



**HOLY CROSS COLLEGE OF CALINAN, INC
DAVAO – BUKIDNON HIGHWAY, CALINAN POBLACION, DAVAO CITY**

**AN ASSESSMENT OF THE ICT SKILLS, PRACTICES,
PERCEPTIONS, AND BARRIERS OF ICT USE AMONG
SECONDARY SCHOOL STUDENTS**

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SECONDARY SCHOOL STUDENTS**

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in Practical Research 2

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APPROVAL SHEET

In partial fulfillment of the requirements in Practical Research 2, this study entitled,
**AN ASSESSMENT OF THE ICT SKILLS, PRACTICES, PERCEPTIONS, AND
BARRIERS OF ICT USE AMONG SECONDARY SCHOOL STUDENTS**, prepared
and submitted by **Elaiza Maples D. Ecunas, Raphael Nikhoz A. Tecson, Aliannah Babe
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examination, approval and acceptance.

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Approved by the panel of examiners, after the presentation of the study with the
grade of **PASSED**.

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Accepted in partial fulfilment of the requirements in Practical Research 2.

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The Researchers

ABSTRACT

Information and Communication Technology (ICT) has long been integrated into pedagogical methods. It offers new ways to develop students, but due to its complexity, some do not experience its benefits. Several studies have shown conflicting results regarding the ICT skills, practices, perceptions, and barriers of its use among secondary school students. Hence, this study was pursued. This study is a quantitative-descriptive study that aimed to identify whether secondary students have sufficient ICT skills to follow the trend, and assess the following practices, perceptions, and barriers of ICT use. Secondary school students were sampled using proportionate stratified random sampling with a total of 238 respondents. The results were derived from the survey questionnaire. Further, the data were analyzed by a statistical tool, specifically, mean and frequency percentage distribution. Based on the results of the study, secondary school students showed high basic ICT skill but possessed low advanced ICT skill, ICT practices that engaged in a weekly routine, positive perception of ICT use, and the presence of barriers to ICT use.

Keywords: *ICT, skills, practices, perceptions, barriers*

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Chapter 1

INTRODUCTION

Background of the Study

Information and Communication Technology (ICT) is employed extensively in the field of education today. ICT comprises computers, the Internet, and electronic delivery systems including radios, televisions, and projectors among others. ICT used in schools encourages more student-centered learning environments (Fu, 2013). Interest in the technology has expanded significantly along with the incredible expansion and innovation in information and communication technologies (Freeman et al., 2020). ICT has emerged as a crucial instrument for gathering, analyzing, and sharing adequate knowledge, particularly in the 21st century (Adesote & Fatoki, 2013). It has become essential to have the relevant ICT skills to satisfy the expectations of knowledge-driven economy (Maneschijn, Botha, & Biljon, 2013).

Internationally, there is a notable shift toward digital learning (Marcus-Quinn, Hourigan, & McCoy, 2019). In a study conducted by Pandey (2022) among secondary students in Nepal, results showed that although the participants valued ICT tools, there was a lack of knowledge regarding how to use them. Students typically struggle with problems including not having access to online resources and not knowing how to use computers. Also, results from the secondary school students in Malaysia assessment of ICT level skills indicated a moderate skill level for basic ICT knowledge, a low level for advanced ICT knowledge, a moderate skill level for Internet applications for information access, and a high skill level for Internet applications for communication. This is a clear finding that most students lack skills for other ICT skills (Umar & Jalil, 2012).

Meanwhile, globalization has promoted the digital usage and improvement of ICT especially for the Philippines as a developing country. Even though the Philippines leads the factors of educational access and literacy in its neighbors, it failed to harness these conditions to follow other Asian countries with the economic booms (Castillo, 2018). Consequently, according to Bonifacio (2013), the effectiveness of learning is not primarily affected by the availability of technology, but the pedagogical design for effective use and implementation of the standards for technology use. In statistics presented by Dy (2022) with relevance to the Sustainable Development Goals (SGD) goal number 4, 15+ years old Filipinos only possess 6 % basic digital skills, 2 % standard digital skills and 1 % advanced digital skill. Castillo (2018) also pointed out that infrastructure resources and human factors are the barriers that hinder the development of ICT-related skills in his study. Even though the Philippine government has initiated several programs and projects for the use of ICT in education, real implementation in day-to-day learning is still limited, especially at the start of the implementation, only 18.24 % of the 36 360 schools from elementary to secondary have staffs which are proficient in using computers (Bonifacio, 2013).

In specific areas of the Philippines, developing ICT-related skills are almost impossible, much more so when teaching ICT subjects without the resources. In a study conducted in San Isidro, Davao Oriental, five different schools responded to the survey that assesses the ICT integration of the respective schools, with results showing a very low integration rate was presented (Castillo, 2018). One of the schools that got the lowest mean score is located at the Poblacion center with internet connectivity and technology, and the other two that got a higher mean score are from areas with low urbanization and scarce technology. Through this result, resources can be an indicator for ICT skill assessment, but

the main factors that affected the said result are utilization and implementation. With the help of a survey questionnaire, the barriers to computer and information literacy are ranked in no particular order: low to no internet connection, no hands-on training in internet, and no maintenance cost for equipments, by resolving the said problems, the respondents got a barely satisfactory result (Lorenzo, 2016).

Schools have seen an exponential increase in the range of ICT being utilized for learning and teaching over the past decade, especially with the advent of the Internet (Bonifacio, 2013). A fundamental understanding of ICT usage is crucial for students to better prepare them for the digital learning era. ICT has been extensively developed as a learning tool, yet the extent of student ICT literacy competency has not been quantified (Lestari & Prasetyo, 2019). It has become essential to have the relevant ICT skills to satisfy the expectations of knowledge- driven economy. Therefore, it is crucial to properly transfer those skills to learners in secondary education (Maneschijn, Botha, & Biljon, 2013). Existing studies often explored assessing factors that affect the usage of ICT skills and its authentication. Also, there are several studies that investigated the barriers and defined the indicators for perception and practices. However, these current studies have not sufficiently assessed the ICT skills of secondary students or are outdated surveys from before the technological trend in the Philippines. Without an updated study that assesses the ICT skills of secondary students, there is a need to conduct this study that will fill the gap whether secondary students have sufficient ICT skills to follow the trend, assess the following practices, barriers and perception; and recommend actions that can improve the said skill.

Statement of the Problem

This study aimed to assess the ICT skills, practices, perceptions, and barriers of ICT use among secondary school students in Calinan, Davao City.

Specifically, this sought to answer the following questions:

1. What is the demographic profile of the respondents in terms of:
 - 1.1 age;
 - 1.2 gender;
 - 1.3 socio-economic status; and
 - 1.4 ICT background?
2. What is the level of the ICT skills of the respondents in terms of:
 - 2.1 basic ICT skills; and
 - 2.2 advanced ICT skills?
3. What are the ICT practices of the respondents?
4. What are the ICT perceptions of the respondents?
5. What barriers hinder the respondents from using ICT in school?

Review of Related Literature

This study aimed to assess the ICT skills, practices, perceptions, and barriers experienced by secondary school students in their use of ICT. This section reviews the specifically related literatures that are needed to be discussed which involves assessing basic and advanced ICT skills, the way students navigate ICT, and also the existing barriers that hinder them from applying ICT.

The Differences in ICT Skills Among Students of Different Age/Grade Level, Gender, Socio-Economic Status and Background

There may be a variety of factors affecting how information and communication technology (ICT) is used. Age is a crucial consideration (Kubiatko, 2013). Juhaňák, Zounek, Záleská, Bárta, and Vlčková (2019), conducted a mediation analysis of the relationship between the age at first computer use and students' perceived competence and autonomy in ICT usage. The results revealed that at the age of fifteen, children who begin using computers later (after the age of seven) exhibit significantly lower ICT competence and ICT autonomy.

The findings of the study of ICT adoption of skills by Kusumaningtyasa and Suwarto (2015), demonstrated that there are disparities in ICT adoption, use, and skills that exist based on age. Adolescents need to be literate in ICT in order to contribute effectively to modern society (Gnambs, 2021). Additionally, secondary school students acquired higher levels of digital literacy than did primary school pupils (Jin, Reichert, Cagasan, Torre, & Naw, 2020).

Consecutively, ICT self-efficacy and adolescents' interest are strongly positively correlated at age 15 to 19, and this correlation was largely mediated by behavioral factors of ICT engagement (Chen & Hu, 2020). Data from a national survey revealed that,

adolescents between the ages of 12 to 18 make use of ICT for communication and learning most of the time (Hale & Guan, 2015). Adolescents between the ages 14 and 18 spend more time using various ICTs for engagement, such as smartphones and computers (Kim, Kim, & Jee, 2015).

Hutt, Cabello, and Claro (2018), confirmed the importance of individual variables in determining online possibilities and threats; age appears to influence children's and adolescents' internet experience. An examination on how education and age affected the use of antivirus software and safety-related digital abilities, found that the level of users' digital security skills is related to their age, education, and access quality (Dodel & Mesch, 2018).

Additionally, one of the key areas of research in education has been the gender variations in academic performance, particularly because it may reveal potential gaps and inequalities in particular areas. The perception of boys of their ICT literacy as being higher than that of girls is one of the findings that have persisted over time (Siddiq & Scherer, 2019). Gender differences, particularly in secondary education, where attitudes of girls about computers appear to be less favourable than those of boys and where girls and boys approach ICT activities differently (Cai, Fan, & Du, 2017).

Critically, despite being a significant issue in education, the relationship between gender and attitudes toward ICT has received more attention in scientific literature than research mode. A hypothetical "digital gap" is discussed from a gender perspective by a number of authors (Gamez, Martinez, & Camacho, 2020). In comparison to female students, male students had better digital skills, with the exception of information navigation. Additionally, there was a gender gap among secondary students, with male

students having higher levels of digital proficiency in social and creative abilities, computer and internet operation, and information navigation, compared to female students (Ahmad, Ayub, & Khambari, 2019).

On the other hand, findings demonstrated by Gnambs (2021), that at the age 15, gender variations in ICT literacy were insignificant, but by age 18, there were some minor differences in boys' favor. Contrarily, at age 15, gender differences in ICT confidence benefited males but did not change with time. There was no support for any hypotheses regarding the moderating effects of gender role orientations. Overall, the survey discovered relatively minor variations in girls' and boys' ICT literacy. The discovered effect's tiny size do not support frightening claims about growing ICT literacy barriers for girls. It was found that there were significant variations between men and women in the overall attitudes about ICT use scale as well as in the cognitive, affective, and behavioral components with regard to sex. This result differs from earlier studies' findings, which suggested that men had better attitudes (Martinez, Abeledo, & Machado, 2020).

Other research has revealed that women have more positive attitudes toward ICT, which is in contradiction to the beliefs discussed above (González-Sanmamed, Sangrà, & Muoz-Carril, 2017). Siddiq and Scherer (2019) discovered gender disparities in ICT task performance, favoring women, in a recent meta-analysis culled from 23 empirical studies. However, other studies (Semerci & Aydn, 2018; Dauda, Ayanda, & Ji-brin, 2018; Teo, Milutinovic, & Zhou, 2016; Sáinz, Meneses, López, & Fàbregues, 2016) did not discover gender differences relating the behavior toward ICT.

Chiefly, on the basis of information from the 2013 International Computer and Information Literacy Study, a theoretical model was created and put to the test in each

nation. The results of the studies demonstrated that differences in ICT self-efficacy are explained by technological experience, self-directed learning, and socioeconomic background. In addition, socioeconomic background, gender, and self-efficacy all play crucial roles in comprehending students' computer and information literacy (Hatlevik, Throndsen, Loi & Gudmundsdottir, 2018). The relationship between indicators of socioeconomic status (SES) and students' information and communication technology (ICT) literacy a skill set that has found its way into educational curricula was synthesized in a meta-analysis and found that different socioeconomic status groups have different levels of students' ICT literacy, indicating a gap in the ICT field (Scherer & Siddiq, 2019).

The social class report of Philippine Statistics Authority (PSA) having 58.4% of the households of the Philippines belonged to the low-income class (Zoleta, 2022). Moreover, in an earlier report by PSA (Virola, Viernes, & Cortel, 2022), 83.1% of the Filipinos belonged to the low-income class. Using multilevel modeling by Casey, Kirk, Kuklies, and Mireles (2022), it was discovered that even in more advanced societies, there is a second-level digital divide between schools. High-SES students are more likely than low-SES students to use computers for education both inside and outside of the classroom and to be more proficient with technology. Even after accounting for school-level resources, these discrepancies are still sizable and statistically significant.

Students' motivation to use ICT and level of digital competence are influenced by their socioeconomic backgrounds (Heinz, 2016). There appeared to be less opportunities for students from low-SES homes to become ICT engaged (Dolan, 2016). Higher SES appears to be associated with more ICT use, having a minor effect on ICT use (Scheerder, Deursen, & Dijk, 2017). SES and the availability of ICT resources had a statistically

significant and strongly beneficial association. The availability of ICT resources was also favorably correlated with student household wealth as categorized being in low SES and high SES (Yang, Barnard-Brak, & Du, 2017).

Computer self-efficacy, subjective norms, and reported enjoyment were found to have a substantial relationship, and these variables were major drivers of perceived usefulness and ease of use. Students' intents to use ICT and their happiness were influenced by their attitudes toward using computers (Al-Rahmi, Alzahrani, Yahaya, Alalwan, & Kanim, 2020). The perception of utility has a big impact towards the attitude of students about using computers and what behaviors we want to engage in. It has been discovered that attitude toward using computers influences behavioral intention. Perceived ease of use significantly influences perceived usefulness (Osman, Choo, & Rahmat, 2013).

In fact, information and communication technologies (ICTs) are used differently at home and at school, according to recent study on ICT usage of students. The availability of ICT tools and education at the school, as well as the backgrounds and motivations of learners, may contribute to these discrepancies (Scherer, Rohatgi, & Hatlevik, 2017). The plurality of students had computers and laptops, and almost all had smartphones. Common sorts of technology, including computers and the internet, were readily available to them. They were proficient at utilizing cellphones, but only to a minor extent with other common technology. They used common digital devices and programs for information access and communication (Gasaymeh, 2018).

Basic ICT Skills Among Secondary School Students

Research recommendations call for initiatives to enhance pupils' foundational ICT abilities. Due to the expansion of ICT in the 21st century environment, young people have

a variety of choices for using ICT at home and at school (Eger, Klement, Pisoňová, & Petrová, 2018). Word processors are potent tools that undoubtedly have an impact on how teaching and learning are conducted in the twenty-first century in a world of computer technology that is developing quickly. Due to the unavoidable use of information and communication technologies (ICTs) to meet the needs of students from the digital generation, teaching writing in the modern day has undergone significant change (Zaidi, Zaoui, & Mezhoud, 2020).

Word processing software is a potent instrument in the quickly evolving world of computer technology, and its influence on 21st-century teaching and learning cannot be denied. Due to the unavoidable use of information and communication technologies (ICTs) to meet the needs of students from the digital generation, teaching writing in the modern day has undergone significant change (Zaidi, Zaoui, & Mezhoud, 2020). An essential skill for effective computer literacy is word processing (Ogbonna, Ibezim, & Obi, 2019). From the study of Harerimana and Mtshali (2019), the vast majority of respondents reported having proficiency with these programs such as Moodle (81.3%), Microsoft PowerPoint (70.7%), and online resources (74.7%).

Using a word processor greatly improved the students' performance, according to inferential statistics, and they perceived a significant difference between using pencil and paper and word processors to complete writing assignments. Majority of the students using a word processor made their work look more polished. Students thought that writing by hand was artistically beautiful, but they valued the convenience of using computer-generated sentences that were correctly spelled and written (Zhu, Shum, Tse, & Liu, 2016). There are numerous ICT applications, including word processors, radio cassette players,

television sets, phones, and the internet, that support the development of reading abilities. The aforementioned applications improved literacy abilities like reading, writing, speaking, and listening (Mulauzi & Kaira, 2021).

The analysis of Koraneekij and Khlaisang (2019) on the beliefs of students regarding the use of e-portfolios produced positive results, with the top five findings being: (1) learning through creation of work; (2) enhancing creativity; (3) enhancing the ability to solve problems; (4) enhancing critical thinking; and (5) enhancing authentic assessment. In fact, Ahmed and Ward (2016) found that e-portfolios are being accepted by students and higher education institutions all over the world as crucial for students' personal, intellectual, and professional growth.

Critical thinking, problem-solving, digital communication and sharing, the productivity of creative innovation, self-regulated learning and career skills, and a review of several prior studies that highlight the significance of e-portfolios are among the 21st century basic skills that have been identified (El-Senousy, 2020). Results noted by Alajmi (2019) in his study about the impact of e-portfolio use, ascribed to the fact that using e-portfolios based on life skills has made it easier for student instructors to communicate clearly, engage in meaningful dialogue, and draw on their prior learning and experiences to connect with new information.

Pegrum and Oakley (2017) also pointed out that students now use e-portfolios to show off their achievements to potential employers. Ellis (2017) made a similar argument, contending that e-portfolios have opened up new avenues and opportunities for conceptualizing, enabling, structuring, supporting, and ensuring a contemporary learning environment. Hodgson (2017) also noted that via e-portfolios, students can now jointly

demonstrate their academic and extracurricular learning experiences. E-portfolios were praised as an integrated tool for student personal development by McKenna, Baxter, and Hainey (2017).

The importance of visual literacy abilities has expanded due to the manner that students now use visual materials in their academic work (Matusiak, Heinbach, Harper, & Bovee, 2019). Following multimedia learning, learning is most efficient when students can create and coordinate verbal and visual representations of the same information (Wang, Mendori, & Hoel, 2019). In educational and professional settings, it is crucial to develop the ability to create visual materials that will improve comprehension of an oral presentation. In a study, almost all students that are respondents (97%) said they were able to create a slide to increase their comprehension after participating in the activity (Hammond, 2019).

Many people, especially beginners, find it difficult to create presentation slides that look skilled. The ability to create excellent slideshows is becoming more and more crucial in modern life (Yi, Matsugami, & Yamasaki, 2022). Language analysis showed that participants making presentation slide design conditions may have internalized the material and processed it more thoroughly in regard to themselves indicating better reflective learning when writing about the PowerPoint content (LeFebvre, Parsons, Entwistle, Boyd, & Allen, 2022).

Computation is a new study paradigm that has lately grown in popularity in scientific inquiry thanks to the invention of the computer (Gero & Levin, 2019). There are numerous theoretical frameworks and methods for evaluating knowledge and abilities connected to the usage of information and communication technologies at this time (ICT)

such as electronic spreadsheets (Tomczyk, 2021). For a variety of data analytics and decision-making functions, electronic spreadsheets are frequently employed in various tasks (Koch, Schekotihin, Jannach, Hofer, & Wotawa, 2019). The study of Oguguo et al. (2019), stated that secondary students can learn effectively since they are proficient in MS-Word and Excel.

Advanced ICT Skills Among Secondary School Students

Over the past few years, there has been a lot of research done on the skills necessary to enable and guarantee universal access to information. The study's findings shed light on the disparities and digital inequalities. One of the most important factors to consider when assessing ICT skill levels is the validity of the assessment in order to address the outcomes and obtain the relevant information for effective interventions to promote digital inclusion (Kaarakainen, Kivinen, & Vainio, 2018). The idea that using a computer to enhance learning makes it more meaningful and motivates one to put more effort into studying. Self-reported proficiency with ICT was heavily correlated, along with extensive ICT use at home, networking with expert cultures, and mentoring of others to further their ICT proficiency. The level of ICT use at school, seems to be more influenced by equipment accessibility and ICT use overall in the classroom than by a student's level of ICT proficiency (Ilomäki & Lakkala, 2018).

In truth, this encompasses a wide range of abilities, such as problem-solving, creativity, computer and information literacy, teamwork, and many more. Although these ideas are not strictly creations of the late 20th or early 21st centuries, they do indicate the growing significance of these complicated skills in a rapidly evolving society where the value of rote information is declining and that of broad skills is rising (Greiff & Kyllonen,

2016). Centered on the idea that technological advancements skills are within higher order thinking, problem solving, and communication skills, as well as proficiency in digital literacy, global citizenship, teamwork, team-based learning, and circumstances involving a variety of languages and backgrounds (Mayrath, Clarke-Midura, & Robinson).

The uses of computer animation present a number of difficulties and constraints for the teaching and learning process. Utilizing animation tools like Flash requires expertise. As a result, high-level skills are required, particularly in the sector of education, to integrate such media into a single multimedia product (Mansor et al., 2020). Students studying information technology education at the advanced level must be able to create 2D animations. Nevertheless, a number of earlier research have demonstrated that student learning outcomes for creating 2D animations are still quite low. This is due to the fact that misunderstandings and misconceptions still exist. When using 2D animations in the classroom as learning resources, students often experience confusion (Untari, Kamdi, Dardiri, Hadi, & Nurhadi, 2019).

The study of Ahmadi (2018), demonstrated that there are beneficial effects of using Adobe Animate learning media design in enhancing student learning outcomes. Suselo, Wunsche, and Reilly (2018) identified that slides and computer graphics combine a variety of skills, such as programming, mathematics, art, and spatial reasoning; and computer graphics involves many 3D concepts such as geometry, transformations, illumination and shading, projections and mappings. Hence, computer graphics are often best learned by experimenting with computer graphics concepts and interacting with the resulting renderings.

Conceptual skills are a group of skills that enable a person to visualize concepts, recognize patterns, comprehend abstract ideas, solve issues, formulate procedures, and comprehend how various systems, programs, and ideas are related to one another. The ability to adapt content to particular types of digital media falls under the category of conceptual abilities in the production of digital media (Carroll, 2014). The development of effective communication in the digital sphere depends on the use of digital media principles. These concepts, together with conceptual and functional skills, are now adapted by students to be able to communicate effectively in the digital age (Reyna, Hanham, & Meier, 2018).

The application of multimedia literacy in middle and high school which is behind, behaviors in schools is changing quickly (Arrow & Finch, 2013). Although most students are aware of the existence and advantages of multimedia technologies that can supplement their traditional learning methods, very few actively use the tools in classroom settings. Infrastructure issues and skills gaps are the two main deterrents to employing multimedia tools (Mashiyane, Bangani, & Deventer, 2020).

The ICT Practices of Students

Information and communication technologies (ICT) can provide a company with a source of competitive advantage. A crucial part of the goal for educational reform is the dissemination of ICT knowledge and experience in higher education (Iniesta-Bonillo, Sánchez-Fernández, & Schlesinger, 2013). The findings from the study of Beacham and McIntosh (2014) demonstrated that students had very positive attitudes about both inclusive education and the use of ICT for teaching and learning. They had slightly less favorable sentiments regarding inclusive practices and the use of ICT for inclusive

practices. ICT usage appeared to change as a result, shifting away from inclusive education and toward curricular accessibility. The study showed evidence that the views of students toward digital equality do not play a significant role in inclusive practices and that their understanding of the influence of ICT as a component of inclusive practice is lacking.

The use of information and communication technology (ICT) in teaching and learning has increased. Information and communication technologies, or ICT, are those that use computers and the internet to create, store, display, and share information. ICT provides a context for information production, display, delivery, and sharing. It also provides a context for human-human and human-machine communication (Annamalai, 2017). As students employ ICT in education, they practice to include social networking sites for social engagement which serves as a medium for peer discussion and a platform for communication between students and instructors, learning motivation, and experience support (Habibi et al., 2018).

Likewise, students commonly utilize information and communication devices in the classroom, such as laptops and smartphones, for purposes other than academic ones, according to research. These activities include messaging, email, and social media account checking (Vahedi, Zannella, & Want, 2021). Students used the Internet more often outside of class. In comparison to academic pursuits, they used the internet and other digital devices more frequently. ICT-related characteristics and academic performance have a strong correlation, according to the canonical study (Nouri, Zandi, & Etemadizade, 2022).

Social media, in addition to the website, helps the entire academic community connect and interact. Facebook, Twitter, Instagram, and YouTube can be used for communication, cooperation, and fostering creativity between students and instructors

(Selwyn, 2016). Students even frequently use digital libraries for a wide selection of reference resources in electronic format, including books, journal articles, scientific journals, and other scientific works. Students' capacity to learn and conduct research in real-time or without time constraints can be aided by its use (Lyman, 2017).

Major universities now have dedicated multimedia classrooms and multimedia-friendly facilities in their schools and classrooms thanks to the development of physical networks and large-scale data processing technology. Students possess a thorough theoretical understanding and the ability to put that knowledge of multimedia application into practice (Hu, 2022). A test of the effectiveness of the usage of interactive multimedia learning resources on the critical thinking abilities of students thereby found the validity, applicability, and effectiveness of interactive multimedia learning resources. This finding suggests that interactive multimedia learning materials can help students develop their critical thinking abilities (Djamas & Tinedi, 2021).

Students use sites to watch sports videos, sports teaching animations, and other content in order to better comprehend and learn the subject of sports (Da-Wei, Chao, Shun, Xun-Liang, & Wen-Fang, 2018). An ICT-based learning environment fosters interaction, collaboration, and communication while also providing chances for growth and involvement (Peñaflor-Espinosa & Espinosa, 2021).

Most practices of utilizing ICT involve the use of a laptop, computer, multimedia projector, wide screen, microphone, sound system, e-library, email, and video conferencing by the students. Students are very engaged and focused on learning when using ICT tools (Peñaflor-Espinosa, 2019). Both the study and practice environments have transformed as

a result of the rapid development producing improved literature retrieval applications and expanded access to personal computers (Jain, Kumar, & Khattar, 2021).

The study of Ishaq et al. (2020) demonstrated that the majority of students owned laptops and personal computers, and they had access to the Internet in institutions. Many students claimed that they used ICTs to enhance their fundamental abilities and to engage actively in their studies. It has also been demonstrated that the effective usage of ICTs has had a significant impact on the students. Learners increasingly favor including computer training in the curriculum because they claim it will improve their capacity to gather, evaluate, and use knowledge in order to solve problems quickly and effectively while enrolled in classes and, more crucially, after graduation (Srivastava et al., 2014).

The ICT Perceptions of Students

Perceptions of students of digital literacy within information and communication were higher when it came to understanding it, using digital tools to find information, using it to critically evaluate information, online interaction, and online tools. They were more evenly divided when it came to their perceptions of the factors of digital literacy in managing and communicating information, collaboration, and sharing of digital contents (Abbas, Hussain, & Rasool, 2019). From the study of Qaddumi, Bartram, and Qashmar (2021), findings showed that students in public schools in Palestine believed that ICT had a moderate impact on their learning. Students acknowledged that they frequently encounter difficulties, such as long lessons, limited access to contemporary technology, and difficulties with information research techniques.

Students even perceived access to and use of ICT. Despite the fact that students utilize and have access to ICT in the classroom, levels of substitution and augmentation

predominate. Enhancement refers to these two stages. The results show how ICT is used in the classroom. The abilities of students to use a simple function in a constrained mobile application have not changed or improved much (Alkaromah, Fauziati, & Asib, 2020). The research study of Verhoeven, Heerwegh and Wit (2012), showed that the skills of students in computer maintenance and website development grow but not in using the Internet or using fundamental ICT skills. The findings revealed a relationship between learning styles and self-perceived ICT skills, albeit a weak one.

More so, in the study of Khokhar and Javaid (2016), identified that while both students and teachers thought that ICT was a very important tool for maximizing learning in classrooms, students thought that the use of the technology of the teachers was the least creative. Students wanted their teachers to use ICT to create authentic teaching and learning experiences in the classroom, rather than just PowerPoint presentations and video showings. In terms of perceptions with regard to interest, the majority wants to learn more about ICT but they are not very interested in using ICT to make course reflections, share work or outputs, or work collaboratively with classmates. This illustrates that word processors, web browsers, search engines, and emails are the most frequently used ICT tools, while desktop publishing, video editing software, and social bookmarking are the least used (Toyo, 2019).

On the other hand, a study among students in Bangladesh, shows that pupils generally have high self-reported computer and internet skills. According to the students, they do well on basic computer and internet tasks but averagely on more difficult ones, including resource appraisal on the internet. They also perceive their professional software skills to be below average (Hossain & Sormunen, 2019). Even Fabunmi (2020) concluded

in his study that ICT is a tremendously helpful and accessible resource for learners. The implication is that ICT culture has permeated all higher education institutions and is here to stay. This is true because modern methods for enhancing teaching and learning, particularly in the education sector, now include information and communication technology.

Conforming to that as stated by Pardede (2020) students were confident in their knowledge and ability to use ICT in learning activities, learners had a positive and high-level perception of the use of ICT to increase their interest and motivation. They had a positive and high-level perception of the impacts of ICT use in learning, including positive and high-level perception of ICT educational values, and participants had a positive and high-level perception of their ICT use self-efficacy. The perceptions of students about ICT alter as a result of repeated exposure to its possibilities; the more favorable their perception of ICT, the more likely one is to improve their ICT-use skills (Bazer, Pardillo, & Ruales, 2012).

Digital existence requires proficiency with the use of information and communications technology (ICT). The age at which students interact with and use ICT for the first time has been declining over the past few years. This may have a substantial impact on how well-developed their digital literacy is (Juhaňák, Zounek, Záleská, Bárta, & Vlčková, 2019). There are also findings shown by Porat, Blau and Barak (2018), revealing just a few perceived skills from the students and their actual performance were correlated. Although their self-reported evaluations of various digital skills showed high positive connections, actual performance tests showed low- to medium-sized relationships between various literacies.

The Barriers of ICT Use Among Students

ICT has the potential to significantly enhance the educational system, but due to many barriers, students are still far from experiencing these advantages (Khan, Hasan, & Clement, 2012). These impediments include a lack of ICT proficiency among the teachers, a lack of teacher assurance, a lack of pedagogical teacher preparation, a lack of appropriate educational software, a lack of access to ICT, the rigid design of traditional educational institutions, constrictive curricula, and many others (Buabeng-Andoh, 2012).

As stated by Kipsoi, Chang'ach, and Sang (2012) that ICT barriers exist highly in Kenya, schools hardly ever employ ICTs to control output quality, boost teacher productivity, or cut expenses by scrutinizing spending. This is explained by the numerous difficulties most Kenyan schools face in using ICTs for educational management. Despite its promise and potential for application in instructional management in schools, this has led to a slow pace of technological adoption. The main deterrents to the use of ICT in secondary schools include, among other things, a lack of facilities, teachers who are not proficient at fully integrating ICT into classroom instruction, a lack of time, and a lack of a clear ICT utilization policy in schools, Andrew (2014).

Lack of ICT equipment at most schools, including computers, scanners, digital cameras, phones, fax machines, modems, CD and DVD players and recorders, digitized video, radio, and TV programs, database programs, and multimedia programs has been a problem. It implies that adequate equipment, computer supplies, and maintenance, as well as other accessories, are necessary for the effective use of ICT (Andrew, 2015). There are not many ICT resources accessible at schools for ICT integration, and this lack of ICT equipment and/or inadequate utilization of these ICT resources for those schools that do

have them has a negative influence and a dilemma on the teaching and curriculum administration functions of most teachers towards imparting knowledge to the students (Mathevula & Uwizeyimana, 2014).

Albugami and Ahmed (2015) emphasized that the use of ICT was recognized as a key instrument for enhancing performance, teamwork, the learning process, and learning outcomes. The use of ICT in Saudi secondary schools is hampered by a number of issues. The obstacles were a lack of room, supplies, maintenance, and ICT expertise among instructors and head teachers. ICT integration in schools was also negatively impacted by the level of teacher competency, training, and absence of defined ICT policies. This study identified factors that support and impede ICT application in learning. In congruence with the claim of Alenezi (2019), the lack of management and technical support, time constraints, a lack of ICT and pedagogical training, unfavorable attitudes and beliefs toward educational technology, a lack of clear policies and strategies on ICT adoption in learning institutions, resistance to change, and insufficient technological resources are some of the factors affecting the practical use of educational technology.

As mentioned by Siddiquah and Salim (2017) in their study, the majority of students struggle with issues including slow computer speeds, Internet signal issues, virus threats, damaged computers, load shedding, and limited access to the internet. To address the ICT-related issues faced by students, secondary schools should make greater investments in strengthening their infrastructure. Also, in accordance with the findings of Tarimo and Kavishe (2017), that the majority of students had slow Internet speeds as well as inadequate Internet browsing skills that clearly shows that they face difficulties in using ICTs.

The lack of training facilities to learn ICTs is the institutional level constraint that students cite most frequently. This may be due to a technical staffing shortage in the field of ICT. This also includes a lack of self-assurance when using ICT tools and the fact that ICTs can lead to issues like visual fatigue and physical pain. It demonstrated how many students lacked even the most fundamental technological knowledge and required skills for the simple use of a personal computer (Malik & Godara, 2020). Additionally, the difficulties presented by the requirement for ongoing professional development to suit the needs of varied students, who undoubtedly increased in learning, are not always well addressed by teacher preparation programs and/or professional development methods (McCrimmon 2015; Gray, Wilcox & Nordstokke, 2017).

As a matter of fact, the implementation of ICT into classroom teaching methods by instructors may be hampered by inadequate ICT planning and techniques. This should be a component of professional teachers development. To make ICT use in education easier, ICT policies and strategies must be devised. Emphasizing the shared vision of schools for using ICT, reliable methodologies, and teachers are taking into account school policies for implementing ICT. The formation of a positive school climate is facilitated by ICT policy (Salam, Zeng, Pathan, Latif, & Shaheen, 2018). Moreover, common instructional software is pricey and not readily accessible. The provision of physical infrastructure in schools, in addition to the expensive acquisition and regular maintenance of ICT resources, presents a significant challenge for the customization of the relevant software in accordance with the local educational requirements for teaching, learning, and administrative tasks (Laaria, 2013).

In summary, studies from the last several years showed a startling shift in how people use technology. The role of Information and Communication Technology (ICT) in education should be understood, and suitable steps should be taken to ensure its proper and effective use. Students who are skilled in ICT can better manage their workload during class, speed up procedures, integrate communication, and access digital content as well as media navigation. The importance of ICTs is likely to increase as they become more widely available, affordable, and interactive. This will make it easier to assess the relevance of educational outcomes among secondary school students. Other aspects of learning can also be facilitated by ICT, including the augmentation of resources, contents, and media, the improvement of learning process monitoring, the growth of achievement and satisfaction of students, and the advancement of teacher-student and student-student communication as perceived by students. There are numerous barriers in transforming secondary education to align them with the demands of a globalized and technology-driven world. ICT-related approaches could change the relevance and quality of secondary education.

Theoretical Framework

This study is anchored on the Unified Theory of Acceptance and Use of Technology by Venkatesh et al. (2003) developed the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003). The UTAUT has used behaviour (UB) as the main variable, which Venkatesh et al. defined as the degree to which a person accepts and uses a new technology. According to Figure 1, UB is a function of behavioural intention (BI) and facilitating conditions (FC). BI is a measure of the strength of one's intention to perform a specific behaviour (Davis, Bogazzi, & Warshaw, 1989), while FC is

the degree to which an individual believes that organizational and technical infrastructure required for the support of the technology exists (Venkatesh et al., 2003). BI is in turn, as illustrated in Figure 1, determined by performance expectancy (PE), effort expectancy (EE) and social influence (SI). Venkatesh et al. (2003) defined PE as the degree to which an individual believes that using the technology will help him or her to attain gains in job performance; EE as the degree of ease associated with the use of the technology; and SI as the degree to which an individual perceives that important others believe that he or she should use the technology.

This theory is greatly suitable for the study, because the theory has supported the actual use or the behaviour of students towards ICT as validated by the perception of students, and also the practices they have related to ICT. This implies that students' ICT skill is not directly proportional to the availability of technology-related resources, but instead, the attitude and behaviour of the students. This theory helped in assessing the students' ICT skills with respect to their practices and perception towards the subject. The theory takes on the role in supporting the importance of understanding the level of ICT skills of the students along with their perception and practices, while also assessing the barriers of ICT use to provide information that can improve the current institution.

Significance of the Study

The study would give an understanding of the current ICT skills of secondary students, as well as their practices, perceptions, and barriers in their use of ICT. This study would be beneficial for the learners, the school administration, the teachers, and the parents.

This will serve as a way to find out and assess the quality of education of the learners with respect to ICT use and instruction. Students would be able to assess their ICT skills, recognize practices, and perceptions that are beneficial for them. This study would give feedback to students if they are capable to follow the trends in ICT in the 21st century. Learners could grasp an established standards of competence and technological skills as domain for education. As the institution implements interventions effectively, students would experience a more developed teaching modality.

If the results of the study would show that the ICT skills of the respondents are deemed satisfactory, with good practice and perception then it would be a good indicator that the school has successfully integrated ICT to the curriculum. The result of the study would help formulate programs, activities, or events that will enrich the ICT skills of secondary students to maintain a consistent positive feedback. However, if the results show low ICT skills in secondary students, then it will act as a starting point for the institution's efforts to recognize and solve the issue. Moreover, the study may also be used as a reference for future researchers that will pursue the subject to identify the problem.

Teachers would know whether they have integrated ICT in teaching successfully. It is vital to understand how teachers can make ICT useful as they would become more knowledgeable on how to select and use ICT instructional strategies effectively. They would become more aware on what barriers hinder students to practice ICT and could generate activities that would allow students to participate and be involved actively in using ICT.

It is significant for the parents to know that an institution ensures quality standard of education that would give a guarantee to an efficient pedagogy. This could serve as a

direction for parents to analyze the impacts of successful educational system as to how their children could have positive learning experience. They could be a starting point through providing their children a safe and excellent environment at home relating to ICT involving practices and establish a positive foundation of perception as they can influence them in promoting a network of practical engagement.

Scope and Limitation

The focus of this study was to assess the ICT skills of students of S.Y. 2022-2023, as well as to assess the practices, perceptions, and barriers that the students of Holy Cross College of Calinan, Inc. have towards ICT use. The respondents were from grades 7, 8, 9, 10, 11, and 12 of the school year 2022-2023 of the institution. All of the secondary level students became the respondents of the study including those transferees and new students.

Secondary level students from other academic institutions were excluded for the convenience of the data gathering procedure. All the data gathered for the data analysis were only from the responses from the survey questionnaire distributed to the respondents.

Definition of Terms

The following terms are used in this study for guidance.

Information and Communication Technology (ICT) refers to a broad range of

technological resources and techniques that are used to create, transfer, store, share, and exchange information.

Barriers refers to circumstances that hinder progress. It shows the events that block secondary school students from experiencing the advantages of ICT use.

Discrepancies refers to the lack of similarities between facts. This shows how references and data contradict each other.

Pedagogy refers to methods or practices related to teaching.

Perceptions refers to how a person sees a subject. This shows the attitude of secondary school students toward the potential, utility, and value of ICT.

Practices refers to the routine or repetitive execution of an action. This shows how frequently secondary school students use ICT to perform a task,

Skills refers to the ability to use knowledge effectively to accomplish a given task. This shows the ability of secondary school students to use ICT to execute a task.

Chapter 2

METHODS

Research Design

Quantitative research is used by the researchers to observe situations or events that affect people. Quantitative research generates objective data that can be represented clearly using statistics and numbers. The goal of quantitative research is to gain a better understanding of the social world through data collection (Williams, 2021). This research used a descriptive research design. This research method helps in investigating the underlying techniques, processes, procedures, effectiveness, and other critical factors. The general procedure of any research is to investigate, collect, and interpret data on a specific phenomenon, concept, or claim. The primary goal is to identify and observe the various factors and variables that contribute to the phenomenon (Siedlecki, 2020).

A descriptive, quantitative design was used in this study. The purpose of the descriptive study was to describe the assessment of ICT skills, practices, perceptions, and barriers of its use among secondary school students. The goal was to determine whether or not the students were computer and ICT literate, as well as whether or not they used computers and ICT in their activities. The findings shed light on the differences and digital divides. When examining ICT skill levels, one of the most important issues to address is the accuracy of assessment in order to address the results and obtain relevant data for appropriate interventions to improve digital inclusion.

Research Respondents

The researchers chose the Junior High School and Senior High School students as the respondents of the study. The number of respondents in each stratum have the same

proportion to its population counterpart in accordance to the proportionate stratified random sampling. Using the proportionate sampling, the research had more reliable results and had a better representation of the entire population (Hayes, 2021).

The population size for the study was more than 100, and the researchers aimed for a 99% confidence level, therefore the researchers used Calmorin's Formula to get the sample size. The total population is 644 and so, the calculated sample size is 238. Each stratum contains approximately 36. 95652174% of the population in that same stratum.

Table 1. Research Respondents Sample Distribution

Grade Level and Section	Population Size (<i>N</i>)	Sample Size (<i>n</i>)
Grade 7 Saint George	58	21
Grade 7 Saint Helen	56	21
Grade 8 Saint John the Baptist	37	14
Grade 8 Saint Kiara	35	13
Grade 9 Saint Maria Goretti	37	14
Grade 9 Saint Nicholas	33	12
Grade 10 Saint Pedro Calungsod	41	15
Grade 10 Saint Raymond	41	15
Grade 11 Saint Therese	57	21
Grade 11 Saint Marie Rivier	57	21
Grade 11 Saint Vincent	29	11
Grade 11 Saint Paul	32	12
Grade 11 Saint Peter	32	12
Grade 12 Our Lady of Assumption	61	22
Grade 12 Our Lady of Lourdes & Grade 12 Our Lady of Fatima	38	14
TOTAL	644	238

Research Locale



Figure 1. Research Locale

The researchers conducted the study in the premises of Holy Cross College of Calinan, Inc. that was founded by the Foreign Missionaries of Quebec in June 1948 (seen in HCCC student handbook, 2021, p. 2). The school is a private and Catholic school located at McArthur highway, Calinan, Davao City. The Sisters of the Presentation of Mary (P.M. Sisters) has managed the said school since 1958. The said school encourages the use of technology and provides technology- equipped facilities for the students' usage.

Hence, the researchers chose Holy Cross College of Calinan, Inc. as their research locale because of the convenience of the data gathering procedure. The researchers of this study also have easier access to the respondents and have knowledge over the school. Lastly, the researchers chose this school because of the attitude of the school towards ICT use and practices that integrate technology to teaching, learning and tasks to students.

Research Instrument

By means of making a research instrument, the researchers utilized a physical survey questionnaire. Questions that were gathered from the questionnaire were related and

suited for the research study. The International Computer and Information Literacy Study (ICILS) questionnaire was adapted in this study to assess the current ICT skills of secondary students through their perception and practices, as well the barriers of its use. The adapted survey questionnaires, was floated only inside school campus among the research respondents. The researchers sought validation of the survey questionnaire from experts before disseminating them to the respondents. Before the survey proper, the study introduced, including the terms and conditions to seek the permission of the respondents.

Data Gathering Procedure

In this study, the researchers first sought permission from the school administration of the Holy Cross College of Calinan, Inc. to conduct their study. After given a permission, the researchers asked the school registrar for a permitted access of the population of respondents, for them to know the exact number of students under the secondary level from the institution. Upon approval, the researchers proceeded to disseminate the consent to the parents considering that most of the respondents were minors. After given the parents approval, the consent were distributed to the respondents with the content of informing them of what the study is all about and the options to be taken into consideration, indicating that the respondents can decline or withdraw anytime for it is voluntary and not obligatory. Then, the survey questionnaires were be distributed to the chosen respondents.

Additionally, the survey questionnaire also included orientation and information about the study and the use of the provided answers by the respondents. The adapted survey questionnaire was validated accordingly and was distributed personally following appropriate protocols and ethics. The provided answers and information of the respondents in this survey questionnaire were handled and analyzed with utmost confidentiality.

Data Analysis

In analyzing the data, the researchers used Frequency, Percentage Distribution and Mean.

A percentage frequency distribution displays the relative frequency of an observation by measuring the number of events included in a criteria (JoVE, 2022). This is used to identify the demographic profile of the respondents, as well as their collective responses. Percentage and frequency distribution were used to answer research questions #1, #3, #4, and #5.

Bhandari (2023) stated that mean is a parameter used in statistics that measures the central location in other terms. It is the average of the various data points. This is used in interpreting the collected responses to measure and determine the basic and advanced ICT skills of secondary students. Mean was used to answer research question #2.

Table 2 on the next page shows the interpretation of the data as the level of agreement of the respondents with the statements measuring individual skills, in basic and advanced level towards ICT use.

Table 2. Table of Interpretation of the Level of Basic and Advanced ICT Skills

Mean Range	Description	Interpretation
3.26 – 4.00	Strongly Agree	The respondents show very high level skill in using ICT
2.51 – 3.25	Agree	The respondents show high level skill in using ICT
1.76 – 2.50	Disagree	The respondents show low level skill in using ICT
1.00 – 1.75	Strongly Disagree	The respondents lack the skill in using ICT

Ethical Considerations

The researchers conveyed four fundamental ethical principles that are taken into consideration to ensure the ethicality of the study. Confidentiality, respect, validity, and justice and attainment of informed consents. The ethical principles are as follows:

Responses, details, and information were handled with utmost confidentiality. There were useful and fairly specific guidelines, an acceptable technique for overcoming potential harm and is required to weigh and balance flexible, adaptable to specific scenarios in the research. With the principle of respect for individuals, respondents should be considered autonomous. Respondents must be allowed to make their own informed judgements about whether or not to participate in this study. They have the freedom to ask questions and the researchers must explain in an understandable manner. The respondents with diminished autonomy should be protected. Some persons may lack the ability to make fully informed decisions regarding their actions and outcomes. The second is validity, which this study is focused on the accuracy of the data being studied by the researchers.

Definitely, justice would never be out of every step to make this research successful. This principle is concerned with the concept of righteousness. Every part of the population has an equal right to be part of the research along with considering the research sampling for a justifiable recognition of respondents, removing barriers, and equal access to benefits with rightful and just compensation in remuneration for the time and inconvenience of participation in research. Lastly, attainment of informed consents from the respondents that were given by the researchers serves as permission to be able to know about their rights for responding for the research.

Chapter 3

RESULTS AND DISCUSSION

This chapter contains the presentation, analysis, and interpretation of the data. Presentation of the results, interpretations, and discussions were arranged according to the order of the research questions in Chapter 1.

Research Question #1: What are the demographic profiles of the students in terms of age, gender, and socio-economic status?

Table 3. The Frequency Distribution of Respondents According to Age

The demographic profile of the respondents in terms of :		
1.1. AGE	FREQUENCY	PERCENTAGE
11	1	0.4%
12	29	12.2%
13	32	13.4%
14	22	9.2%
15	34	14.3%
16	52	21.8%
17	53	22.3%
18	10	4.2%
19	4	1.7%
20	0	0.0%
21	1	0.4%
	238	100.0%

Table 3 presents the frequency and percentage of the data according to age. Most of the respondents were 17 and 16 years old. Specifically, there were 53 (22.3%) respondent aging 17, and 52 (21.8%) in the age of 16. Other responses are, 1 (0.4%) 11 year old, 29 (12.2%) 12-year olds, 32 (13.4%) 13 year olds, 22 (9.2%) 14 year olds, 34

(14.3%) 15 year olds, 10 (4.2%) 18 year olds, 4 (1.7%) 19 year olds, 0 (0.0%) 20 year old, and 1 (0.4%) 21 year old.

Table 4. The Frequency Distribution of Respondents According to Gender

1.2. GENDER	FREQUENCY	PERCENTAGE
Male	95	40%
Female	143	60%
	238	100%

Table 4 presents the frequency and percentage of the data according to gender. There was a total of 143 (60%) respondents who are female, and 95 (40%) male. A high inclination towards the female gender can be referred in table 4.

Table 5. The Frequency Distribution of Respondents According to Socio-economic Status

1.3. SOCIO-ECONOMIC STATUS	FREQUENCY	PERCENTAGE
below 10,000/month	64	26.9%
10,000 to 20,000/month	89	37.4%
21,000 to 40,000/month	55	23.1%
41,000 and above/month	30	12.6%
	238	100.0%

Table 5 presents the frequency and percentage of the data according to socio-economic status. Precisely, 89 (37.4%) respondents identified their socio-economic status in the range 10,000 to 20,000/ month, while the least selected range of 41,000 and above/ month garnered 30 (12.6%) responses. Other ranges include 64 (26.9%) responses for below 10,000/month, and 55 (23.1%) responses for 21,000 to 40,000/month.

Table 6. The Frequency Distribution of Respondents According to ICT Background

1.4. ICT BACKGROUND								
1.4.a ICT devices currently used at home								
	none		one		Two		three or more	
	F	P	F	P	F	P	F	P
Desktop or laptop computers	32	13.4%	98	41.2%	60	25.2%	48	20.2%
Tablet devices or e-readers	97	40.8%	79	33.2%	31	13.0%	31	13.0%
Smartphones	3	1.3%	45	18.9%	28	11.8%	162	68.1%
1.4.b Years of using each of the following types of ICT devices								
	Never or <1 year		1-3 years		3-5 years		>5 years	
	F	P	F	P	F	P	F	P
Desktop or laptop computers	49	20.6%	95	39.9%	42	17.6%	52	21.8%
Tablet devices or e-readers	103	43.3%	81	34.0%	25	10.5%	29	12.2%
Smartphones	11	4.6%	58	24.4%	54	22.7%	115	48.3%
1.4.c Learned to do the following ICT activities through								
	My Teachers		My Family		My Friends		My Self	
	F	P	F	P	F	P	F	P
Communicate over the Internet	10	4.2%	62	26.1%	55	23.1%	107	45.0%
Create or edit documents	88	37.0 %	29	12.2%	28	11.8%	83	34.9%
Create or edit presentations	85	35.7 %	28	11.8%	28	11.8%	88	37.0%
Find information on the Internet	34	14.3 %	22	9.2%	30	12.6%	145	60.9%
Change the setting on an ICT device	54	22.7 %	42	17.6%	25	10.5%	96	40.3%
Use applications	19	8.0%	37	15.5%	19	8.0%	150	63.0%
							I have never learned this	Others
							F	P

Table 6 presents the frequency and percentage of the data according to ICT background. Mostly, in terms of ICT background, 98 (41.2 %) respondents appeared to have one desktop or laptop computer in their home, 97 (40.8%) respondents did not have any tablet devices or e-readers in their home, and 162 (68.1%) respondents have three or

more smartphones in their home. In addition, 95 (39.9%) of the respondents used a desktop or laptop computer for 1-3 years, 103 (43.3%) of the respondents have never or >1 year of using a tablet device or e-reader, and 115 (48.4%) of the respondents selected >5 years to describe their usage of smartphones. Particularly, there were 107 (45.0 %) respondents that were self-taught on how to communicate over the internet, 88 (37.0 %) respondents were taught by teachers to create or edit documents, 88 (37.0%) respondents were self-taught to create or edit presentations, 145 (60.9%) respondents were self-taught to find information in the internet, 96 (40.3%) respondents were self-taught to change the settings on an ICT device, and 150 (63.0%) respondents were self-taught to use applications.

Specifically, for other individual choices in the ICT background, ICT devices currently used at home, garnered 32 (13.4%) responses having no desktop or laptop computers, 60 (25.2%) responses having two desktops or laptop computers, and 48 (20.2%) responses having three or more desktops or laptop computers. In tablet devices or e-readers, 79 (33.2%) people had one, 31 (13.0%) people had two, and 31 (13.0%) people had three or more. While smartphones, 3 (1.3%) people had none, 45 (18.9%) had one, and 28 (11.8%) had two. For the ICT background, years of using each of the following devices, other responses for desktop or laptop computers showed 49 (20.6%) students had none to less than a year of experience, 42 (17.6%) students had three to five years of experience, and 52 (21.8%) students had greater than five years of experience. In tablet devices or e-readers experience, 81 (34%) had one to three years, 25 (10.5%) had three to five years, and 29 (12.2%) had greater than five years, in smartphones experience, 11 (4.6%) had none to less than a year, 58 (24.4%) had one to three years, and 54 (22.7%) had three to five years. Sequentially, other responses for "learned to do the following activities" projected

the results in communicating over the Internet with 10 (4.2%) responses for "My Teachers", 62 (26.1%) responses for "My Family", 55 (23.1%) responses for "My Friends", 2 (0.8%) responses for "I have never learned this", and 2 (0.8%) responses for "Others". Create or edit documents with 29 (12.2%) responses for "My Family", 28 (11.8%) responses for "My Friends", 83 (34.9%) responses for "My Self", 6 (2.5%) responses for "I have never learned this", and 4 (1.7%) responses for "Others", while creating or editing presentations had 85 (35.7%) responses for "My Teachers", 28 (11.8%) responses for "My Family", 28 (11.8%) responses for "My Friends", 5 (2.1%) responses for "I have never learned this", and 4 (1.7%) responses for "Others". The students learned to find information on the Internet with 34 (14.3%) responses for "My Teachers", 22 (9.2%) responses for "My Family", 30 (12.6%) responses for "My Friends", 2 (0.8%) responses for "I have never learned this", and 5 (2.1%) responses for "Others", and also changing the setting on an ICT device with 54 (22.7%) responses for "My Teachers", 42 (17.6%) responses for "My Family", 25 (10.5%) responses for "My Friends", 17 (7.1%) responses for "I have never learned this", and 4 (1.7%) responses for "Others", and lastly, use application with 19 (8.0%) responses for "My Teachers", 37 (15.5%) responses for "My Family", 19 (8.0%) responses for "My Friends", 6 (2.5%) responses for "I have never learned this", and 7 (2.9%) responses for "Others".

The demographic profile of the respondents showed a dominant inclination towards the ages 16-17. In the study of Hale and Guan (2015), most of their respondents were adolescents between the ages of 12 and 18 and in the study of Chen and Hu (2020) most of their respondents were between 15 and 19 years old.

In respect to gender, the results projected heavily to females. This result is in congruence to the study of a different meta-analysis about gender and attitudes toward technology use as conducted by Cai, Fan, and Du (2017). Female dominates wherein, the average sample sizes for male group are lesser than the female groups respectively. However, the study conducted by Siddiq and Scherer (2019), contradicted the result of the prior study about a meta-analysis. The results showed that the dominant gender from their sample size are boys than girls with measurement precision.

Meanwhile, the results of the socio-economic status concentrated in the lower-half of the scale was aligned to the social class report of Philippine Statistics Authority (PSA) having 58.4% of the households of the Philippines belonged to the low-income class (Zoleta, 2022). Moreover, in an earlier report by PSA (Virola, Viernes, & Cortel, 2022), 83.1% of the Filipinos belonged to the low-income class. The findings of the reports reflected that low socio-economic status is prevalent among Filipinos, and the results are in congruence to the reports of PSA in 2021 and 2022.

For ICT background, the results coincide with Gasaymeh (2018), that the plurality of students had computers and laptops, and almost all had smartphones. Common sorts of technology, including computers and the internet, were readily available to them. They were proficient at utilizing cellphones, but only to a minor extent with other common technology. They used common digital devices and programs for information access and communication.

The results of the basic and advanced ICT skills of the respondents will be able to show a general idea about the overall ICT skill of secondary school students. With the dominant results in the demographic profile of the respondents as the main anchor of

interpreting the results. The level of ICT skill of the respondents may be treated as the effect of the dominant options.

Research Question #2: What is the level of the ICT skills of the respondents in terms of basic and advanced ICT skills?

Table 7. The Weighted Mean of Basic and Advanced ICT Skills of Secondary School Students

The level of the ICT skills of the respondents in terms of:		
	WEIGHTED MEAN	EXPLANATION
2. 1 Basic ICT Skills	3.3	The respondents show high level skill in using basic ICT
2.2 Advance ICT Skills	2.4	The respondents show low level skill in using advance ICT

Table 7 above shows that the basic ICT skills of secondary school students have a general weighted average of 3.3 with a verbal interpretation that respondents show high skill in using ICT. However, the advanced ICT skills of secondary school students have a general weighted mean of 2.4 with a verbal interpretation that respondents show low skill level in using ICT.

The weighted mean of the basic ICT skill of the respondents reflects that they have a very high skill in respect to the basic ICT skills, and showed that they have knowledge over word processing, spreadsheet organization, internet collaboration, account creation, file storing, information searching, information verification, record and archive creations, and communicate using ICT devices. This finding can prove that the secondary school students of HCCC possess the essential and fundamental skills expected for them to have in transition to the 21st century environment (Eger et al., 2018; Ogbonna et al., 2019; Zaidi et al., 2020). Equipped with the aforementioned skills, the students are able to perform as aimed by the SGD goal number 4 or the “Quality Education”, which is contrasting to the

findings of Dy (2022). The showcase of high basic ICT skill of the respondents can partially fulfil the aim of the Department of Education (DepEd) to integrate ICT to the curriculum. In connection with the findings of Castillo (2018), HCCC provided availability of ICT devices and have integrated these devices to their teaching methods and implemented them successfully.

The findings provided evidence with respect to advanced ICT skill, that secondary school students of HCCC display low skill in using ICT based on the table of interpretation provided. The respondents lack the capability to perform effectively in subjects regarding website creation, programming, database creation and management, object animation and graphic designing, and multimedia product creation. This finding proved to be contrary to a certain extent with the statement of Illomaki and Lakkala (2018). The availability of ICT devices in HCCC campus did not show a positive result to the skill set of the respondents. Possible factors may be related to the difficulty of learning and teaching the specific skills to secondary school students. To back up this claim, the study of Mansor et al. (2020) found that usage of complicated tools like that of animation presents difficulties and constraints in the teaching and learning process, therefore requiring expertise and high skill, particularly in the sector of education. Additionally, the weighted mean of the advanced ICT skill of the respondents reflect the need of the development of conceptual skills that ranges in visualizing concepts, recognize patterns, comprehend abstract ideas, solve issues, formulate procedures, and understand the relation of each program, idea and system which is related to each other (Caroll, 2014). These skills are related to the development of advanced skills of programming, computer graphics and spatial reasoning (Suselo et al., 2018).

Research Question #3: What are the ICT practices of the respondents?

Table 8. The Frequency and Percentage Distribution of the ICT Practices of the Respondents

The ICT practices of the respondents										
The frequency of practicing ICT to										
	Never		Less than once a month		At least once a month but not every week		At least once a week but not every day		Every day	
	F	P	F	P	F	P	F	P	F	P
Write or edit documents	10	4.2%	27	11.3%	64	26.9%	109	45.8%	28	11.8%
Do calculations, store data or plot graphs	43	18.1%	61	25.6%	66	27.7%	55	23.1%	13	5.5%
Prepare a presentation	16	6.7%	37	15.5%	64	26.9%	98	41.2%	23	9.7%
Research or study a subject	3	1.3%	16	6.7%	37	15.5%	94	39.5%	88	37.0%
Collaborate with others to create an output	15	6.3%	25	10.5%	52	21.8%	95	39.9%	51	21.4%
Interact, plan and discuss with others	15	6.3%	28	11.8%	48	20.2%	80	33.6%	67	28.2%

Table 8 describes the ICT practices of the respondents with respect to ICT use and instruction. Majority of the respondents with a frequency of 109 (45.8%) managed to write or edit documents at least once a week but not every day. Students with a high frequency of 66 (27.7%) do calculations, store data, or plot graphs at least once a month but not weekly. In addition, 98 (41.2%) respondents prepare a presentation as practice at least once a week but not every day. The respondents most of the time practice research or study a subject at least once a week but not every day, as described by 94 (39.5%) students. Moreover 95 (39.9%) respondents do collaborate with others to create an output frequently at least once a week but not every day. Lastly, 80 (33.6) students frequently interact, plan, and discuss with others at least once a week but not every day.

Meanwhile, other responses for the practices of the secondary school students include the following: for writing or editing documents, 10 (4.2%) responses for never, 27 (11.3%) responses for less than a month, 64 (26.9%) responses for at least once a month but not every week, 28 (11.8%) responses for everyday. As to do calculations, store data or plot graphs, 43 (18.1%) responses for never, 61 (25.6%) responses for less than once a month, 55 (23.1%) responses for at least once a week but none for every day, and 13 (5.5%) responses for everyday. Further, for preparing for presentation, 16 (6.7%) responses for never, 37 (15.5%) responses for less than once a month, 64 (26.9%) responses for at least once a month but none for every week, and 23 (9.7%) responses for everyday. As to research or study a subject, 3 (1.3%) responses for never, 16 (6.7%) responses for less than once a month, 37 (15.5%) responses at least once a month but not every week, 88 (37.0%) responses for everyday. In addition, collaborate with others to create an output, 15 (6.3%) responses for never, 25 (10.5%) responses less than once a month, 52 (21.8%) responses for at least once a month but none every week, 51 (21.4%) responses for everyday. And lastly for interact, plan and discuss with others, 15 (6.3%) responses for never, 28 (11.8%) responses for less than once a month, 48 (20.2%) responses for at least once a month but none every week, 67 (28.2%) responses for never.

The findings regarding the practices of the respondents showed that the respondents in general engaged in ICT usage in a weekly routine. The ICT practices of the respondents backup the result of high basic ICT skill. The ICT practices of the respondents possessed identical results with Beacham and McIntosh (2014), demonstrating that students had very positive attitudes about inclusive education and the use of ICT for teaching and learning. The idea of ICT as a medium of collaboration was supported by the practices of the

respondents marking the presence of growth and involvement, while managing and communicating information, and sharing of digital contents were present in the practices of the respondents as good attitudes (Habibi et al., 2018; Abbas et al., 2019; Peñaflor-Espinosa & Espinosa, 2021).

Research Question #4: What are the ICT perceptions of the respondents?

Table 9. The Frequency and Percentage Distribution of the ICT Perceptions of the Respondents

The ICT perceptions of the respondents								
	Strongly Disagree		Disagree		Agree		Strongly Agree	
	F	P	F	P	F	P	F	P
Advances in ICT usually improve people's living conditions	9	3.8%	23	9.7%	119	50.0%	87	36.6%
ICT helps us to understand the world better	1	0.4%	25	10.5%	129	54.2%	83	34.9%
Using ICT makes people more isolated in society	7	2.9%	68	28.6%	122	51.3%	41	17.2%
With more ICT there will be fewer jobs	15	6.3%	90	37.8%	99	41.6%	34	14.3%
People spend far too much time using ICT	3	1.3%	44	18.5%	123	51.7%	68	28.6%
ICT is valuable to society	3	1.3%	15	6.3%	136	57.1%	84	35.3%
Advances in ICT bring many social benefits	4	1.7%	15	6.3%	127	53.4%	92	38.7%
Using ICT may be dangerous for people's health	21	8.8%	70	29.4%	99	41.6%	48	20.2%
I would like to study subjects related to ICT after high school	9	3.8%	57	23.9%	125	52.5%	47	19.7%
I hope to find a job that involves advanced ICT	14	5.9%	70	29.4%	119	50.0%	35	14.7%
Learning how to use ICT applications will help me to do the work I am interested in	6	2.5%	21	8.8%	134	56.3%	77	32.4%

ICT perceptions can be gleaned from table 9 above. Specifically, the highest frequencies from strongly disagree, disagree, agree, and strongly agree of perception, describe how students perceive ICT. In the perception that (1) Advances in ICT usually improve people's living conditions, 119 (50%) of the respondents agree, 87 (36.6%) strongly agree, 23 (9.7%) disagree, and 9 (3.8%) strongly disagree. For the responses for

the perception that (2) ICT helps us to understand the world better, a majority of 129 (54.2%) agree, followed by 83 (34.9%) which strongly agree, 20 (10.5%) disagree, and 1 (0.4%) strongly agree. The perception that (3) Using ICT makes people more isolated in society have responses of 122 (51.3%) that agree, 68 (28.6%) that disagree, 41 (17.2%) that strongly agree, and with 7 (2.9%) that strongly disagree. Moreover, the perception that (4) With more ICT there will be fewer jobs, most of the respondents with 99 (41.6%) agree, 90 (37.8%) disagree, 34 (14.3%) strongly agree, and 15 (6.3%) strongly disagree. Perception about (5) People spend far too much time using ICT gathered responses which 123 (51.7%) of the respondents agree, 68 (28.6%) strongly agree, 44 (18.5%) disagree, and 3 (1.3%) strongly disagree. In the perception that (6) ICT is valuable to society, 136 (57.1%) of the respondents agree, 84 (35.3%) strongly agree, 15 (6.3%) disagree, and 3 (1.3%) strongly disagree. The response for the perception that (7) Advances in ICT bring many social benefits, a majority of 127 (53.4%) agree, followed by 92 (38.7%) which strongly agree, 15 (6.3%) disagree, and 4 (1.7%) strongly disagree. The perception that (8) Using ICT may be dangerous for people's health have responses of 99 (41.6%) that agree, 70 (29.4%) that disagree, 48 (20.2%) that strongly agree, and with 21 (8.8%) that strongly disagree. Also, the perception that on (9) I would like to study subjects related to ICT after high school, most of the respondents with 125 (52.5%) agree, 57 (23.9%) disagree, 47 (19.7%) strongly agree, and 9 (3.8%) strongly disagree. Perception about (10) I hope to find a job that involves advanced ICT gathered responses which 119 (50%) of the respondents agree, 70 (29.4%) disagree, 35 (14.7%) disagree, and 14 (5.9%) strongly disagree. Lastly, assessing the perception that (11) Learning how to use ICT applications will help me to do the work I am interested in, gathered responses with 134 (56.3%) that

agree, 77 (32.4%) that strongly agree, 21 (8.8%) that disagree, and 6 (2.5%) that strongly disagree.

In general, the respondents possessed a positive attitude regarding the benefits and integration of ICT towards its use. Conforming with the study of Pardede (2020), the respondents were able to demonstrate positive level of perception, acknowledging the potential of ICT for future developments (Bazer et al., 2012).

Research Question #5: What barriers hinder the respondents from using ICT in school?

Table 10. The Frequency and Percentage Distribution of the Barriers that Hinder the Respondents to Use ICT in School

Barriers that hinder the respondents from using ICT in school:										
	Never		Rarely		Sometimes		Most of the time		Always	
	F	P	F	P	F	P	F	P	F	P
There is time limit for the students to use it	9	3.8%	22	9.2%	99	41.6%	68	28.6%	40	16.8%
We are not allowed to use the computer units	50	21.0%	81	34.0%	78	32.8%	21	8.8%	8	3.4%
The ICT rooms are always locked	56	23.5%	64	26.9%	83	34.9%	21	8.8%	14	5.9%
The computers are malfunctioning	24	10.1%	67	28.2%	102	42.9%	34	14.3%	11	4.6%
The programs or software available are different than the ones I am using at home	20	8.4%	42	17.6%	104	43.7%	55	23.1%	17	7.1%
All computer units are occupied	36	15.1%	58	24.4%	83	34.9%	38	16.0%	23	9.7%

Table 10 presents the barriers that hinder the respondents from using ICT in school. Out of 99 (41.6%) respondents, 68 (28.6%) responded most of the time, 40 (16.8%) responded always, 22 (9.2%) responded rarely, and 9 (3.8%) responded never. There were 81 (34.0%) respondents who rarely encountered that students are not allowed to use the computer units on campus, 78 (32.8%) responded sometimes, 50 (21.0%) responded never, 21 (8.8%) responded most of the time, and 8 (3.4%) responded always. Mostly, 83 (34.9%)

respondents sometimes encountered that ICT rooms are always locked, 64 (26.9%) responded rarely, 56 (23.5%) responded never, 21 (8.8%) responded most of the time, and 14 (5.9%) responded always. Sometimes, the majority of 102 (42.9%) respondents that most of the computers are malfunctioning, 67 (28.2%) responded rarely, 34 (14.3%) responded most of the time, 24 (10.1%) responded never, and 11 (4.6%) always. Then, 102 (43.7%) respondents encountered that the programs or software available are different from the ones used at home, sometimes, 55 (23.1%) responded most of the time, 42 (17.6%) responded rarely, 20 (8.4%) responded never, and 17 (7.1%) responded always. And a high frequency of 83 (34.9%) respondents sometimes encountered that all computer units are occupied that hindered them to use ICT in school. 58 (24.4%) responded rarely, 38 (16.0%) responded most of the time, 36 (15.1%) responded never, and 23 (9.7%) responded always.

The findings regarding the barriers of ICT use show that although there were ICT devices in the school, there are barriers that reduced their use of it (Khan et al., 2012). Although the presence of these barriers showed no negative impact to basic ICT skill, the effect of these barriers may have resulted the low level of advanced ICT skill. Additionally, according to Alenezi (2019) and Lauria (2013), time constraints, lack of pedagogical training and insufficient technological resources affect learning and teaching tasks, especially for more complicated and advanced level of skill. Moreover, according to the Unified Theory of Acceptance and Use of Technology, facilitating conditions like the devices needed should exist that can support ICT use (Venkatesh et al., 2003).

Chapter 4

CONCLUSION AND RECOMMENDATIONS

This chapter delineates the conclusions or the insights of the researchers from conducting the study. In addition, it shall also elaborate the recommendations or suggestions of the researchers based on the results presented in chapter 3.

Conclusion

After gathering the data about the demographic profile of the students, the researchers concluded that secondary school students are mostly 16 - 17 years old, and female dominates over male when it comes to gender. In addition, there are more students who belong to 10, 000 to 20, 000/month in terms of socio-economic status as monthly income of their parents. For ICT background, most secondary school students own a desktop or laptop for 1-3 years in use. Most of them do not own a tablet or e-readers. It is identified that most students use smartphones, particularly for less than five years of use. Among all secondary school students, most of them learned how to use ICT by themselves.

In the second statement of the problem, secondary school students show high basic ICT skills. However, the students show low advanced ICT skills. For the third statement, the practices of the respondents showed that the respondents in general engage in ICT usage weekly. Indeed, in the fourth statement of the problem, it is concluded that the respondents have a positive perception towards ICT use because most students identified that they agree on perceptions that show how ICT is beneficial to them. Finally, it is concluded that most of the students encountered common barriers that hinder them from using ICT.

In connection with the theory UTAUT and its theoretical framework, the resulting responses can be interpreted that gender, age, and experience are factors that can affect the use behavior. The user behavior of secondary school students can be identified using their practices and perception. Although using this theory supports that ICT availability solely does not mean a higher skill level prominently with advanced skills. The results also showed that positive perception and practice were not on the same degree with advanced ICT skill level. This may suggest a possible factor that affects advanced ICT skills more than that of the basic level.

Recommendations

Based on the results of the study, the following recommendations are suggested for the school to strategically look at the following components: (1) ICT Enhancement Programs, (2) Instruction Development, (3) ICT Program Evaluation, (4) Higher level of Student Activities, and (5) Robotics Program. Explicitly, the researchers recommend the following to be undertaken:

Firstly, on ICT enhancement programs. The institution can generate programs that will help students in sharpening their basic ICT skills and develop advanced ICT skills. Interventions like a series and continuous bridging programs and seminar-workshops focusing on enhancing advance ICT skills can likewise be done. As presented in this study students lack ICT, which serves as an evaluation of ICT integration. It is recommended that secondary students need to develop their capacity on enhancing skills and knowledge. Students require additional chances for high quality ICT integration. This enables the use of interventions of innovative educational resources and let the students explore technology through programs, establishing a more active collaboration of students and the concurrent

acquisition of technological knowledge. It also allows students to monitor and manage their own progress to better support ICT in learning practices.

Secondly, in order to adapt to the new ICT-based world and acquire the necessary skills required for the 21st century, instructors must innovate their teaching methods and resources. Instructors can improve their teaching framework in using ICT in learning. This includes ICT-enhanced instruction starting with teacher-focused methods. Establish approaches that are student-focused, feedback-oriented, practice-oriented, and information-oriented. It is important to recognize teachers' intentions and pedagogy of ICT instruction, offering significant insights into the variables that affect teachers' attitudes on adopting ICT in the classroom. The need for ICT teaching strategies will facilitate connections between the individual skills of students and their application towards ICT use.

Thirdly, the school must conduct an evaluation of ICT-related programs like integration in the subjects, and curriculum alignment. As the educational landscape is changing quickly as a result of technological advancements, and for schools, this transition presents a chance to leverage contemporary technology to promote really inspirational learning. Initiatives are adopted and implemented by education systems, which means that it is important to evaluate whether the implementation of these programs are with greater appreciation of their complexity. A major aspect of the complexity involved with ICT integration is having standard usefulness.

Fourthly, it is recommended that students need to be engaged in higher levels of activities. Not limiting students' time using ICT in the classroom or even at different facilities inside the school such as at the computer laboratory and library, giving them

avenues to use technology inside the classrooms, and using ICT to support their learning in all subjects is a significant way to develop ICT capability. Consequently, the adoption and practical usage of ICT in a broader way as a learning medium hinge mainly on how simple the system is to use and how useful the user really finds it is an important approach for students to recognize that ICT skills should be practiced accordingly.

Fifthly, the school can reintroduce the robotics program along with an instructor specialized in that subject to the students. This will promote a higher level of ICT activity and will focus more on the implementation and practical use of ICT skills into the society. The program can initiate active participation to the students and build a foundation for innovation and creativity, as well as develop problem-solving capabilities, collaboration, critical and technical skills. The robotics program will be able to create an environment that the learners can perceive the usefulness and functional potential of ICT for improvement.

Lastly, the findings of this study led the researchers to suggest that future researchers must delve in a more specific study. Since the study is limited on describing solely the skills, practices, perceptions, and barriers of ICT use, it could be commended for future researchers to identify whether practices, perceptions, and barriers have correlation with ICT skills. In addition to that, future researchers should identify the possible factor affecting the low advanced skill level of the respondents even with satisfactory perception and practice. In this way, it will further determine how to develop ICT integration in the learning process. Withal, future researchers should also consider these recommendations so bridge gaps of lacking knowledge in relation to this study.

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Appendix 1: Letter of Permission (SCHOOL PRESIDENT)

**HOLY CROSS COLLEGE OF CALINAN
Davao-Bukidnon Highway, Calinan, Davao City**

October 21, 2022

SR. CHERIE ELOISA GAROTTE, PM
School President
This Institution

Dear Sister,

Greetings of peace and solidarity!

We, are writing this letter to inform you that we will be conducting a research study entitled: **AN ASSESSMENT OF THE ICT SKILLS, PRACTICES, PERCEPTIONS, AND BARRIERS OF ITS USE AMONG SECONDARY SCHOOL STUDENTS** as the major requirement in our Practical Research 1 and 2. The objective of this study is to serve as a way to find out and assess the quality of education of the learners with respect to ICT use and instruction. If the results of the study will show that the ICT skills of the respondents are deemed satisfactory, with good practice and perception then it will be a good indicator that the school has successfully integrated ICT to the curriculum. The result of the study will help formulate programs, activities, or events that will enrich the ICT skills of secondary students to maintain consistent positive feedback. However, if the results show low ICT skills in secondary students, then it will act as a starting point for the institution's efforts to recognize and solve the issue.

With this, we are asking permission to allow us to conduct our study inside the school and secure data from the respondents involved in our study. The researchers will be gathering data from the secondary students of the school. This endeavor may not harm or disturb any respondents. Also, the confidentiality of the information obtained is assured as no individuals will have access to this except us, the researchers, and our research adviser.

Should you wish to know more about the study, please feel free to contact:

Elaiza Maples Ecunas—0955713138 / elazamaplesecunas@gmail.com

We hope that this request will merit your kind approval. Thank you, and may God bless you.

Very truly yours,

Elaiza Maples D. Ecunas
Researcher

Tecson, Raphael Nikhoz A.
Researcher

Sharlyn F. Tillo
Researcher

Aliannah Babe A. Alion
Researcher

John Lloyd M. Misal
Researcher

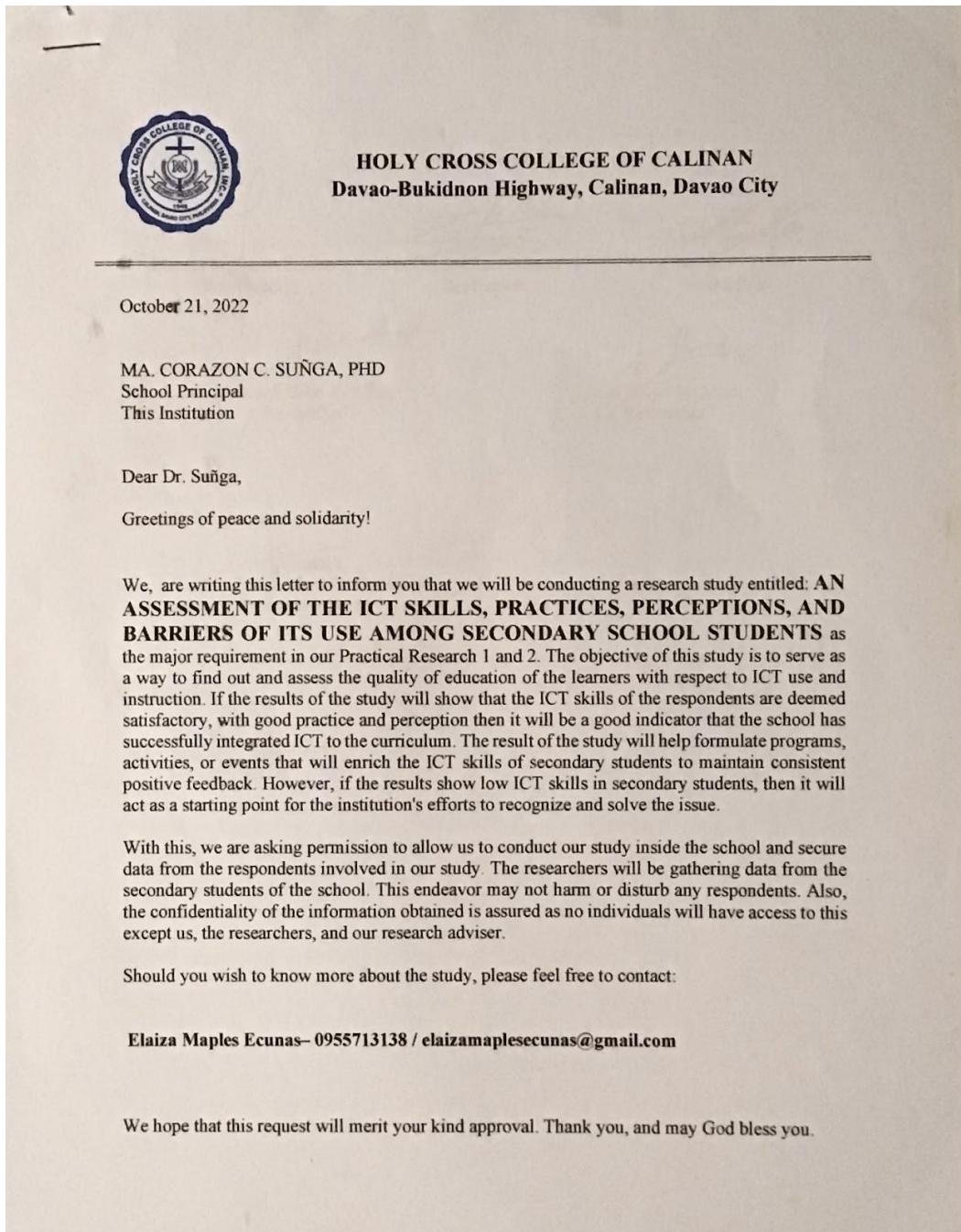
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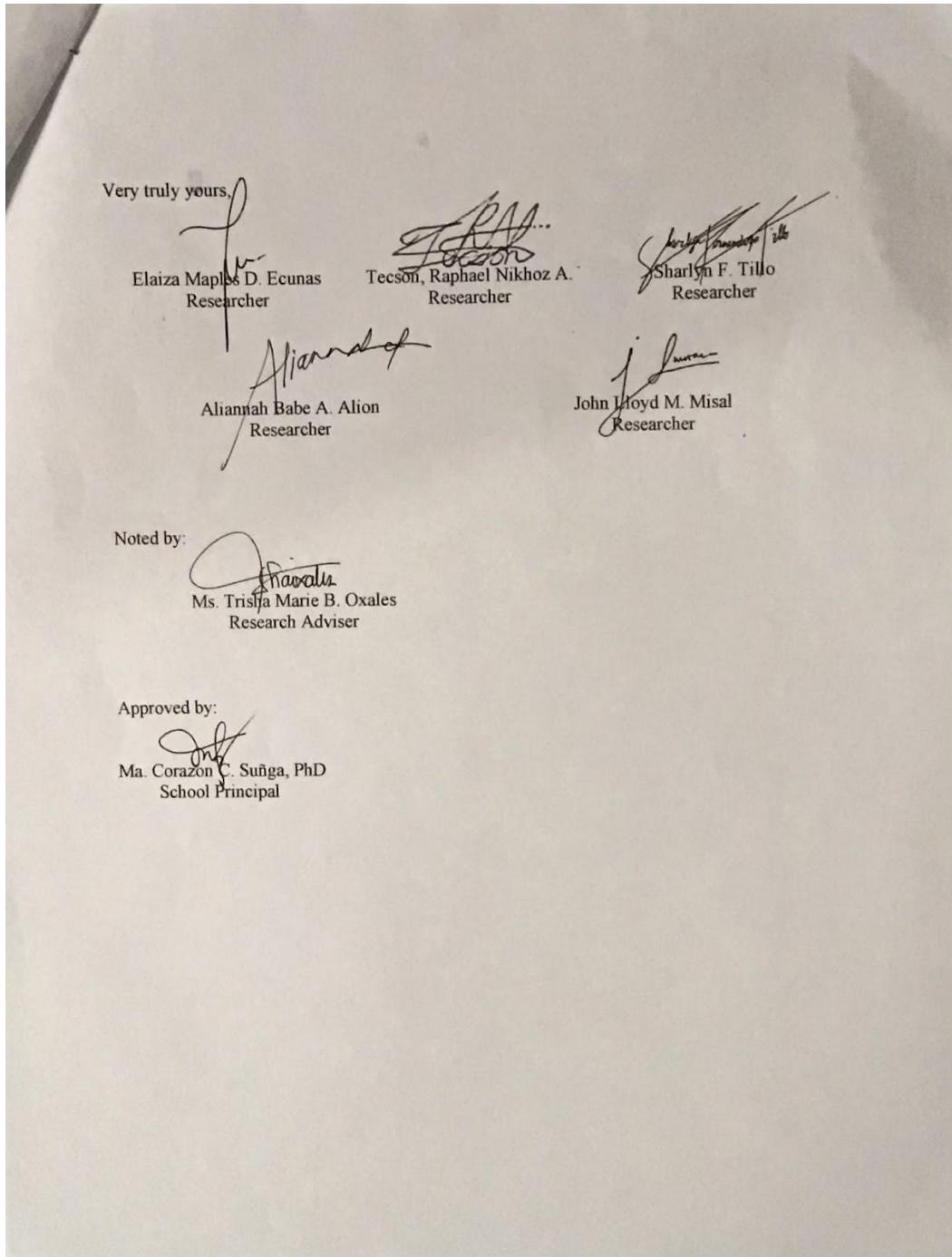
Ms. Trisha Marie B. Oxales
Research Adviser

Approved by:

Sr. Cherie Elsa Garote, PM
School President

Appendix 1b: Letter of Permission (PRINCIPAL)





Appendix 2a: Letter to the Validator (PANEL 1)


HOLY CROSS COLLEGE OF CALINAN
Davao-Bukidnon Highway, Calinan, Davao City

October 21, 2022

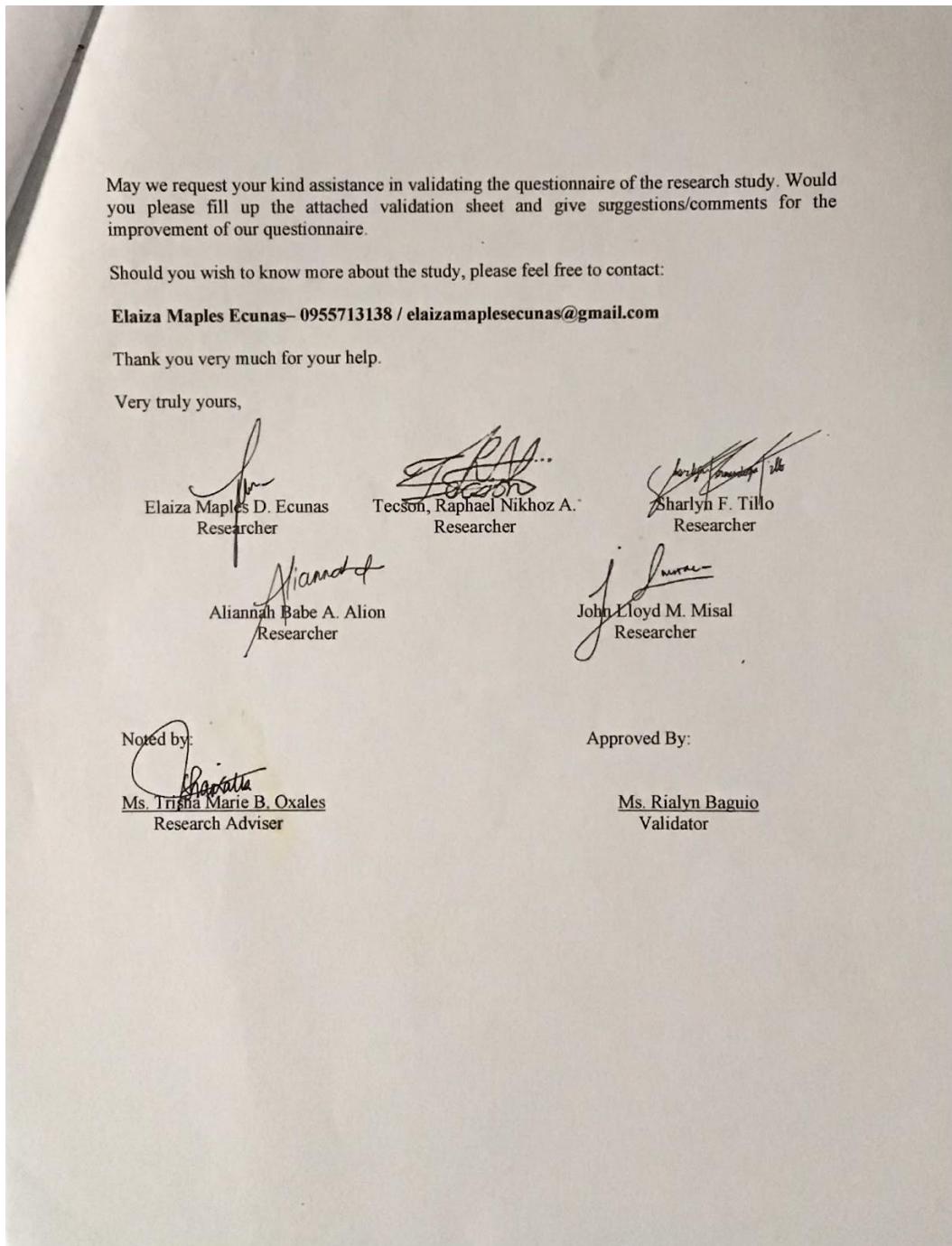
Ms. Rialyn Baguio
School Teacher
Holy Cross College of Calinan

Dear Ms. Baguio,

Greetings of peace and solidarity!

We, by Elaiza Maples D. Ecunas, Aliannah Babe A. Alion, Raphael Nikhoz A. Tecson, Sharlyn F. Tillo and John Lloyd Misal enrolled in the class of Practical Research 1 and 2 and conducting a research entitled: **“An Assessment the ICT Skills, Practices, Perceptions, and Barriers of its Use Among Secondary School Students”**. This study aims to assess the ICT skills, practices, perceptions, and barriers of its use among secondary school students. The following are the research questions to be addressed in this study:

1. What is the demographic profile of the respondents in terms of:
 - 1.1 age;
 - 1.2 gender; and
 - 1.3 socio-economic status;
 - 1.4 ICT background?
2. What is the level of the ICT skills of the respondents in terms of:
 - 2.1 basic ICT skills;
 - 2.2 advanced ICT skills;
 - 2.3 internet application skills for information access; and
 - 2.4 internet application skills for communication?
3. What are the ICT practices of the respondents?
4. What are the ICT perceptions of the respondents?
5. What are the hinders the respondents to use the ICT?



Appendix 2b: Letter to the Validator (PANEL 2)

 **HOLY CROSS COLLEGE OF CALINAN**
Davao-Bukidnon Highway, Calinan, Davao City

October 21, 2022

Ms. Riassa Rodriguez
School Teacher
Holy Cross College of Calinan

Dear Ms. Rodriguez,

Greetings of peace and solidarity!

We, by Elaiza Maples D. Ecunas, Aliannah Babe A. Alion, Raphael Nikhoz A. Tecson, Sharlyn F. Tillo and John Lloyd Misal enrolled in the class of Practical Research 1 and 2 and conducting a research entitled: "**An Assessment the ICT Skills, Practices, Perceptions, and Barriers of its Use Among Secondary School Students**". This study aims to assess the ICT skills, practices, perceptions, and barriers of its use among secondary school students. The following are the research questions to be addressed in this study:

1. What is the demographic profile of the respondents in terms of:
1.1 age;
1.2 gender; and
1.3 socio-economic status;
1.4 ICT background?

2. What is the level of the ICT skills of the respondents in terms of:
2.1 basic ICT skills;
2.2 advanced ICT skills;
2.3 internet application skills for information access; and
2.4 internet application skills for communication?

3. What are the ICT practices of the respondents?

4. What are the ICT perceptions of the respondents?

5. What are the hindrances the respondents to use the ICT?

May we request your kind assistance in validating the questionnaire of the research study. Would you please fill up the attached validation sheet and give suggestions/comments for the improvement of our questionnaire.

Should you wish to know more about the study, please feel free to contact:

Elaiza Maples Ecunas- 0955713138 / elazamaplesecunas@gmail.com

Thank you very much for your help.

Very truly yours,

Elaiza Maples D. Ecunas
Researcher

Aliannah Babe A. Alion
Researcher

Tecson, Raphael Nikhoz A.
Researcher

John Lloyd M. Misal
Researcher

Sharlyn F. Tillo
Researcher

Noted by:
Trisha Marie B. Oxales
Ms. Trisha Marie B. Oxales
Research Adviser

Approved By:
Raissa Rodriguez
Ms. Raissa Rodriguez
Validator

Appendix 3: Participation Information Consent



HOLY CROSS COLLEGE OF CALINAN, INC.
Davao-Bukidnon Highway, Calinan Poblacion, Davao City

Subject:

I, _____, agree to participate in the study in which purpose is to assess ICT skills, practices, perceptions, and barriers of its use among secondary school students. I am fully aware that the study will be conducted by Elaiza Maples D. Ecunas, Raphael Nikhoz A. Tecson, Aliannah Babe A. Alion, Sharlyn F. Tillo, and John Lloyd M. Misal with Ms. Trisha Marie B. Oxales, their research adviser.

Before the onset of the study, the researchers explained to me the nature and extent of my involvement in this project. Also, during the orientation, participants were informed of the following:

- a. that there are no known risks in our participation;
- b. that my participation will involve the study's purpose of assessing ICT skills, practices, perceptions, and barriers of its use among secondary school students;
- c. that the information they obtained from me will be kept confidential and that only them and their research adviser will have access on it; and
- d. that my name and the organization where I am connected will never be mentioned in the final report.

In this study, my participation is entirely voluntary and I am free to withdraw at any time without affecting my relationship with the researchers and Holy Cross College of Calinan.

For possible queries and complaints regarding the conduct of the study, contact details of the researchers and their adviser are provided.

Participant's signature _____

Date _____

Researcher's signature _____

Date _____

Complaints about this research:

This project has been approved by his/their research adviser. Should you have concerns about your rights as a participant in this research, or should you have a complaint about the manner in which the research is conducted, please feel free to contact Ms. Trisha Marie Oxales through her number 09555716529 or email her at trishaoxales@gmail.com. Alternatively, you can direct your queries to the school's Research and Publication Officer through number: 2950797.

Appendix 4: Parent Consent Form



HOLY CROSS COLLEGE OF CALINAN, INC.
Davao- Bukidnon Highway, Calinan Poblacion, Davao City

December ___, 2022

AN ASSESSMENT OF THE ICT SKILLS, PRACTICES, PERCEPTIONS, AND BARRIERS OF ITS USE AMONG SECONDARY SCHOOL STUDENTS

Dear Respondent,

Greetings in the Mighty Name of our Lord, Jesus Christ!

You are invited to participate in the research project identified above which will be conducted by Elaiza Maples D. Ecunas, Raphael Nikhoz A. Tecson, Aliannah Babe A. Alion, Sharlyn F. Tillo, and John Lloyd M. Misal with Ms. Trisha Marie B. Oxales as our research adviser. This study is one of the major requirements in our Practical Research 1 and 2. Questionnaires will be used to gather data from the respondents about assessing the current level of the skills, perceptions, and barriers that secondary school students have towards ICT use, to assess the quality of education of the school in ICT integration with respect to ICT use and instruction.

Participation in this study is completely voluntary, therefore, respondents are free to withdraw from the study at any time without moral obligation to the researcher and to the school. Further the respondents have the right to verify the data to be included in the final manuscript.

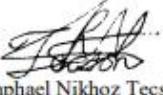
Should you wish to know more about the study, please feel free to contact:

Elaiza Maples D. Ecunas at elaiizamaplesecunas@gmail.com or 09550713138

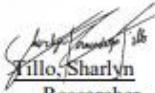
Thank you very much.

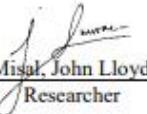
Very truly yours,


Elaiza Maples Ecunas
Researcher

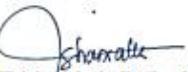

Raphael Nikhoz Tecson
Researcher


Aliannah Babe Alion
Researcher


Sharlyn Villalba
Researcher


John Lloyd Misal
Researcher

Noted by:


Trisha Marie B. Oxales
Research Adviser

Approved by:

Parent's Name and Signature

Complaints about this research:

The Holy Cross College of Calinan requires that all the participants are informed and if they have complaints regarding the manner in which the research is conducted, it may be given to the researcher, or if an independent person is preferred, to the Research and Publication Head, Research Office, Holy Cross College of Calinan with the following numbers: 295-0797 or 09491985644.

Appendix 5: Survey Questionnaire



HOLY CROSS COLLEGE OF CALINAN

Davao- Bukidnon Highway, Calinan Poblacion, Davao City

SURVEY QUESTIONNAIRE

AN ASSESSMENT OF THE ICT SKILLS, PRACTICES, PERCEPTIONS, AND BARRIERS OF ITS USE AMONG SECONDARY SCHOOL STUDENTS

The researchers are carrying out an evaluation of the current level of the skills, perception and barriers that secondary school students have towards ICT use, to assess the quality of education of the school in ICT integration with respect to ICT use and instruction. Your response to this survey is crucial in providing the necessary information to the progress of the research.

The researchers will try their best to keep the confidentiality of your given information and will not be manipulated for the benefit of the research. The researchers are open for queries about the questionnaire, do not hesitate to approach and ask for clarifications or any questions that may arise regarding the questionnaire. Your honest and sincere response, and the time given to answer the questionnaire are greatly appreciated.

Instruction: Please check or supply the information needed in the space provided.

Name (Optional) _____

Part I: Demographic Profile

1. Age _____

2. Gender

[] Male [] Female

3. Socio-Economic Status

What is the monthly income of your family?

[] below 10, 000/month	[] 10, 000 to 20, 000/month
[] 21,000- 40,000/month	[] 41,000 and above/month

4. ICT Background

Check the box of the response that best describe your ICT background.

How many of the following ICT devices are currently used in your home?				
	none	one	two	three or more
Desktop or laptop computers				
Tablet devices or e-readers (e.g., iPad, Surface Pro, Kindle)				
Smart phones				
How long have you been using each of the following types of ICT devices?				
	Never or <1 year	1 – 3 years	3 – 5 years	>5 years
Desktop or laptop computers				
Tablet devices or e-readers (e.g., iPad, Surface Pro, Kindle)				
Smart phones (except for calling or texting)				

Who mainly taught you how to do the following activities						
	My teachers	My family	My friends	My self	I have never learned this	Others
Communicate over the Internet						
Create or edit documents						
Create or edit presentations						
Find information on the Internet						
Change setting on an ICT device						
Use applications						

Part 2: ICT Skills

Check one box in each row:

1= Strongly Disagree (SD) 2= Disagree (D) 3= Agree (A) 4= Strongly Agree (SA)

A – Basic ICT Skills					
I know how to...		1	2	3	4
1	Write or edit documents, e.g., using Microsoft Word				
2	Use a spreadsheet to do calculations, store data or plot graphs, e.g., using Microsoft Excel				
3	Collaborate with others in the Internet (e.g., Google docs, slides and sheets)				
4	Create a new account (e.g., email address, Facebook account)				
5	Store files, images and videos in a cloud storage e.g., using Google Drive				
6	Search for needed information using a search engine, e.g., Google				
7	Verify the truthfulness of an information on the Internet				
8	Create an ePortfolio				
9	Communicate with others using applications or sites, e.g., using Discord, Facebook or Messenger				
B – Advanced ICT Skills					
I know how to...		1	2	3	4
1	Create my own Website e.g., using Wix or Google Sites				
2	Use programming software or have basic knowledge in coding (e.g., Scratch)				
3	Create my own database ,e.g., using Microsoft Excel or SQL to organize a set of data				
4	Store, retrieve, modify and delete data in a database				

5	Produce animation and graphics				
6	Produce multimedia using authoring tools, e.g., Authorware				
7	Create and edit proficiently two or three dimensional objects				

Part 3: ICT Practices

Check one box in each row:

1= Never	2= Less than once a month	3= At least once a month but not every week
4= At least once a week but not every day	5= Everyday	

How often do you use ICT for each of the following activities?		1	2	3	4	5
1	Write or edit documents					
2	Do calculations, store data or plot graphs					
3	Prepare a presentation					
4	Research or study a subject					
5	Collaborate with others to create an output					
6	Interact, plan and discuss with others					

Part 4: ICT Perception

Check one box in each row.

1= Strongly Disagree (SD)	2= Disagree (D)	3= Agree (A)	4= Strongly Agree (SA)
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		1	2	3	4
1	Advances in ICT usually improve people's living conditions				
2	ICT helps us to understand the world better				
3	Using ICT makes people more isolated in society				

4	With more ICT there will be fewer jobs				
5	People spend far too much time using ICT				
6	ICT is valuable to society				
7	Advances in ICT bring many social benefits				
8	Using ICT may be dangerous for people's health				
9	I would like to study subjects related to ICT after high school				
10	I hope to find a job that involves advanced ICT				
11	Learning how to use ICT applications will help me to do the work I am interested in				

Part 5: Barriers of Use

Check one box in each row:

1= never 2=rarely 3=sometimes 4= most of the time 5= always

How frequent have I encountered these barriers of ICT use while in the campus?		1	2	3	4	5
1	There is time limit for the students to use it					
2	We are not allowed to use the computer units					
3	The ICT rooms are always locked					
4	The computers are malfunctioning					
5	The programs or software available are different than the ones I am using at home					
6	All computer units are occupied					

THANK YOU VERY MUCH FOR YOUR COOPERATION

Appendix 6: Adapted Questionnaire (ICILS 2018 QUESTIONNAIRE)

ICILS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

ICILS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

ABOUT YOU

Q1 When were you born?

(Scroll down to answer both parts to this question)

January - December (Month) 1997 – 2008 (Year)

Q2 Are you a girl or a boy?

Girl Boy

Q3 Are you Hispanic or Latino?

(Please mark only one choice)

Yes, I am Hispanic or Latino No, I am not Hispanic or Latino

Q4 Which of the following best describes you?

(Please mark all choices that apply)

- White
- Black or African American
- Asian
- American Indian or Alaska Native
- Native Hawaiian or other Pacific Islander

Q5 What is the highest level of education you expect to complete?

(Please mark only one choice)

Bachelor's degree (4-year college program) OR Master's degree or professional degree (MD, DDS, lawyer, minister)
OR Doctorate (Ph.D. or EdD)

Associate's degree (2-year college program)

High school graduate

Some high school

Less than high school

YOUR HOME AND YOUR FAMILY

In this section you will be asked some questions about your family and your home.

Some of these questions will be about home and your parents or guardians who look after you — for example, step-parents or foster-parents. Select one parent or guardian as parent or guardian 1 and the other as parent or guardian 2.

If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians with whom you spend the most time. If you share your time only with one parent, please answer only the following questions for this parent.

Q6 In what country were you and your parents born?

(Please mark only one choice in each column)

You	Parent or guardian 1	Parent or guardian 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q7 What language do you speak at home most of the time?

(Please mark only one choice)

- English
- Spanish
- Another language

ICILS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

Q5 What is the highest level of education you expect to complete?

(Please mark only one choice)

Bachelor's degree (4-year college program) OR Master's degree or professional degree (MD, DDS, lawyer, minister)
OR Doctorate (Ph.D. or EdD)

Associate's degree (2-year college program)

High school graduate

Some high school

Less than high school

Q8 Does your parent or guardian 1 work in a paid job?

- Yes (Note: Student will be directed to Q10a and Q11a)
 No (Note: Student will be directed to Q10b and Q11b)

Q9a What is your parent or guardian 1's main job?
(for example, school teacher, cook, sales manager)
(Please write in the job title)**Q10a What does your parent or guardian 1 do in his/her main job?**
(for example, teaches high school students, helps prepare meals in a restaurant, manages a sales team)
(Please use a sentence to describe the kind of work he/she does in that job)**Q9b What was your parent or guardian 1's last main job?**
(for example, school teacher, cook, sales manager)
Please tell us his/her last main job. If he/she has never had a paid job, please write what he/she is currently doing.
(Please write in the job title)**Q10b What did your parent or guardian 1 do in his/her last main job?**
(for example, taught high school students, helped prepare meals in a restaurant, managed a sales team)
(Please use a sentence to describe the kind of work he/she did in that job or what he/she is currently doing if he/she has never had a paid job)**Q11 What is the highest level of education completed by your parent or guardian 1?**

If you are not sure which box to choose, please ask the test administrator for help.

(Please mark only one choice)

Bachelor's degree (4-year college program)
OR Master's degree or professional degree (MD, DDS, lawyer, minister) OR Doctorate (Ph.D. or EdD)

Associate's degree (2-year college program)

High school graduate

Some high school

Less than high school

Q12 Does your parent or guardian 2 work in a paid job?

- Yes (Note: Student will be directed to Q14a and Q15a)
 No (Note: Student will be directed to Q14b and Q15b)

Q13a What is your parent or guardian 2's main job?
(for example, school teacher, cook, sales manager)
(Please write in the job title)**Q14a What does your parent or guardian 2 do in his/her main job?**
(for example, teaches high school students, helps prepare meals in a restaurant, manages a sales team)
(Please use a sentence to describe the kind of work he/she does in that job)**Q15 What is the highest level of education completed by your parent or guardian 2?**

If you are not sure which box to choose, please ask the test administrator for help.

(Please mark only one choice)

Bachelor's degree (4-year college program)
OR Master's degree or professional degree (MD, DDS, lawyer, minister) OR Doctorate (Ph.D. or EdD)

Associate's degree (2-year college program)

High school graduate

Some high school

Less than high school

Q16 About how many books are there in your home?

Do not count magazines, newspapers, comic books or your schoolbooks.

(Please mark only one choice)

None or very few (0–10 books)

Enough to fill one shelf (11–25 books)

Enough to fill one bookcase (26–100 books)

Enough to fill two bookcases (101–200 books)

Enough to fill three or more bookcases (more than 200 books)

Q17 How many of the following ICT devices are currently used in your home?

(Please mark one choice in each row)

		None	One	Two	Three or more
a)	Desktop or laptop computers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Tablet devices or e-readers (e.g. iPad, Surface Pro, Kindle)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HCIS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

YOUR USE OF ICT

YOUR USE OF ICT

Q21 How often do you use ICT for each of the following activities?

(Please mark one choice in each row)

	Never or less than one year	At least one year but less than three years	At least three years but less than five years	At least five years but less than seven years	Seven years or more
a) Desktop or laptop computers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Tablet devices or e-readers (e.g., iPad, Surface Pro, Kindle)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Smartphones except for using text and calling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ICILS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

Q19 Who mainly taught you how to do the following activities?

(Please mark one choice in each row)

HOIS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

	Never	Less than once a month	At least once a week but not every day	At least once a week but not every day	Every day
a) Write or edit documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Use a spreadsheet to do calculations, store data or plot graphs e.g., using Microsoft Excel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Create a simple "slideshow" presentation (e.g., using Microsoft PowerPoint)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Record or edit videos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Write computer programs, scripts or apps (e.g., using Scratch, Logo, VBA, Java)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Use drawing, painting or graphics software or apps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Produce or edit music	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Build or edit a webpage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

My teachers My family My friends I

a) Communicate over the Internet

	<i>My teachers</i>	<i>My family</i>	<i>My friends</i>	<i>I taught myself</i>	<i>I have never learned this</i>
a) Communicate over the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create or edit digital documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Create or edit digital presentations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Change settings on an ICT device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Find information on the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Use programs and files in a computer network	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HOIS 2018 MAIN STUDY U.S. QUESTIONNAIRES (Final) – Student Questionnaire

Q20 How often do you use ICT in these places?

Please do not count the use of smartphones when making phone calls or writing text messages.

(Please mark one choice in each row)

Q22 How often do you use ICT to do each of the following communication activities?

(Please mark one choice in each row)

	Never	Less than once a month	At least once a month but not every week	At least once a week but not every day	Every day
1) Share news about current events on social media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Communicate with friends, family, or other people using instant messaging, voice or video chat (e.g., Skype, FaceTime, WhatsApp, Viber)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Send texts or instant messages to friends, family, or other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Write posts and updates about what happens in your life on social media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Ask questions on forums or Q&A, question and answer websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Answer other peoples' questions on forums or Q&A, question and answer websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Write posts for your own blog (e.g., WordPress, Tumblr, Blogger)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) Post images or video in social networks or online communities (e.g., Facebook, Instagram or YouTube)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Watch videos or images that other people have posted online	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Send or forward information about events or activities to other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q23 How often do you use ICT to do each of the following leisure activities?

(Please mark one choice in each row)

	Never	Less than once a month	At least once a month but not every week	At least once a week but not every day	Every day
a) Search the Internet to find information about places to go or activities to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Read reviews on the Internet of things you might want to buy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Read news stories on the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Search for online information about things you are interested in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Use websites, forums, or online videos to find out how to do something	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Play games	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Listen to downloaded or streamed music	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Watch downloaded or streamed TV shows or movies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q25 At school, how often do you use ICT during lessons in the following subjects or subject areas?

(Please mark one choice in each row)

	I don't study this subject/these subjects	Never	In some lessons	In most lessons	In every or almost every lesson
a) English Language Arts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Spanish or other foreign language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Mathematics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Sciences (general science and/or physics, chemistry, biology, geology, earth sciences)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Human sciences/Humanities /Social studies (e.g., history, geography, civics, law, economics)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Creative arts (e.g., visual arts, music, dance, drama)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Information technology, computer science or similar subject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Practical or vocational (e.g., mechanics and repair, healthcare occupations, construction trades)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Other (e.g., moral/ethics, physical education, personal and social development)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

USING ICT FOR SCHOOL

Q24 How often do you use ICT for the following school-related purposes?

(Please mark one choice in each row)

	Never	Less than once a month	At least once a month but not every week	At least once a week but not every school day	Every school day
a) Prepare reports or essays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare presentations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Work online with other students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Complete worksheets or exercises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Organize your time and work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Take tests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Use software or applications to learn skills or a subject (e.g., mathematics tutoring software, language learning software)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Use the Internet to do research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Use coding software to complete assignments (e.g., in Scratch, Logo, VBA, Java)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Make video or audio productions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q26 When studying throughout this school year, how often did you use the following tools during class?

(Please mark one choice in each row)

	Never	In some lessons	In most lessons	In every or almost every lesson
a) Tutorial software or practice programs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Word-processing software (e.g., Microsoft Word)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Presentation software (e.g., Microsoft PowerPoint)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Spreadsheets (e.g., Microsoft Excel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Multimedia production tools (e.g., media capture and editing, web production)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Concept mapping software (e.g., Inspiration, Webspiration)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Tools that capture real-world data (e.g., speed, temperature) digitally for analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Simulations and modelling software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Computer-based information resources (e.g., websites, wikis, encyclopedia)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Interactive digital learning resources (e.g., learning games or applications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Graphing or drawing software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q27 At school, to what extent have you learned how to do the following tasks?

(Please mark one choice in each row)

	To a large extent	To a moderate extent	To a small extent	Not at all
a) Provide references to Internet sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Search for information using ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Present information for a given audience or purpose using ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Work out whether to trust information from the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Decide what information obtained from the Internet is relevant to include in school work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Organize information obtained from Internet sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Decide where to look for information on the Internet about an unfamiliar topic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Use ICT to collaborate with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q28 At school, have you learned about the importance of the following topics?

(Please mark one choice in each row)

	Yes	No
a) To change passwords regularly (e.g., network account, email, social media)	<input type="checkbox"/>	<input type="checkbox"/>
b) To check the origin of emails before opening attachments	<input type="checkbox"/>	<input type="checkbox"/>
c) To log out of a shared computer at the end of a session	<input type="checkbox"/>	<input type="checkbox"/>
d) To share information on social media responsibly	<input type="checkbox"/>	<input type="checkbox"/>

YOUR THOUGHTS ABOUT USING AND LEARNING ABOUT ICT**Q29 How well can you do each of these tasks when using ICT?**

(Please mark one choice in each row)

	I know how to do this	I have never done this but I could work out how to do this	I do not think I could do this
a) Edit digital photographs or other graphic images	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a database (e.g., using Microsoft Access)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Write or edit text for a school assignment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Search for and find relevant information for a school project on the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Build or edit a webpage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Change the settings on your device to improve the way it operates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Create a computer program, macro, or app (e.g., in Scratch, Logo, VBA, Java)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Set up a local area network of computers or other ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Create a multi-media presentation (with sound, pictures, or video)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Upload text, images, or video to an online profile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Insert an image into a document or message	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l) Install a program or app	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m) Judge whether you can trust information you find on the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q30 How much do you agree or disagree with the following statements about ICT?

(Please mark one choice in each row)

	Strongly agree	Agree	Disagree	Strongly disagree
a) Advances in ICT usually improve people's living conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) ICT helps us to understand the world better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Using ICT makes people more isolated in society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) With more ICT there will be fewer jobs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) People spend far too much time using ICT.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) ICT is valuable to society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Advances in ICT bring many social benefits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Using ICT may be dangerous for people's health.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) I would like to study subjects related to ICT after high school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) I hope to find a job that involves advanced ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Learning how to use ICT applications will help me to do the work I am interested in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

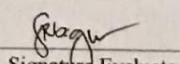
Q31 When studying during the current school year, to what extent have you been taught how to do the following tasks?

(Please mark one choice in each row)

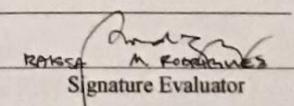
	To a large extent	To a moderate extent	To a small extent	Not at all
a) To display information in different ways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) To break a complex process into smaller parts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) To understand diagrams that describe or show real-world problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) To plan tasks by setting out the steps needed to complete them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) To use tools to make diagrams that help solve problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) To use simulations to help understand or solve real world problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) To make flow diagrams to show the different parts of a process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) To record and evaluate data to understand and solve a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) To use real-world data to review and revise solutions to problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q32 Do you study computing, computer science, information technology, informatics or similar in the current school year?Yes No **THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THE QUESTIONNAIRE**

Appendix 7a: Validation Sheet (PANEL 1)

	HOLY CROSS COLLEGE OF CALINAN Davao-Bukidnon Highway, Calinan, Davao City					
Research Assessment Tool and Validation Sheet						
Name of Evaluator : <u>Ms. Rialyn Baguio</u> Degree : <u>BSED Math (with MA units)</u> Position : <u>Math Area Coordinator</u> Institution : <u>HCCC-BEd</u>						
To the Evaluator: Please check the appropriate box for your ratings. POINT EQUIVALENT: 1 – Poor 3 – Good 5 - Excellent 2 - Fair 4 – Very Good						
Criteria/ Indicators						
1	CLARITY OF DIRECTIONS AND ITEMS The vocabulary level, language structure and conceptual level of questions suit to level of respondents. The test directions and items are written in clear and understandable manner.	1	2	3	4	5
2	PRESENTATION/ ORGANIZATION OF ITEMS The items are presented and organized in logical manner.				/	
3	SUITABILITY OF ITEMS The items appropriately represent the substance of the research. The questions are designed to determine the condition, knowledge, perception and attitudes that are supposed to be measured.				/	
4	ADEQUATENESS OF ITEMS PER CATEGORY The items represent the coverage of the research adequately. The number of questions per area category is representative enough of all the question needed for the research.				/	
5	ATTAINMENT OF PURPOSE The instrument as a whole fulfills the objectives for which it was constructed.				/	
6	OBJECTIVE Each item question requires only one specific answer or measure only one behavior and no aspect of questionnaire suggest bias on the part of the researcher.				/	
7	SCALE AND EVALUATION RATING SYSTEM The scale adapted is appropriate for the items.					/
Comments and Suggestions: _____						
 Signature Evaluator						

Appendix 7b: Validation Sheet (PANEL 2)

	HOLY CROSS COLLEGE OF CALINAN Davao-Bukidnon Highway, Calinan, Davao City					
Research Assessment Tool and Validation Sheet						
Name of Evaluator : <u>Ms. Raissa Rodriguez</u> Degree : <u>BSED English (with MA units)</u> Position : <u>Senior High School Teacher</u> Institution : <u>HCCC-BEd</u>						
To the Evaluator: Please check the appropriate box for your ratings. POINT EQUIVALENT: 1 - Poor 3 - Good 5 - Excellent 2 - Fair 4 - Very Good						
Criteria/ Indicators						
1	CLARITY OF DIRECTIONS AND ITEMS The vocabulary level, language structure and conceptual level of questions suit to level of respondents. The test directions and items are written in clear and understandable manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	PRESENTATION/ ORGANIZATION OF ITEMS The items are presented and organized in logical manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	SUITABILITY OF ITEMS The items appropriately represent the substance of the research. The questions are designed to determine the condition, knowledge, perception and attitudes that are supposed to be measured.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	ADEQUATENESS OF ITEMS PER CATEGORY The items represent the coverage of the research adequately. The number of questions per area category is representative enough of all the question needed for the research.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	ATTAINMENT OF PURPOSE The instrument as a whole fulfills the objectives for which it was constructed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	OBJECTIVE Each item question requires only one specific answer or measure only one behavior and no aspect of questionnaire suggest bias on the part of the researcher.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	SCALE AND EVALUATION RATING SYSTEM The scale adapted is appropriate for the items.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments and Suggestions: _____						
 RAISSE A. RODRIGUEZ Signature Evaluator						

Appendix 8: Raw Data

Part I: Demographic Profile			
	AGE	GENDER	SES
R1	12	2	1
R2	12	2	2
R3	13	2	2
R4	13	2	1
R5	13	2	3
R6	12	1	3
R7	12	2	2
R8	12	1	2
R9	13	1	3
R10	12	1	2
R11	12	2	2
R12	12	2	2
R13	13	2	1
R14	13	2	2
R15	12	2	2
R16	12	2	1
R17	13	2	1
R18	12	2	1
R19	11	2	2
R20	12	1	1
7 - SG			
R21	12	1	2
R22	12	2	2
R23	13	1	2
R24	12	1	1
R25	12	2	3
R26	12	2	1
R27	12	2	3
R28	14	2	2
R29	12	2	3
R30	13	1	1
R31	12	2	2
R32	13	1	4
R33	12	2	3
R34	12	2	2
R35	12	2	3
R36	12	2	3
R37	13	2	3
R38	12	2	2
R39	12	1	1
R40	12	2	2
R41	12	2	2
R42	12	2	2
7 - SH			
R43	13	2	1
R44	13	2	3
R45	14	1	2
9 - SMG			
R46	14	1	2
R47	13	2	2
R48	14	2	1
R49	13	2	1
R50	13	2	3
R51	14	1	2
R52	13	2	3
R53	13	1	1
R54	13	1	3
R55	14	2	1
R56	13	2	3
R57	13	1	1
R58	14	2	2
R59	13	2	3
R60	13	1	1
R61	13	1	1
R62	13	2	2
R63	13	2	3
R64	13	2	4
R65	13	2	1
R66	13	2	2
R67	13	2	2
R68	13	2	2
R69	13	2	2
8 - SK			
R70	14	2	1
R71	14	2	3
R72	15	2	4
R73	14	2	4
R74	14	2	3
R75	14	2	4
R76	14	2	4
R77	14	2	2
R78	15	2	3
R79	15	2	2
10 - SPC			
R80	15	2	2
R81	15	1	2
R82	15	1	4
R83	15	1	4
R84	14	2	2
R85	15	1	2
R86	14	2	2
R87	15	1	2
R88	14	2	1
R89	15	1	2
R90	14	2	1
R91	15	1	4
R92	16	1	2
11 - SMR			
R93	14	2	2
R94	14	1	1
R95	15	2	1
R96	15	1	1
R97	16	1	1
R98	15	2	1
R99	16	1	1
R100	15	2	1
R101	15	2	1
R102	16	2	1
R103	15	1	1
R104	15	1	1
R105	14	2	1
R106	15	2	1
R107	15	2	1
R108	15	2	1
R109	15	2	1
R110	15	2	1
R111	15	2	1
R112	15	2	1
R113	15	2	1
R114	16	1	1
R115	15	2	1
R116	15	2	1
R117	15	1	1
R118	16	2	1
R119	15	1	1
R120	15	1	1
R121	14	2	1
R122	16	1	1
R123	16	2	1
R124	15	2	2
R125	15	1	1
R126	16	1	1
R127	17	2	1
R128	16	1	1
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R130	17	1	1
R131	16	1	1
R132	17	1	1
R133	17	2	1
R134	16	2	1
R135	17	2	1
R136	17	2	1
R137	16	2	1
R138	15	1	1
R139	16	1	1
11 - SV			
R140	16	2	3
R141	16	2	2
R142	18	2	3
R143	17	2	1
R144	16	1	3
R145	16	1	1
R146	17	2	2
R147	17	1	2
R148	17	2	3
R149	16	1	2
R150	16	1	3
R151	16	1	3
R152	17	1	3
R153	16	2	4
R154	16	1	3
R155	16	2	2
R156	17	2	1
R157	16	2	2
R158	16	2	2
R159	16	2	1
R160	17	1	1
R161	17	2	2
R162	16	2	2
R163	16	1	1
R164	17	1	2
R165	16	2	2
R166	16	2	2
R167	16	1	3
R168	17	2	1
R169	16	2	1
R170	16	2	1
R171	16	2	2
R172	16	2	1
R173	17	2	2
R174	17	2	2
R175	17	2	2
R176	17	2	2
R177	16	2	2
R178	21	1	3
R179	17	1	2
R180	16	2	1
R181	16	2	1
R182	16	2	2
R183	17	2	3
R184	17	2	1
R185	16	2	3
R186	16	2	2

Part II: ICT Skills

BASIC ICT SKILLS		B51	B52	B53	B54	B55	B56	B57	B58	B59	R44
R1	3	2	3	4	3	3	3	3	2	3	R45
R2	4	2	3	4	3	3	3	3	2	3	R46
R3	4	3	3	2	3	3	3	3	2	3	R47
R4	3	3	2	2	3	3	3	3	2	3	R48
R5	3	2	2	2	3	3	3	3	2	3	R49
R6	3	2	2	2	3	3	3	3	2	3	R50
R7	4	4	3	3	4	4	4	4	2	4	R51
R8	4	4	2	2	4	4	4	4	2	4	R52
R9	4	4	4	4	4	4	4	4	4	4	R53
R10	1	2	3	3	3	3	3	3	2	2	R54
R11	4	2	4	4	4	4	4	4	4	4	R55
R12	3	2	2	2	3	3	3	3	2	2	R56
R13	2	3	3	3	3	3	3	3	2	2	R57
R14	4	4	3	3	4	4	4	4	2	2	R58
R15	3	3	4	4	3	3	3	3	2	2	R59
R16	4	4	3	3	4	4	4	4	3	3	R60
R17	2	2	3	3	3	3	3	3	2	2	R61
R18	2	3	3	3	3	3	3	3	2	2	R62
R19	3	2	3	3	3	3	3	3	2	2	R63
R20	3	3	2	2	3	3	3	3	2	2	R64
R21	4	2	2	2	3	3	3	3	2	2	R65
R22	3	3	3	3	3	3	3	3	2	2	R66
R23	4	2	3	3	3	3	3	3	2	2	R67
R24	2	3	3	3	3	3	3	3	2	2	R68
R25	3	3	3	3	3	3	3	3	2	2	R69
R26	4	3	2	2	3	3	3	3	2	2	R70
R27	2	3	3	3	3	3	3	3	2	2	R71
R28	3	3	3	3	3	3	3	3	2	2	R72
R29	2	3	3	3	3	3	3	3	2	2	R73
R30	3	3	3	3	3	3	3	3	2	2	R74
R31	4	2	3	3	4	4	4	4	2	2	R75
R32	2	3	3	3	4	4	4	4	2	2	R76
R33	3	2	3	1	4	4	4	4	2	2	R77
R34	3	3	3	4	3	4	4	4	2	2	R78
R35	2	3	4	4	4	4	4	4	2	2	R79
R36	3	4	4	4	4	4	4	4	2	2	R80
R37	3	3	2	1	1	3	3	3	2	2	R81
R38	2	3	3	3	3	3	3	3	2	2	R82
R39	3	3	3	1	3	3	3	3	2	2	R83
R40	2	2	1	1	1	3	3	3	2	2	R84
R41	2	2	1	1	1	3	3	3	2	2	R85
R42	3	4	4	4	4	4	4	4	2	2	R86
R43	2	2	3	2	2	3	3	3	2	2	R87
7-SH											R88
											R89
											R90
9 - SMG											
2	3	3	3	3	3	3	3	3	2	2	
3	3	3	3	3	3	3	3	3	2	2	
4	3	3	3	3	3	3	3	3	2	2	
5	3	3	3	3	3	3	3	3	2	2	
6	3	3	3	3	3	3	3	3	2	2	
7	3	3	3	3	3	3	3	3	2	2	
8	3	3	3	3	3	3	3	3	2	2	
9	3	3	3	3	3	3	3	3	2	2	
10	3	3	3	3	3	3	3	3	2	2	
11	3	3	3	3	3	3	3	3	2	2	
12	3	3	3	3	3	3	3	3	2	2	
13	3	3	3	3	3	3	3	3	2	2	
14	3	3	3	3	3	3	3	3	2	2	
15	3	3	3	3	3	3	3	3	2	2	
16	3	3	3	3	3	3	3	3	2	2	
17	3	3	3	3	3	3	3	3	2	2	
18	3	3	3	3	3	3	3	3	2	2	
19	3	3	3	3	3	3	3	3	2	2	
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22	3	3	3	3	3	3	3	3	2	2	
23	3	3	3	3	3	3	3	3	2	2	
24	3	3	3	3	3	3	3	3	2	2	
25	3	3	3	3	3	3	3	3	2	2	
26	3	3	3	3	3	3	3	3	2	2	
27	3	3	3	3	3	3	3	3	2	2	
28	3	3	3	3	3	3	3	3	2	2	
29	3	3	3	3	3	3	3	3	2	2	
30	3	3	3	3	3	3	3	3	2	2	
31	3	3	3	3	3	3	3	3	2	2	
32	3	3	3	3	3	3	3	3	2	2	
33	3	3	3	3	3	3	3	3	2	2	
34	3	3	3	3	3	3	3	3	2	2	
35	3	3	3	3	3	3	3	3	2	2	
36	3	3	3	3	3	3	3	3	2	2	
37	3	3	3	3	3	3	3	3	2	2	
38	3	3	3	3	3	3	3	3	2	2	
39	3	3	3	3	3	3	3	3	2	2	
40	2	2	1	1	1	3	3	3	2	2	
41	2	2	1	1	1	3	3	3	2	2	
42	3	4	4	4	4	4	4	4	2	2	
43	2	2	1	1	1	3	3	3	2	2	

Part III: ICT Practices						
	IP1	IP2	IP3	IP4	IP5	IP6
R1	5	4	5	5	5	5
R2	5	4	5	5	5	5
R3	4	4	4	3	5	4
R4	4	4	4	4	4	4
R5	3	1	3	3	3	3
R6	3	3	3	3	3	3
R7	4	3	3	4	4	4
R8	1	1	3	4	5	5
R9	5	5	5	5	5	5
R10	1	2	3	5	5	5
R11	3	1	2	5	5	5
R12	4	1	4	4	5	5
R13	4	3	4	5	5	5
R14	2	2	4	4	4	4
R15	3	1	1	5	5	5
R16	4	3	4	4	4	4
R17	4	1	4	4	4	4
R18	2	2	2	2	2	2
R19	4	2	2	4	4	4
R20	1	1	1	1	1	1
7 - SG	4	2	5	5	5	5
R21	4	4	4	4	4	4
R22	4	4	4	4	4	4
R23	4	4	5	5	5	5
R24	2	3	2	2	2	2
R25	3	1	2	5	5	5
R26	5	4	5	5	5	5
R27	4	4	4	4	4	4
R28	2	1	4	4	4	4
R29	4	4	4	4	4	4
R30	5	4	4	4	4	4
R31	4	4	3	4	4	4
R32	1	1	2	2	2	2
R33	4	2	3	2	2	2
R34	5	5	4	4	4	4
R35	4	1	1	4	4	4
R36	3	2	2	3	3	3
R37	3	3	2	4	4	4
R38	3	1	2	4	4	4
R39	2	1	1	5	5	5
R40	2	2	2	2	2	2
R41	4	4	4	3	3	3
R42	4	4	5	4	4	4
R43	3	3	3	4	4	4
R44	4	4	3	3	3	3
7 - SH	3	3	3	4	4	4
R45	4	4	4	4	4	4
R46	4	4	2	2	2	2
R47	4	4	2	2	2	2
R48	4	4	2	2	2	2
R49	4	4	2	2	2	2
R50	5	2	4	4	4	4
R51	1	1	4	3	3	3
R52	4	1	1	1	1	1
R53	2	2	3	1	1	1
R54	3	2	2	3	3	3
R55	5	5	4	5	5	5
R56	2	2	2	2	2	2
R57	4	1	1	1	1	1
R58	4	1	1	3	3	3
R59	2	4	2	2	2	2
R60	4	3	3	3	3	3
R61	5	1	1	4	4	4
R62	4	4	4	4	4	4
R63	1	1	1	1	1	1
R64	4	4	4	4	4	4
R65	3	1	1	2	2	2
R66	4	1	1	4	4	4
R67	3	2	3	3	3	3
R68	4	5	1	1	1	1
R69	4	1	1	4	4	4
R70	3	3	3	3	3	3
R71	4	4	4	4	4	4
R72	4	3	3	4	4	4
R73	2	3	2	2	2	2
R74	3	3	2	4	4	4
R75	3	1	2	4	4	4
R76	5	4	4	4	4	4
R77	4	4	5	5	5	5
R78	3	1	3	4	4	4
R79	2	4	3	4	4	4
R80	4	1	2	2	2	2
R81	3	3	3	3	3	3
R82	3	3	3	3	3	3
R83	1	1	1	1	1	1
9 - SMG	4	4	4	4	4	4
R84	3	3	3	3	3	3
R85	5	4	4	4	4	4
R86	4	5	5	5	5	5
R87	2	3	4	4	4	4
R88	3	2	2	3	3	3
R89	4	4	2	3	3	3
R90	3	3	4	4	4	4
R91	2	3	3	4	4	4
9 - SN	3	3	3	3	3	3
R92	3	3	3	3	3	3
R93	2	3	3	3	3	3
R94	2	4	4	4	4	4
R95	4	4	4	4	4	4
R96	4	4	4	4	4	4
R97	4	4	4	4	4	4
R98	4	4	4	4	4	4
R99	3	3	3	3	3	3
R100	4	4	4	4	4	4
R101	2	2	2	2	2	2
R102	5	2	2	2	2	2
R103	5	2	2	2	2	2
R104	3	3	3	3	3	3
R105	2	2	2	2	2	2
R106	3	3	3	3	3	3
R107	3	3	3	3	3	3
R108	3	3	3	3	3	3
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R112	3	3	3	3	3	3
R113	4	4	4	4	4	4
R114	3	3	3	3	3	3
R115	4	4	4	4	4	4
R116	4	4	4	4	4	4
R117	3	3	3	3	3	3
R118	2	2	2	2	2	2
R119	4	4	4	4	4	4
R120	2	2	2	2	2	2
R121	4	4	4	4	4	4
R122	3	3	3	3	3	3
R123	3	3	3	3	3	3
R124	2	2	2	2	2	2
R125	4	4	4	4	4	4
R126	4	4	4	4	4	4
R127	4	4	4	4	4	4
R128	4	4	4	4	4	4
R129	5	4	4	4	4	4
R130	2	2	2	2	2	2
R131	4	4	4	4	4	4
R132	3	3	3	3	3	3
R133	4	4	4	4	4	4
R134	4	4	4	4	4	4
R135	3	3	3	3	3	3
R136	4	4	4	4	4	4
R137	4	4	4	4	4	4
R138	1	1	1	1	1	1

Part IV: ICT Perception										
	IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8	IP9	IP10

R1	4	4	3	3	3	3	4	3	3	3
R2	4	4	4	4	4	4	4	4	4	4
R3	3	3	3	3	3	3	3	3	4	4
R4	3	3	3	3	3	3	3	3	3	3
R5	3	3	2	3	3	3	3	3	2	3
R6	3	3	3	3	3	3	3	3	3	3
R7	4	4	4	4	4	3	2	3	3	2
R8	4	4	4	4	4	3	2	3	3	2
R9	4	4	4	4	4	4	4	4	4	4
R10	3	2	3	3	3	3	3	2	2	3
R11	2	3	3	3	3	3	3	2	3	3
R12	3	3	3	3	3	3	3	3	3	3
R13	4	4	4	4	4	3	3	3	3	3
R14	4	4	4	3	3	3	3	3	3	3
R15	3	3	4	4	4	3	4	4	4	4
R16	4	4	3	2	2	2	2	2	2	2
R17	3	3	3	3	3	2	2	2	3	3
R18	2	2	3	3	3	2	2	2	2	2
R19	3	3	3	3	2	2	2	3	3	3
R20	1	3	3	3	2	2	2	2	3	3
7 - SG										
R21	4	4	4	1	3	3	3	3	3	3
R22	3	3	3	3	3	3	3	3	3	3
R23	3	3	4	4	3	3	3	3	3	3
R24	2	2	3	3	3	3	3	3	3	3
R25	4	4	4	4	4	4	4	4	4	4
R26	3	4	4	4	4	4	4	4	4	4
R27	3	4	3	3	3	3	3	3	3	3
R28	3	3	3	3	3	3	3	3	3	3
R29	3	2	2	3	3	3	3	3	3	3
R30	3	3	3	2	2	3	3	3	3	3
R31	3	3	3	3	2	2	2	2	2	2
R32	2	3	2	3	2	3	3	3	3	3
R33	3	3	4	4	2	3	4	4	4	4
R34	3	3	3	2	2	3	3	3	3	3
R35	3	3	3	2	2	3	3	3	3	3
R36	3	3	3	2	2	3	3	3	3	3
R37	3	3	3	3	2	2	3	3	3	3
R38	3	3	3	3	3	3	3	3	3	3
R39	3	3	3	3	2	2	3	3	3	3
R40	3	2	2	2	3	3	3	3	3	3
R41	3	3	3	3	2	2	3	3	3	3
R42	2	3	2	3	2	3	3	3	3	3
7 - SH										
R43	3	3	3	3	1	2	2	3	3	3
R44	3	3	3	3	2	2	3	3	3	3
R45	4	4	3	3	3	4	4	4	4	4
R46	4	4	2	2	2	3	3	3	3	3
R47	3	2	2	2	2	3	3	3	3	3
9 - SN										
R48	4	3	3	3	3	3	3	3	3	2
R49	3	3	3	3	3	3	3	3	3	2
R50	4	4	4	4	4	4	4	4	4	3
R51	4	4	4	4	4	4	4	4	4	2
R52	3	3	3	3	3	3	3	3	3	2
R53	2	2	2	2	2	3	3	3	3	1
R54	3	3	3	3	3	3	3	3	3	1
R55	3	3	3	3	3	3	3	3	3	1
R56	3	3	3	3	3	3	3	3	3	1
R57	3	3	3	3	3	3	3	3	3	1
R58	3	3	3	3	3	3	3	3	3	1
R59	3	3	3	3	3	3	3	3	3	1
R60	3	3	3	3	3	3	3	3	3	1
R61	4	4	4	4	4	4	4	4	4	1
R62	3	3	3	3	3	3	3	3	3	1
R63	3	1	1	1	1	1	1	1	1	1
R64	3	3	3	3	3	3	3	3	3	1
R65	3	2	2	2	2	2	2	2	2	1
R66	2	2	2	2	2	2	2	2	2	1
R67	2	2	2	2	2	2	2	2	2	1
R68	3	3	3	3	3	3	3	3	3	1
R69	1	1	1	1	1	1	1	1	1	1
R70	4	4	4	4	4	4	4	4	4	1
R71	3	3	3	3	3	3	3	3	3	1
R72	3	3	3	3	3	3	3	3	3	1
R73	1	1	1	1	1	1	1	1	1	1
8 - SK										
R74	4	4	4	4	4	4	4	4	4	4
R75	3	3	3	3	3	3	3	3	3	3
R76	4	4	4	4	4	4	4	4	4	4
R77	4	4	4	4	4	4	4	4	4	4
R78	3	3	3	3	3	3	3	3	3	3
R79	3	3	3	3	3	3	3	3	3	3
R80	2	2	2	2	2	2	2	2	2	2
R81	3	3	3	3	3	3	3	3	3	3
R82	2	2	2	2	2	2	2	2	2	2
R83	2	2	2	2	2	2	2	2	2	2
R84	3	3	3	3	3	3	3	3	3	3
R85	2	2	2	2	2	2	2	2	2	2
R86	4	4	4	4	4	4	4	4	4	4
R87	3	3	3	3	3	3	3	3	3	3
R88	3	3	3	3	3	3	3	3	3	3
R89	4	4	4	4	4	4	4	4	4	4
R90	4	4	4	4	4	4	4	4	4	4
R91	1	1	1	1	1	1	1	1	1	1
R92	4	4	4	4	4	4	4	4	4	4
R93	3	3	3	3	3	3	3	3	3	3
R94	3	3	3	3	3	3	3	3	3	3
R95	3	3	3	3	3	3	3	3	3	3
R96	3	3	3	3	3	3	3	3	3	3
R97	3	3	3	3	3	3	3	3	3	3

R148	3
R149	2
R150	3
R151	4
R152	4
R153	3
R154	3
R155	4
R156	3
R157	3
R158	4
R159	3
R160	4
R161	4
R162	4
R163	1
R164	3
R165	3
R166	4
R167	4
R168	4
R169	3
R170	3
R171	4
R172	4
R173	4
R174	3
R175	2
R176	4
R177	3
R178	3
R179	1
R180	3
R181	4
R182	3
R183	4
R184	2
R185	4
R186	4
R187	4
R188	3
R189	3
R190	3
R191	4
R192	4
R193	3
R194	4
R195	1
R196	3
R197	3
11 - SML	
R198	3
R199	3
R200	3
R201	3
R202	4
R203	4
R204	4
R205	4
R206	4
R207	3
R208	4
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R216	4
R217	3
R218	3
R219	4
R220	4
R221	3
R222	4
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R224	4
R225	3
R226	4
R227	4
R228	3
R229	4
R230	4
R231	3
R232	2
R233	3
R234	3
R235	2
R236	4
R237	3
11 - SPT	
R204	4
R205	4
R206	4
R207	3
R208	4
R209	3
R210	4
R211	3
R212	2
R213	3
R214	4
R215	3
R216	3
R217	2
R218	2
R219	1
R220	3
R221	2
R222	2
R223	2
R224	1
R225	2
R226	1
R227	2
R228	2
R229	1
R230	2
R231	1
R232	2
R233	3
R234	4
R235	3
R236	3
R237	3
12 - OLG/r	
R238	3
3.193277	3.235294
3.2	2.8
2.8	2.6
2.6	2.6

Part V: Barriers of Its Use					
	IB1	IB2	IB3	IB4	IB5
R1	3	2	5	3	4
R2	5	2	4	4	5
R3	3	2	4	3	4
R4	4	3	3	4	3
R5	3	1	1	1	1
R6	3	2	3	3	2
R7	3	2	1	1	1
R8	3	1	5	5	4
R9	2	4	3	2	4
R10	3	2	2	3	2
R11	4	4	3	4	3
R12	3	3	1	1	1
R13	5	2	4	4	5
R14	4	3	1	4	4
R15	5	1	4	5	5
R16	3	3	2	2	2
R17	3	2	2	2	2
R18	3	4	3	3	2
R19	4	4	3	3	2
R20	3	5	2	2	2
R21	3	2	2	2	2
R22	3	2	1	1	1
R23	4	4	4	4	4
R24	3	4	4	4	4
R25	3	1	2	3	2
R26	3	2	1	1	1
R27	5	4	5	5	5
R28	1	1	1	1	1
R29	5	3	3	3	3
R30	4	4	2	3	2
R31	4	2	3	3	2
R32	3	2	2	2	2
R33	4	1	2	1	1
R34	4	2	1	1	1
R35	5	3	1	3	3
R36	3	3	4	4	4
R37	5	2	2	2	2
R38	3	2	4	3	3
R39	3	3	4	2	2
R40	5	1	2	2	2
R41	5	1	1	5	4
R42	2	3	2	3	3
R43	3	3	4	4	4
R44	2	2	3	4	4
1	1	1	1	1	1
2	3	4	3	4	5
3	4	3	3	3	5
4	4	4	4	4	5
5	3	3	3	3	5
6	4	4	4	4	5
7	5	5	5	5	5
8	5	5	5	5	5
9	5	5	5	5	5
10	5	5	5	5	5
11	5	5	5	5	5
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13	5	5	5	5	5
14	5	5	5	5	5
15	5	5	5	5	5
16	5	5	5	5	5
17	5	5	5	5	5
18	5	5	5	5	5
19	5	5	5	5	5
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27	5	5	5	5	5
28	5	5	5	5	5
29	5	5	5	5	5
30	5	5	5	5	5
31	5	5	5	5	5
32	5	5	5	5	5
33	5	5	5	5	5
34	5	5	5	5	5
35	5	5	5	5	5
36	5	5	5	5	5
37	5	5	5	5	5
38	5	5	5	5	5
39	5	5	5	5	5
40	5	5	5	5	5
41	5	5	5	5	5
42	5	5	5	5	5
43	5	5	5	5	5
44	5	5	5	5	5
45	5	5	5	5	5
46	5	5	5	5	5
47	5	5	5	5	5
48	5	5	5	5	5
49	5	5	5	5	5
50	5	5	5	5	5
51	5	5	5	5	5
52	5	5	5	5	5
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56	5	5	5	5	5
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61	4	1	1	1	1
62	5	3	3	3	3
63	3	3	2	2	2
64	5	4	4	4	4
65	4	1	1	1	1
66	5	2	5	4	4
67	4	2	3	3	3
68	4	3	3	3	3
69	4	1	1	1	1
70	4	3	3	3	3
71	5	2	2	2	2
72	5	2	3	3	3
73	4	3	4	3	3
74	3	3	2	1	1
75	5	2	2	2	2
76	3	3	3	2	2
77	3	1	3	3	3
78	3	1	2	2	2
79	3	1	2	2	2
80	2	2	1	2	2
81	5	2	5	2	2
82	3	3	3	3	3
83	5	1	4	4	4
84	4	3	2	2	2
85	3	3	3	2	2
86	3	3	3	3	3
87	2	3	3	2	2
88	4	2	3	2	2
89	4	4	4	4	4
90	4	3	3	3	3
91	4	3	3	3	3

R233	3	1	2	2	4	4
R234	4	3	3	4	5	2
R235	4	2	2	2	2	2
R236	3	1	1	2	2	1
R237	3	4	2	2	3	3
12-01G/F R238	3	3	3	3	2	2
3.453782	2.394958	2.466387	2.752101	3.029412	2.806773	2.817727
3.5	2.4	2.5	2.8	3	2.9	2.85

Appendix 9: Editor's Certificate



HOLY CROSS COLLEGE OF CALINAN, INC.

Davao- Bukidnon Highway, Calinan Poblacion, Davao City

RESEARCH AND PUBLICATION OFFICE

CERTIFICATION

This is to certify that the research paper of **Ecunas, Elaiza Maples, Tecson, Raphael Nikhoz, Alion, Aliannah Babe, Tillo, Sharlyn, and Misal, John Lloyd** entitled **AN ASSESSMENT OF THE ICT SKILLS, PRACTICES, PERCEPTIONS, AND BARRIERS OF ICT USE AMONG SECONDARY SCHOOL STUDENTS** has undergone the editing process and been approved by the undersigned.

This certification is issued upon the request by the researcher on August 02, 2023.

RIZALITO H. PAGA, PhD

Editor

CURRICULUM VITAE

Name: Elaiza Maples D. Ecunas



Age: 18

Date of Birth: December 13, 2004

Place of Birth: Davao City

Citizenship: Filipino

Sex: Female

Civil Status: Single **Phone Number:** 09550713138

Religion: Roman Catholic

Email:
elaizamaplesecunas@gmail.com

Father: Eduard G. Ecunas

Occupation: Driver

Mother: Leslie C. Ecunas

Occupation: Businesswoman

EDUCATIONAL ATTAINMENT

	School	Year Graduated
Elementary:	Wines Elementary School	2017
Junior High School:	Holy Cross College of Calinan, Inc.	2021
Senior High School:	Holy Cross College of Calinan, Inc.	2023

CURRICULUM VITAE

Name: Raphael Nikhoz A. Tecson



Age: 17

Date of Birth: November 03, 2005

Place of Birth: Calinan, Davao City

Citizenship: Filipino

Sex: Male

Civil Status: Single **Phone Number:** 09771766940

Religion: Roman Catholic **Email:** tecson.ict@gmail.com

Father: Robert R. Tecson **Occupation:** Businessman

Mother: Maria Nilma A. Tecson **Occupation:** Housewife

EDUCATIONAL ATTAINMENT

	School	Year Graduated
Elementary:	Lacson Elementary School	2017
Junior High School:	Holy Cross College of Calinan, Inc.	2021
Senior High School:	Holy Cross College of Calinan, Inc.	2023

CURRICULUM VITAE

Name: Aliannah Babe A. Alion

Age: 18

Date of Birth: September 04, 2004

Place of Birth: Davao City

Citizenship: Filipino

Sex: Female

Civil Status: Single **Phone Number:** 09553460825

Religion: Alliance **Email:** aliannahbabe@gmail.com

Father: Tito T. Alion **Occupation:** Househusband

Mother: Dinnah A. Alion **Occupation:** Teacher



EDUCATIONAL ATTAINMENT

	School	Year Graduated
Elementary:	Wines Elementary School	2017
Junior High School:	Amigo School of Calinan, Inc.	2021
Senior High School:	Holy Cross College of Calinan, Inc.	2023

CURRICULUM VITAE

Name: Sharlyn F. Tillo

Age: 17

Date of Birth: July 21, 2005

Place of Birth: Davao City

Citizenship: Filipino

Sex: Female

Civil Status: Single **Phone Number:** 09617578397

Religion: Roman Catholic **Email:** tillosharlyn@gmail.com

Father: Loel D. Tillo **Occupation:** Househusband

Mother: Arlene F. Tillo **Occupation:** Businesswoman



EDUCATIONAL ATTAINMENT

	School	Year Graduated
Elementary:	Holy Spirit Academy of Calinan	2017
Junior High School:	Holy Cross College of Calinan	2021
Senior High School:	Holy Cross College of Calinan	2023

CURRICULUM VITAE

Name: John Lloyd M. Misal

Age: 17

Date of Birth: October 27, 2005

Place of Birth: Calinan, Davao City

Citizenship: Filipino

Sex: Male

Civil Status: Single **Phone Number:** 09777686486

Religion: Roman Catholic **Email:** Jlmisal2727@gmail.com

Father: Rufino C. Dela Serna **Occupation:** Farmer

Mother: Merlina F. Misal **Occupation:** Housewife



EDUCATIONAL ATTAINMENT

	School	Year Graduated
Elementary:	Holy Cross College of Calinan, Inc.	2017
Junior High School:	Holy Cross College of Calinan, Inc.	2021
Senior High School:	Holy Cross College of Calinan, Inc.	2023