,(2015) self-efficacy made people process, weigh, and integrate diversources of information concerning their capability and they regulate their choice, behavior and effort and expenditure according to that information .We have control over our behavior not control of the outcome. There is also a significant correlation to teacher's use of technology in the classroom with their self-efficacy. Due to high demands of student achievement and accountability, if teachers felt the use of technology had a positive outcome on their students' learning it was more likely they would integrate it into their practice. However, if they felt it would not increase their student's performance they would not use it. Another point worth noting, 62% of elementary students feel they know more about technology than their teachers (Pearson, 2015) which may add to some teachers perceived low self-efficacy.

Teachers' digital mindset. Mindset is the established set of attitudes held by someone" (Oxford Living Dictionaries, 2017). It is safe to assume that individuals who grew up prior to the digital age would have a different mindset towards technology than those who grew up during the digital age. Understanding the mindset of each group will allow both digital immigrants and digital natives to collaborate effectively within the K-12 classroom. Mindset of digital Immigrants within the K-12 classroom, may see technology as an add-on to their daily lesson plan. They may not view an app as being integrated into their curriculum and rather view it as something to use at the end of class, such as a short video clip. Additionally as stated earlier, many digital immigrants prefer in-person interactions and may prioritize those over digital interactions. With the advancement of technology, such as the Internet, it may be possible for teachers to have their students complete a homework check-in online. However, some teachers may prefer to discuss the daily homework face-to-face as opposed to posting it on a website and having students confirm electronically when it is completed. Riegel and Mete (2015)Reid & Ostashewski (2011)'s cited two main mindsets that often occur with digital immigrants. First was, it is too difficult for them to learn new technology and it is too late for them to learn about new electronic devices, electronic educational programs, and apps. This was evidenced in study where a teacher who was unfamiliar with the iPad stated that he doesn't need to be the guru of technology, but his students will be. This mindset may pose a barrier for collaboration between digital immigrants and digital natives, where digital immigrants may feel hesitant to ask for assistance, and digital natives may be using the technology in a different manner than anticipated. Patience to acquire digital knowledge. Patience is a virtue as it is commonly called and according to research by psychologist Sarah Schnitker patience is the ability to stay calm while you're waiting for an outcome that you need or want. Patience then is to wait calmly for or through something. Being able to harness the potential of the digital transformation was a keystone of more sustainable and inclusive economies and societies however, the growth in technology, in particular smartphones, had led to instant gratification becoming the norm. Computer games provide instant feedback. We can post things on social media and get an immediate response from our friends. Information is available at the touch of a screen no more having to go to the library and look things up. In other words, we have become used to instant, rather than delayed gratification. People joining the workforce now expect everything to be given to them. They don't necessarily expect to work for their rewards, and they don't expect to take time to build up their skills. Brown M. (2017) stated that many teachers were still lagging behind in their ability to access, use, and afford digital tools. They are also facing cultural barriers and stereotypes that affect their expectations and hesitant to choose career paths that necessitates increasingly digitalized and interconnected world for they were much more likely to experience computer anxiety. Others know about digital technologies and have access to them, they just lack the skills and confidence to actually use them. For example, in Mexico and China, 31% of women who use mobile phones are not using mobile Internet because they report not knowing how to access it. Such technophobia is often a result of concurrent factors including employment status, income level and the patience to acquire knowledge and the required skill to become digitally literate. Jisc, (2014) said that digital literacies were those capabilities which fit an individual for living, learning and working in a digital society which he

called digital capability framework that included the following dimensions; ICT proficiency; information data and media literacies; digital creation, problem solving and innovation; digital communication, collaboration and participation; digital learning and development; and digital identity and wellbeing. Various elements of digital literacies attempt to encapsulate a wider emphasis on digital capability, including the notions of identity, wellbeing and rights and responsibilities. Research suggested that people who can stay calm in the face of these constant, petty frustrations are more likely to be more empathic, more equitable, and to suffer less from depression. Whatever the obstacle you have to overcome, it will likely require determination and focus to achieve. And you will need to keep your emotions under control throughout the journey. The ability to maintain self-discipline, and give a job no matter how mundane the attention to detail it needs, is a hallmark of patience.

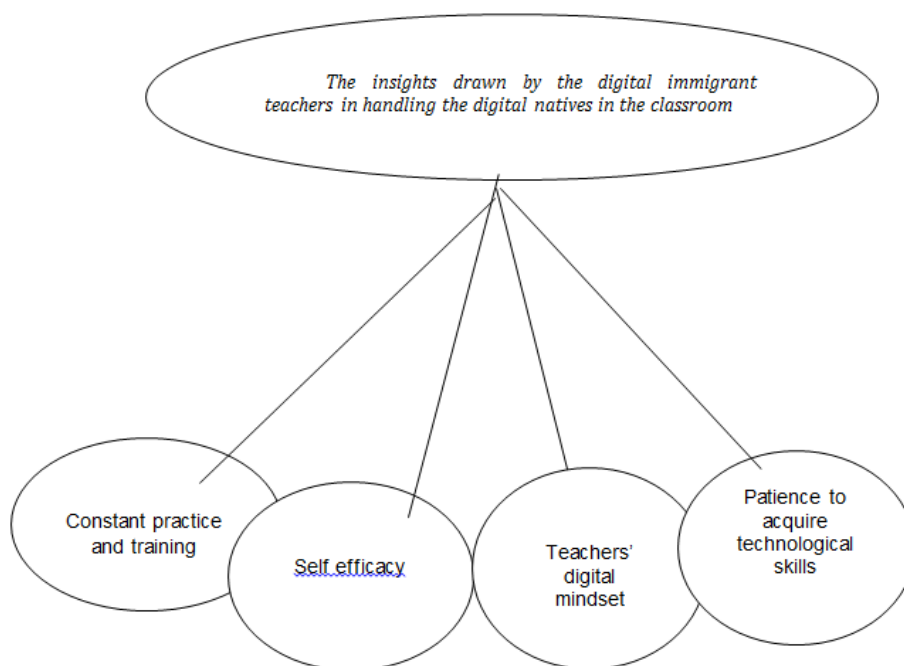


Figure 5. The emerging themes on the insights drawn by the digital immigrant teachers in handling the digital natives in the classroom.

V. CONCLUSION

Shown in this chapter was a brief overview of the study followed by implications based on the findings of the study. Future directions in the field of teaching by digital immigrants handling digital natives in the classroom, lived experiences of digital immigrants, problems encountered and the insights gained were also discussed here.

The primary objective of this study was to explore and investigate the lived experiences of our participants about handling digital natives in the classroom. Further this study examined the problems that were encountered by the digital immigrants and the meaningful learnings acquired.

It was an undeniable fact that today's generation of students was welcome by the fast-growing advancement of technology and thus making them dependent on the use of technology in everyday use. Technology was integrated into the classroom to create a balance in the learning process. The primary purpose of technology is used as a means of knowledge acquisition.

As a public elementary school teacher with my colleagues who were into teaching, being curious on the effects of teaching learning process in the classroom and the expected learning outcome of digital immigrant teachers handling digital natives in their classes this study was formulated. There were ten (10) teachers with varying backgrounds from different elementary schools who were interviewed.

The four themes in Figure 3 were the digital immigrants' adaptability to the new normal in the educational system; as teachers were expected to adapt their methods to the new way of learning and to reconstitute themselves according to the terms of the digital natives in order to remain relevant; digital literacy which was

the ability to make digital technology do whatever possible one wants to do to bend digital technology to one's needs, purposes, and will; collaboration, where the teacher is no longer simply the transmitter of knowledge, but facilitated a classroom engaged in authentic and situated problem-based activities, advised students, created structures to scaffold student activities, and maintained student teacher collaboration; and finally digital divide, the gap between people who have adequate access to ICT and those who have zero or poor access to ICT.

These four themes supported the teaching and learning process that leads to meaningful and unique experiences of the digital natives towards handling the digital native in the technological world. This experiences gave more promising hope in teaching and learning processes.

Another important presentation was the four themes which were the problems of digital immigrants handling digital natives; limited technical knowledge, a lack of knowledge and understanding of how to use technology or discomfort with using it; inadequate technology; where students want to use technology more, but, reality is that the resources are just not available to all therefore it is important to bridge the gap between utilization and adequate resources; time consuming; much time was consumed on technological learning which was found to be of equal importance as the pedagogical, labor-intensive in the amount of time spent to grading and responding to questions, lastly, lack of relevant professional development; indicated that simply providing teachers with professional development opportunities related to using technology does not translate into higher levels of integration in the classroom, they should be provided with technology related professional development. Technology can make people smarter and progressive in all aspect of human life and to enjoy the feature of this technology; everyone must embrace this new technological advancement. Indeed, insights learned by the informants- the digital immigrants in handling the digital natives such as constant practice and training, self-efficacy, teachers' digital mindset and patience in acquiring technological skills were essential in the development of the learners. Informants become equipped and competitive in the fast-changing world. The use of technology broadens our concepts, but it should be used in a way that the education, knowledge and skill acquisition is not compromised. Thus, the department of education should take regards in this matters that schools nowadays needs a technology that could cater vast numbers of learners, provide them with sufficient digital needs and the underlying problems should be addressed so as to reach optimum success in the implementation of our desired target for all our learners.

VI. REFERENCES

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