Roles of Parents and Adolescent Learners in the Use of Technology in Homeschooling

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ABSTRACT

This exploratory phenomenographic research examines the varied ICT utilization experiences of Filipino homeschooling parents and their adolescents. Learning from those who have been using technology in homeschooling in light of the extensive use of blended learning in current learning delivery modes. The participants were parents and adolescents, purposively selected for their varied approaches to homeschooling to provide a rich outcome space. Data gathering ensued over five months, using open-ended phenomenographic interviews and making concept/mind maps. Transcription of data used intelligent verbatim and analysis and an iterative approach generated varied categories of description. Categories qualitatively represent different ways or roles of experiencing a phenomenon. Findings revealed that parents are consumers, filters, and instillers of values in using technology in the themes of expanding awareness on communication, facility for learning, and monitoring the consumption of the adolescent. Adolescents are consumers, learners, and seekers of their own potential with themes in communication, entertainment and gaming, access and restrictions, and homeschooling. Family dynamics categories are consumers, learners, and managers of technology with themes in communication, digital literacy, and character building. The study recommends that institutions promote digital literacy and capacity building for independent learning, that adolescents communicate their ICT needs with their parents, and that parents prepare adolescents to participate in the digital community.

Keywords: *ICT, education, adolescents, homeschooling, phenomenography*

Introduction

The post-COVID-19 educational landscape calls for fresh and easily reproducible learning delivery alternatives that could minimize the negative impact of future school disruptions (Gunn & Rowntree, 2021; Ma & Cheng, 2022). One alternative delivery

mode (ADM) of instruction that this study would like to benchmark is homeschooling. In homeschooling, the parent takes the role of the teacher in crafting the learning experience (Letzel, et al., 2022). The homeschooling parents enroll their children in public or private schools with a permit to offer homeschooling as an ADM (Arzadon, 2020; Simpao, 2019). Private schools recognized by the Department of Education (DepEd) can partner with a homeschooling provider to handle the implementation of the program, and the school is solely responsible for monitoring the provider (DO No. 1, s. 2022). The provider handles and facilitates the homeschooling process by supplying DepEd-compliant learning materials and resources, parent coaching, and learner output monitoring, and has a hand in the assessment of the learner.

Some families who homeschool their children independently; either they find a curriculum of their own, let the child's interests lead the curriculum (Palacpac, 2020), or follow the tenets of unschooling where there is no set curriculum for study (Ramos, 2020). At the time of COVID-19, parents had no option but to take on the role of homeschooling parent-teacher (Kurowski, 2022; Yordanova & Markova, 2023), which includes contending with the limited resources and connectivity issues (Skinner et al., 2023; Letzel et al., 2022) in the Philippines. A pervading concern among Philippine parents and adolescents is curating their learning resources online, especially in Filipino and Araling Panlipunan, to create their learning experiences (Paunan, 2020; Servallos & Galupo, 2020).

Parents have dual roles as parents and teachers to their children as they homeschool. They decide on the best way for their children to comply with school requirements and aid in the teaching and learning process (Laird, 2020). The availability of online resources is instrumental in encouraging parents to home-educate their children (Bubb & Jones, 2020; Büber & Kaya, 2020; Laird, 2020). Parents who homeschool must be willing and ready to invest their time and effort in finding the age-appropriate learning materials, online sources, and offline apps needed (Skelton, 2016; Anthony & Wildmon, 2023). In evaluating curricular offerings for a personalized and appropriate education (Pell, 2018; Anthony & Wildmon, 2023), they use the perceived needs of their child and their view of what the future holds to guide them. Homeschool parents choose digital resources and learning activities to augment or deliver the curriculum they follow (Franky A.P. & Chiappe A., 2018; Pell, 2018; Skelton, 2016). Some parents perceive information and communications technology (ICT) to be mediators allowing access to support communities that offer social, emotional, and professional support (Franky & Chiappe, 2018; Pell, 2018; Pieri & Mangione, 2023). They also use ICT to aid in developing their children's talents through gaming, collaboration, and research, and scaffolding the child's learning in a developmentally appropriate way (Franky & Chiappe, 2018; Ewin et al., 2020).

Adolescents see these ICT resources differently. Present adolescents from the middle class function in a world where digital technology is the norm and connectivity a right, a "universal entitlement" to live a relatively functional life, especially with the COVID-19 pandemic (Reglitz, 2020). There is dependence of adolescents on digital

sources for their information by relying on YouTube, Instagram, and Snapchat for their news and current information (García Jiménez & Montes, 2020; Michalovich & Hersh-kovitz, 2020; Robb, 2020). Studies also look into what adolescents do online instead of the number of hours, the vulnerability and resiliency factors that can affect online experiences, and the effect of online behavior on offline social development and acquisition of life skills (Prinstein et al., 2020; Suciu, 2020).

Recent meta-analyses and narrative reviews point to screen time and social media use as potential causes of adolescents' worsening mental health symptoms (Rideout, V., 2020, Coyne, S., et. al., 2020). There are variations in online practices, risks, and opportunities across adolescence, especially between early adolescence or tweens and older adolescents or teens (Rideout, V., 2020). This points out a greater need to examine how adolescents use technology in their day-to-day lives rather than the amount of time they devote to it in the Filipino context in the new normal.

While parents experience trust/distrust and agency/dependence in allowing their child to use ICT (Kucirkova, N., & Flewitt, R., 2022), the pandemic presented its own set of challenges as families navigated distance learning (Drvodelic, M., & Domović, V., 2022). Initially, educators consider managing risks that learners encounter online, the proper netiquette, and teachers keeping learners safe online or digital citizenship (Martin et al., 2019) as the top priority. So much so that in the Child Protection Policy of DepEd, from DO No. 14 s. 2012, Sec. 3 part M specifies that cyberbullying in its many forms is not tolerated. Presently, the studies revolve around digital citizenship and competence like the way in less developed countries, ICT use at home positively affects the adolescent's perceived ICT competence and psychological well-being (Ma & Cheng, 2022). Studies also point out that parental involvement positively impacts on an adolescent's development of digital citizenship (Livingstone, 2020; Odgers, & Robb, 2020; Sannes, 2020).

Parents must grapple with learning how the new technology works and developing their own digital competency while leading their children through the same process (Copeland, 2020; Sannes, 2020). This process has positive and negative effects on the quality of the relationships between the parent and the child, not only because of the forced closeness brought by the pandemic but also due to joint learning of ICT during these times (Drvodelic & Domović, 2022).

The results of this study come from the experiences of homeschooling families with adolescents, describing the different roles of the parent and adolescent as they use ICT in homeschooling. According to the Philippine Statistics Authority's 2019 Functional Literacy, Education and Mass Media Survey, 41.9% of youth aged 12 to 15 and 28.3% aged 16 to 17 identified the lack of personal interest is a major factor in dropping out (Felipe & Marcelo, 2023). While the Annual Poverty Indicators Survey (2017) of the Philippine Statistics Authority points out that the major reasons for out-of-school children and youth for not attending school is marriage, teenage pregnancy or family matters (37%), lack of personal interest (24.7%) and high cost of education (17.9%) (Porcala & Crisosto-

mo, 2019). Knowing families and adolescent's roles as they use ICT in homeschooling can identify ways to address the lack of personal interest and certain family matters.

The purpose of this study is to look qualitatively at varied ways Filipino homeschooling parents and their adolescents use ICT as they homeschool. The study looked into the diverse roles Filipino homeschooling parents and their adolescents experience using technology in homeschooling as stated in the following research aims:

1. to determine the roles of Filipino homeschooling parents in the use of technology;

2. to determine the roles of adolescent learners in the use of technology in homeschooling; and

3. to define the contexts of the roles Filipino homeschooling parents and adolescent learners play out in the use of technology.

This study intends to learn from the experiences of homeschooling families using technology, especially in the light of post-COVID education. It is also hoped that policymakers could see to the welfare of the homeschooling adolescent and the areas within their purview to ensure quality education even under crises (e.g., health, political, or natural crises). This study hopes that homeschooling parents and adolescents could gain insights into the best educational practices to map their ICT use as they homeschool and aid in the homeschooling dynamics of their family.

Methods

Design

Phenomenography endeavors to determine the various ways a phenomenon can be experienced, perceived, and understood by mapping the themes into categories of descriptions that are representations of a "number of qualitatively different meanings or ways of experiencing the phenomenon" (Åkerlind, 2005, p.322, par. 3). It is not merely a collection of similarities and differences between the participants' experiences;   however, it includes the structural relationships between the different individual experiences and is not an isolated experience being analyzed (Booth, 1997). Figure 1 shows the relationality in the qualitative method of phenomenography, indicating the relationship between the researcher and the subjects.

Figure 1

Phenomenographic relationality (Bowden, 2005) Adapted from: Reflections on the phenomenographic team research process
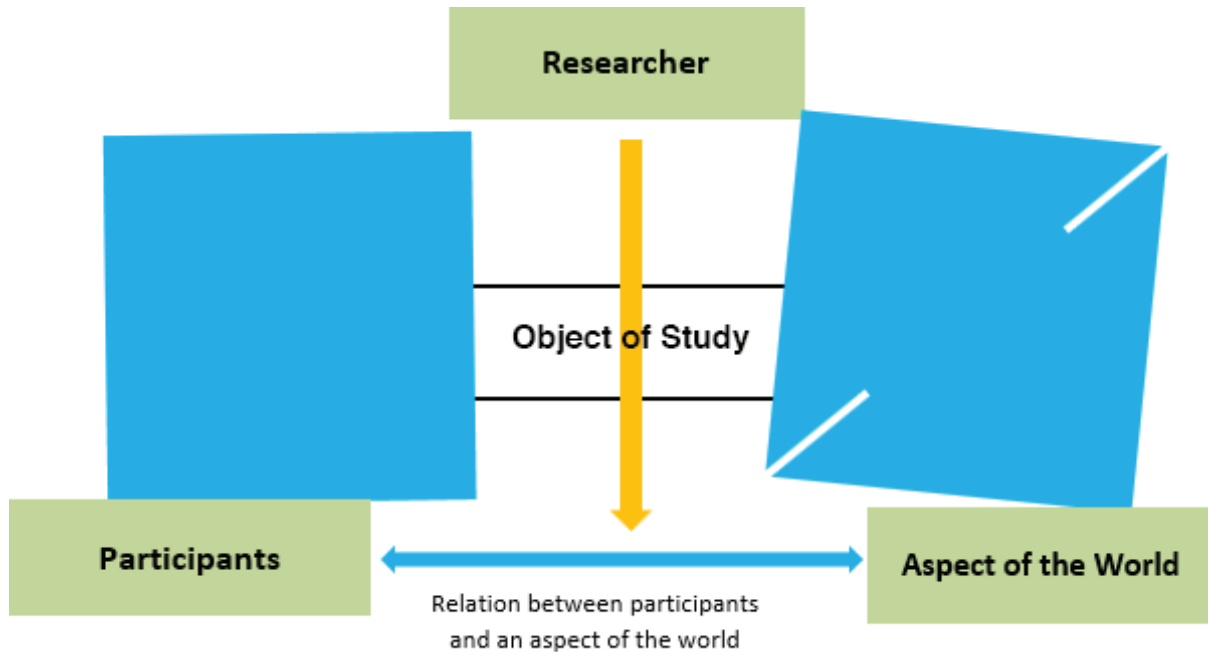
Phenomenography is the best approach to this study because it provides a multi-faceted view of the use of ICT in homeschooling Filipino families with adolescents. The homeschooling movement came to the fore when the pandemic hit and became one of the modes of the delivery of instruction, amongst others (DO 12 s. 2020). When the lockdowns ensued, qualified parents, like professionals and other teachers themselves, opted to homeschool. In contrast, school teachers collaborated with parents in handling the education of their children, who are often across grade levels (University of the Philippines – College of Education, 2020). Even in homeschooling pragmas, teachers still craft the learning experience during the lockdowns (Ocampo & Gonzales, 2022). A phenomenographic approach using ICT in the context of homeschooling provides different views as expressed in the roles or categories and the contexts of the themes of expanding awareness. The roles define what the parents and adolescents experience as they homeschool, providing a guide for those suddenly pushed into these roles. This phenomenographic approach provides the insights of these varied homeschooling parents and adolescents, and this rich experience serves as a guide for future homeschooling families.

As a qualitative study, the relationship between the researcher and the participant is instrumental in gathering data about the participant's experiences. There is also a relationship between the researcher and the aspect of the world being studied, in the sense that the researcher has preconceived notions and biases towards experiences about the aspect of the world and should learn to manage them. However, the main object of the

study of phenomenography is the relationship between the participant and the aspect of the world being studied. There is no room for the researcher in the object of study other than as the instigator of the study (Bowden, 2005).

This study utilized phenomenographic interviews with the addition of the generation of concept/mind maps in gathering data. The concept maps served as a tool for the participants to express their experiences (Wheeldon, 2009), making the participant-made concept map a rich source of qualitative data.

Participants

Parents in the study included nine mothers and a widowed father, with a mean age of 44.5 years and a median of 42. All were college graduates, with one of them having MBA units. Initial interview disclosed that they had varied reasons for homeschooling, such as 1) their youngest daughter is being bullied; 2) the son follows his pursuit in the performing arts; 3) the only child is battling leukemia; 4) the older siblings are being successfully homeschooled, and 5) they are disillusioned with the Philippine educational system or the concept of formal education. The 11 adolescents, who participated in the study were four females and seven males, with a mean age of 14.4 years and a median of 14. The mean number of years of homeschooling was 7.2 years, and a median of 6.5 years.

Moreover, the ten families involved consisted of 7 families affiliated with three different homeschooling providers and three independent homeschoolers described as follows: one was unschooling, the other was interest-led, and the other used unit studies with a Weaver curriculum. The three adolescents in these families were considered out-of-school children by the DepEd. For adolescents with providers, two were in Grades 7 and 8, respectively, and there was one participant each from Grades 4, 9, 10, and 11. They were all middle-class families, with eight owning their own homes and two renting.

Procedures and Instruments

The participants were purposively selected to represent the most varied backgrounds in terms of their homeschooling approach, years in homeschooling, and grade level of the learners for a richer outcome space. Securing necessary letters from the parents before the interviews maintain ethical standards and rigor of the study. This parental consent details what it entailed to participate in the study, including the main questions and manner of the interview. The adolescents were interviewed within sight of the parents, and the transcripts of the interviews were reviewed by the participants before being included in the study. Interviews were phenomenographic in the sense that the participants were led to disclose as much of their experience in the most detailed fashion possible without directly soliciting the information or introducing new terms and asking the participant to clarify and explain their experiences in their own words without supplying terms or what areas are to be discussed next. The parent and

adolescent(s) were interviewed separately during snack time in the morning or afternoon. They were then asked to work collaboratively on a common concept/mind map about their experiences with ICT in homeschooling. The materials were brought by the researchers and no explicit instructions were given except for prompts to focus on how they use ICT as they homeschool. This was a way to generate and disclose unsolicited experiences about their use of technology while homeschooling together and triangulating previous utterances. The root interview questions were:

Interview questions for parents:

1. Why did you homeschool your child?

2. How does technology help you homeschool your teens?

3. How does technology make it harder for you to homeschool your teens?

4. How is your relationship with your teen affected by technology as you homeschool?

5. Would you encourage your child to homeschool their kids when they have their own?

Interview questions for the adolescent:

1. Can you describe what you do on a typical homeschooling day? How about your online access?

2. What things do you use to help you in homeschooling?

3. How does technology help you and/or not help you as you homeschool?

4. How does technology affect the way you and your parents homeschool?

Question for concept/mind map: How do you use technology while homeschooling?

Data Analysis

Intelligent verbatim transcription was used with the interviews. Only the utterances and contexts of the interviews relevant to the research questions represented the data for analysis. The varied and unique concepts from the maps were cited and used as part of the data and in triangulating responses in the later iterations of the analysis. The software NVivo was used to facilitate the organization of the utterances and areas of the concept maps into the categories of description and the contextual themes of expanding awareness. As a phenomenographic study, the transcribed interviews were reread

multiple times to fully immerse in the data. After which, the transcripts were classified into different contexts and groupings to develop the categories in its various themes of expanding awareness over months, as can be seen in Figure 2.

Figure 2

The data analysis process, adapted from the work of Viladrich for King's College London.

The iterative process of revisiting the transcripts to develop the categories and
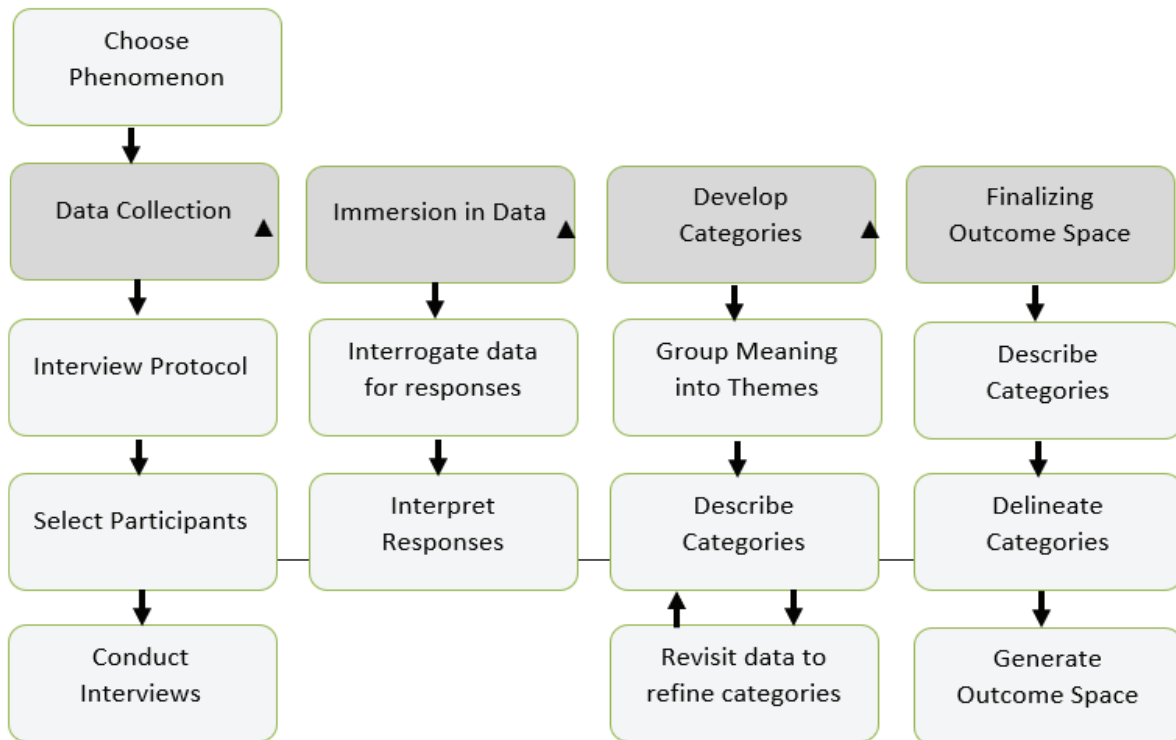
themes was repeated multiple times over months until the outcome spaces were consistently generated each time. The researcher was mindful that refining the categories of description and contextual themes of expanding awareness was always supported by the transcripts as a whole and not taken out of context.

This process was used for the transcripts of the parents to generate the outcome space for the parents and then the adolescents to generate the outcome space for the adolescents. Finally, the transcripts of the parents and adolescents, together with the concept maps, were used to generate the outcome space for the families. In interpreting the responses of both parents and adolescents, the concept maps provided a unique context that gave a different dimension to their utterances. It was also a helpful tool in verifying data and understanding the arrangement of the utterances in the hierarchy of the categories and themes in their entirety. To ensure rigor, the utterances and contexts were reviewed multiple times to fully immerse in the data. The whole process of iterative and multiple reviews took place over 18 months. There were periods of reviews and periods of rest to see the data with a fresh perspective.

Results

The results are expressed as outcome spaces in table form. Here, the results are arranged in increasingly complex categories, moving from left to right of the table. The themes of expanding awareness are the contexts in which they use the technology, also arranged in increasing complexity from top to bottom. The discussion ensues with the implications of the results in light of the new normal in Philippine education.

Roles of Filipino homeschooling parents in the use of technology

The roles the parents played as they used ICT resources in homeschooling were consumers, filters for their adolescent, and instillers of values in using technology for communication, for the various facilities for learning, and to monitor the use and consumption of their adolescent as shown in the outcome space in Table 1.

Table 1.

Outcome Space: Technology and the Filipino Homeschooling Parent

Themes	Categories of Description of Parents		
	Consumer of ICT	**Filter for ICT**	**Instiller of values in the use of or using ICT**
(1) Communication	Express queries through group chats and visiting Facebook support pages. Form group chats to help each other and collaborate. Personal attitudes are helpful, elusive, "*nahihiya*", or frustrated yet supportive of the adolescent.	Adolescent access to social media but not as vigilant with gaming accounts or forums online. Cognizant of the importance of the child's need for privacy in messaging. Mindful of embarrassing children with comments on social media	Online Baybayin classes for the child to instill the love for the language and the country. Video conferencing apps allowed a father overseas to homeschool his sons as he tutored them in math despite the time difference.
(2) Facility for learning	Chose a provider for ease of use, spiritual and academic support, assessments, learning materials, and DepEd recognition. Supplement their existing resources with online sources and software Frugality is the norm, but parents buy resources available online like library subscriptions and curricula. Use of YouTube and Netflix as "co-teachers."	"[YouTube] is their input," access is not as limited as other sites Preferred online sources are Khan Academy, TedEd videos, and other reputable sources (e.g. National Geographic, Biyahe ni Drew) Permissiveness with internet use tempered by a set of standards based on their relationship Using Trello to curate child's resources and monitor coursework.	Learned new technology and software in order to help their child develop new skills. Joined in on the adolescent's technological journey to model the skills towards digital fluency and instill the right attitude towards technology learning and digital citizenship.
(3) Monitoring use and consumption of adolescent	Time, effort, emotional labor, and even hacker skills are involved	Monitoring was an ongoing process because adolescents will commit mistakes. Main reason for filtering is to keep the child safe and to avoid excessive technology use from becoming a hindrance to learning.	Restrictions apply when children begin to act like "zombies" or become unaware of their surroundings. Difficulty in developing a Filipino identity due to preference for foreign content. Share updated knowledge, hold meaningful conversations about digital literacy. "Immerse in their video life" to instill values, digital fluency, & develop digital citizenship

In the theme of communication, parents used it primarily for communicating and collaborating with other parents and contact persons of providers by using group chats and other social media. However, other parents had misgivings in voicing their concerns and hesitated to use group chats for legitimate questions. Parents filter the lines of communication by being vigilant with the adolescent's social media accounts while overlooking gaming and forum accounts. As parents monitor the line of communication and use ICT for communicating, they are mindful of the need for privacy and how they can embarrass their adolescents with enthusiastic comments. Parents can instill values by promoting a love for the language and build up their Filipino identity through online classes at Baybayin. A father overseas using video conferencing apps helps in homeschooling by tutoring the adolescent sons.

In the theme of using ICT as a facility for learning and as consumers, parents enrolled with providers rely on the supplied resources, from assessments and lesson plans to documentation. Even with these resources, homeschooling parents, independent homeschooling parents, and unschooling parents still go online to use free resources. Frugality is the norm by sourcing as much free content online as possible that meets the needs and interests of their adolescent. However, they would invest if they saw worthwhile online subscriptions for libraries and online curricula. They also use YouTube videos, movies, and documentaries on Netflix as their "co-teachers."

As filters for ICT in the theme of the facility for learning, parents choose popular free online resources like Khan Academy and TedEd videos to instruct their adolescents. They also take advantage of free TV content that is within the adolescent's interests, like National Geographic Channel. Due to the lack of resources for Filipino and Araling Panlipunan, parents rely on magazine shows like Biyahe ni Drew as learning tools. One parent uses Trello, a Kanban-based online project-based management system, to curate their adolescent's learning materials and track his progress. In filtering ICT resources to facilitate learning, parents base it on what is needed and what works with their adolescent.

In instilling values for this theme, the parents use ICT as a tool to equip themselves, and ICT is used as the opportunity to directly instill values. Parents' efforts include learning something new, joining their adolescents in their technological journey, and providing their software and hardware needs in an effort to help them learn more about their interests and passions. This flexibility in choosing what to learn while homeschooling is facilitated by the availability of free resources online, from tutorials on software to helping source equipment and new venues for additional content. In learning about these, the parents model how to use digital resources and show how much their adolescents' interests are important to them.

In the theme of monitoring the use and consumption of the adolescent, the parent as a consumer invests their time and effort, including hacker skills, to monitor their adolescent's use of ICT. They shift their roles as parents, teachers, disciplinarians, counselors, and security guards as they police the use of ICT in their adolescence.

As filters in this theme, parents accept that monitoring the online activities of their adolescents is a work in progress yet still needed so their use will not hinder learning. As they assume this role, they accept that their child will make mistakes, and they have to be consistent in filtering online content to keep them safe. They also know that they have to work on sifting through the technology use by their adolescent, from social media to watching YouTube videos, so their homeschooling is not sacrificed.

As instillers of values in this theme, parents often place restrictions when their adolescent is using too much technology for entertainment or just for being online, especially when the adolescent starts acting like "zombies" and unaware of their surroundings. Some parents expressed their frustration that the consumption of their child of foreign content has led to their child favoring a foreign identity and finding Filipino content inferior. To address these, the parents, as instillers of values, had varied approaches. One approach was that instead of restricting the discussion of ideas they picked up online or in the news, they now hold meaningful conversations and engage their adolescents in discussions, usually over their meals. Two mothers pointed out that they "immerse in their (the adolescent's) video life" to instill values, promote digital fluency, and further develop a digital persona that is responsible, kind, and respectful of others.

Roles of adolescent learners in the use of technology in homeschooling

The following outcome space is for ICT and the Filipino homeschooling adolescent. The analysis results produced three categories or roles: consumers, learners, and seekers of their potential. The following themes of expanding awareness arranged in increasing complexity are communication, entertainment and gaming, access and restrictions, and finally, homeschooling. These are reflected in the table of the outcome space for the adolescent in Table 2.

Table 2

Outcome Space: Technology and the Filipino Homeschooling Adolescent

| Themes | Categories of Description for the Adolescent | | |
	Consumer of ICT	Learner of ICT	Seeker of One's Potential
(1) Communication	Online socialization using Messenger Group chats facilitate the organization of social events and gaming	Learning social media applications to communicate with classmates and the provider about coursework, as to not bother parents	ICT use starts with close parental supervision. Posting one's art and maximizing online messaging platforms forms friendships here and overseas. Mature and self-regulating adolescents use and share their expertise online via uploading videos on YouTube.
(2) Entertainment and Gaming	YouTube for music, watching other people play games, watching how others animate videos and really incredible physical feats. Facebook for memes. Minecraft as a creative outlet	*"...bigla ka na lang nanonood ng YouTube."* Online material like gaming and entertainment have disruptive effects on accomplishing coursework.	Production of entertainment and organization of collaborative efforts to do so is facilitated by ICT. Free online content, like films and books, is exposure to more of the world and improves themselves.
(3) Access and Restrictions	Acceptance of guidelines and restrictions for emotional and physical safety Creative and resourcefulness in circumventing restrictions on entertainment when it was perceived as an exchange for work done or due to its rarity.	Lacking access to online resources long-term, results in a lack of practice in using online resources, learning independently, and developing the skill to self-regulate. Getting access to the internet means slacking off when parents were not looking.	Flourishing in pursuit of their interests and passions is based on a mutually agreed upon structure on technology use, regardless of whether it is permissive or restricted.
(4) Homeschooling	Only the interest-led and unschooled adolescents were free from academic pressure as they homeschooled.	"[Videos are] just like my teacher." ICT augments the availability of their parents, the schedule their parents impose, or their academic activities. Perceived lack of academic rigor in homeschooling from other adolescents Difficulty in finding relevant Filipino and Araling Panlipunan resources online and using Google translate to understand them	ICT is a great aid in pursuing their interests. ICT is a distraction for parent-dependent homeschoolers with providers Homeschoolers became independent learners as a way to help their parents, as a result of the parents' upbringing, or as a natural consequence of digital fluency.

In the theme of communication and the role of the consumer of ICT, the adolescent primarily uses ICT for socialization and planning events. ICT becomes a tool that facilitates the development of the social skills of homeschooled adolescents. Notably, adolescents use ICT to organize face-to-face events with online gaming, which are both opportunities to build social skills in different ways. As learners in this theme, the adolescent learns to use ICT as a way to take responsibility for handling their own coursework.

As seekers of their potential in the theme of communication, the adolescents start with close parental supervision. Once the adolescent matures in ICT use, they start to self-regulate by setting the amount of time they are online and how they portion off their time online to different tasks. Mature adolescents capitalize on the affordances of online platforms by contributing to online content, sharing their expertise, and communicating what they know through YouTube videos.

In the theme of entertainment and gaming, the adolescent works to have a healthy relationship with the entertainment value of ICT and other online resources. As consumers of entertainment and gaming, adolescents watch videos on YouTube, find memes on Facebook, and use Minecraft as a creative outlet. As a developing adolescent without the vocabulary to express themselves, these online sources provide creative ways for them to express their ideas and feelings.

As learners in this theme, adolescents consider entertainment and gaming detrimental to their learning by distracting them from their coursework. An expression of this effect is *"...bigla ka na lang nanonood ng YouTube"* [...suddenly you find yourself watching YouTube.] They lack awareness as to how they become engaged enough in their online activities that they do not do their coursework.

In the theme of entertainment and gaming and as seekers of their potential, the adolescent into the visual and performing arts become creators and contributors in these online platforms. These works range from uploading their works in art forums, like DeviantArt, to posting their YouTube videos to build a portfolio and qualify for college scholarships. They also collaborate with other artists in their field to develop better content or organize campaigns in online gaming. For those whose interests do not lie in the arts, ICT is a source of free full-length films and online books, from novels to self-help books.

In the theme of access and restrictions, the adolescent consumer acts in two ways to access and restrictions. One way is for the adolescent to accept that these guidelines and restrictions protect their emotional and physical safety. The other way is to become creative and resourceful in circumventing restrictions, from borrowing units with online access from their peers to quickly finishing their coursework to use the rest of the time allotted for online access to their pursuits. This happens to adolescents who perceive online access as an exchange for work done, like one hour of coursework for two hours of online access, or when the adolescent does not accept the reasons for his/her restrictions.

As learners in this theme, adolescents with little online access do not have enough opportunity to learn independently using online resources, like being unable to use search engines properly without the assistance of their parents on the terms to use to get what they are looking for and not having enough patience to search for legitimate sources. These are also the same adolescents who do not have the skills to self-regulate because their parents or older siblings are always there to tell them when to stop what they are doing or urge them to work on their coursework.

In this theme of access and restrictions, the adolescents who seek their potential flourishes in pursuit of their interests and passions as long as any limitations to their access are agreed upon mutually by the parents and adolescent. It does not matter whether the adolescent's access is highly regulated and restricted or permissive and non-existent. As long as the adolescent agrees wholeheartedly and fully understands those access restrictions, they can self-regulate and use online resources meaningfully. The highly restricted adolescent who buys into the reasons for these restrictions and offers different alternatives to going online is a well-versed coder and digital animator with a thriving online social circle with peers locally and overseas. Adolescents with un-limited access understand the dangers of their access and know how to veer away from dangerous sites. They also know when they use the internet too much for entertainment and trivial pursuits.

In the theme of homeschooling, adolescents as consumers experience academic pressure to use online resources when they follow a curriculum. Those who are using a curriculum have set time-sensitive academic goals that must be met. These goals may come from the provider by setting periodic times for assessment or submissions of de-liverables like portfolios and other proofs of learning. It can also come from the curricu-lum that has a set pace in accomplishing the modules. In these instances, the adolescent uses online resources more to help achieve academic goals and experiences academic stress, especially when deadlines are near. Only those who are independently learning with no set curriculum and the unschooling adolescent are not experiencing any aca-demic pressure and use ICT to pursue their interests.

In the theme of homeschooling as learners, adolescents face various concerns. The main learning tool is subject-specific videos. So much so that adolescents consider vid-eos as their teachers with the advantage of being able to go back in the discussion with-out getting the ire of the teacher and the disadvantage of not being able to ask ques-tions. Using online resources also helps in times when the parents are unavailable to homeschool but the adolescent wants to or has to proceed with their coursework. One adolescent explained that he is often left to his devices as his parents tend to their busi-ness or work outside the home. He may be with his parents physically, but he has online resources that allow him to learn autonomously. As such, their peers perceive them as "*homeschooled lang*" [just homeschooled], implying that they lack academic rigor. This implies that other adolescents consider homeschooled adolescents not as good as reg-ular students attending classes in school. As learners, there is the additional difficulty

of insufficient resources in Filipino and Araling Panlipunan. It also speaks of the need for mastery in the Filipino language of homeschooled Filipino adolescents because they always end up using Google Translate to help them out.

In the theme of homeschooling, all the adolescents seeking their potential consider ICT a great tool to meet their academic goals. However, for those still developing their independent learning skills, especially those with providers, ICT is also a distraction. As they try to succeed in homeschooling, they try to master their ICT and become digitally fluent. Not just for them to learn but also to help their parents with their homeschool responsibilities. These adolescents see how much the parents have to juggle with homeschooling them, running a business, seeing to their siblings, and caring for the home. A more significant motivating factor is to help the parent care for them, like the only daughter concentrating on building their online portfolio of creative videos to secure a scholarship for college so her widower father would not have to work so hard. The results of the utterances of these adolescents revolve around helping their parents, it was not about their learning journey.

Contexts for which roles of homeschooling parents and adolescent learners in the use of technology play out

The following outcome space expresses the results of the contexts for which the roles of homeschooling parents and adolescent learners in the use of technology play out. In increasing complexity, the categories of description or the roles of the parents and adolescents are consumers, learners, and managers. The contextual themes of expanding awareness, in increasing complexity, are communication, digital literacy, and character building, as seen in Table 3.

Table 3

Outcome Space: Technology and the Filipino Homeschooling Family Dynamics

Themes	Categories of Description of Family Dynamics		
	Consumers	**Learners**	**Managers**
(1) Communication	Trust in the use of ICT between the parent and adolescent was built together, reinforced, or imposed by the parent.	Parents may become prescriptive in their communications with their adolescents. Adolescents hope that parents can learn how to listen and compromise with them.	Parents creatively manage adolescent access and restrictions implementation. Restrictions were either prescribed by the parent or formulated by the adolescent.
(2) Digital Literacy	Developing their digital literacy can cause friction. Parents modeling ICT use and consumption reduce this strain and maximize it for their homeschooling journey.	Learning meaningful communication & trust helps in digital literacy. In learning self-regulation, parents infringe upon the adolescent's privacy in the name of safety.	Managing compliance with provider standards is a significant bonding experience as they work for digital literacy Parental restrictions on ICT use & online access resulted in less varied use of the non-accepting adolescent.
(3) Character Building	Parent sets standard for adolescent's inappropriate ICT use. ICT consumption can be monetized for financial independence.	Parents consider learning to code, animate, & program prepares the adolescent for the future. Doing coursework is for compliance not learning. Life-long learning skills were fostered by building a relationship based on learning together.	Supporting the dreams of the child by providing hardware & software gave them confidence. The adolescent managed sibling behavior, chores, coursework, and parent expectations, and worked around parental restrictions.

The outcome space above included data points based on the concepts cited from the concept/mind maps, a sample shown in Figure 3. Family 5 was using interest-led independent homeschooling with all three daughters. The participants in the study were the eldest daughter (13) and the mother (36), who only enrolled her daughter in a traditional school in Gr 1. Since the son was of school age, Family 8 was homeschooled with the same provider. The participants were the mother (41) and the son (14) who was an only child. The parent and adolescent made the concept map together, and the only prompt was to make their concept/mind map of how they used ICT in homeschooling.

Figure 3

Sample concept/mind maps of the participating families
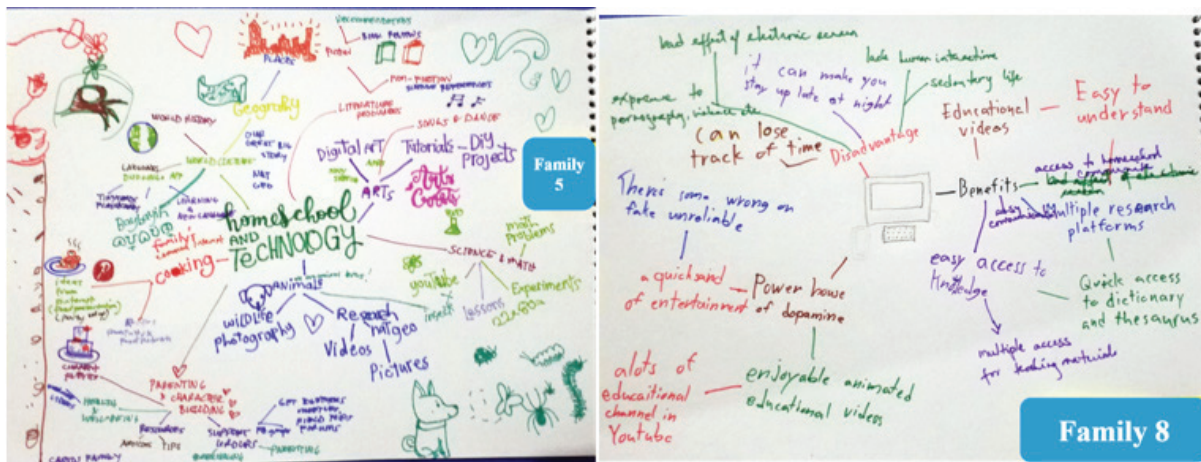
The study addressed family interactions and the contexts in which they act out their roles as a family. In the theme of communication, the primary concern of the family as consumers is the trust between them as they use ICT. The parents need help trusting their adolescent to adhere to the guidelines set by the parents on ICT use for communication. One mother asks for the son's phone during the week, allowing only its use when the son is outside for his activities or during the weekends at certain hours. The same mother has access to the son's social media and reads personal messages;   the son knows this and requested that his mother stop it. The mother told the son that she was not but did it. A father reminds his daughter that she has to respect their guidelines about messaging others at all hours of the night and that he can take it away at any time. The daughter respects this and does not give her father reason to do so. Parent and child build their trust when the parent gives guidelines, and when the adolescent follows them in a span of time, then the parent trusts the adolescent to keep on following those guidelines even without close monitoring.

As learners in the theme of communication, both parent and child are developing their skills in ICT for communication. In this part of their journey in the theme of communication, the results show that parents tend to be prescriptive with their adolescents. They listen to the adolescent's concerns and then prescribe a solution, providing a link to an educational source or giving an inspirational site. The call of adolescents is for their parents to learn how to listen to them, for their voices to be heard, and to possibly compromise on certain things like the need for reasonable access and lessening restrictions.

As managers in the theme of communication, the parents creatively manage their adolescent's access by prescribing the restrictions based on their perception of the correct amount of time to use ICT and the kind of content they can use. Some ways are assigning a common unit siblings can share to access online content, switching between devices where the parent can always view what the adolescent sees, and allowing the

oldest sibling to look after the adolescent. Some adolescents manage their own ICT use by placing restrictions themselves or they self-regulate, like giving themselves an hour of online entertainment for every two hours of coursework, deactivating their social media altogether because it was a distraction from their passions, and voluntarily giving up their device after realizing how much they were not helping themselves with its use.

In the theme of digital literacy, there is friction from their roles as consumers of ICT. In their pursuit of digital literacy, the parent must be ahead of the learning curve to guide their adolescent in using ICT. Adolescents in their late teens are often ahead of the learning curve and hardly need the guidance of their parents as they figure out ways to balance ICT use for homeschooling and entertainment or gaming. This friction is marked for families whose parents are prescriptive while parents who openly modeled their ICT use and consumption reduced the friction.

As learners in the theme of digital literacy, the communication and trust between parent and adolescent determines how digitally literate the adolescent is. The goal is for the adolescent to self-regulate their use of digital resources and insights from the parent on why they chose to do what they do helps the adolescent to determine their framework as they assess ICT resources. They need to provide the adolescent with a safe space to self-regulate and learn from their mistakes. However, the parent ends up reviewing the browsing history and infringing on the privacy of the adolescent in order to check that their adolescent is doing what they said they were doing.

As managers in the theme of digital literacy, the main task is to comply with the standards for academics set by the provider. This includes providing the outputs, adhering to the timetable of submitting those outputs, and preparing the adolescent for quarterly or yearly assessments. Parents homeschool to control the amount of academic stress and the values the adolescent develops, and complying with provider standards becomes a significant bonding experience as they work towards digital literacy. The way the parents and adolescents manage their time and resources help them develop their digital literacy simultaneously. When the parent becomes overly restrictive of the adolescent's ICT use, insisting on using only the available reading materials or talking to the same resource people limits the adolescent. One adolescent was not allowed to use the internet for long periods and talk to the adults around him who were not experts in the subjects he was studying. He takes all information from them automatically correct because his parents know them. This can hinder the development of critical thinking and independent learning, and these restrictions on his use can lead to learned helplessness.

Some parents capitalize on their adolescent's emerging skills and encourage them to further develop their craft. The goal is to find a way to earn money to achieve financial independence. One reason parents homeschool is the economic aspect, where homeschooling removes transportation costs, school fees, and the loss of productive time during the commute. Parents are aware of the future financial straits that their adolescents will face and start encouraging them to monetize their craft, feeding their entre-

preneurial spirit as early as possible and introducing financial literacy in their day-to-day activities.

As learners in character building theme, parents do agree that learning to code, program, and animate can prepare their adolescent for the uncertain future. However, these skills are not necessarily part of the curriculum. This changes the role of doing coursework in their homeschooling journey; from learning, it has turned into compliance. The life-long learning skills developed were on how to deal with complying. The homeschooling process made the parent and adolescent work together, collaborate, and build each other up to learn new ways to comply.

In their roles as managers in character building theme, the family has to manage many aspects of character building. There are aspects that only the parent can manage, such as the sourcing of hardware and software to give the adolescent the tools to navigate a digital world, the values and belief systems the family stands for, and different ways to get these done. Some parents deliberately and consciously make an effort in character formation by introducing other activities outside of their homeschooling provider or choosing a homeschooling provider that reflects their belief systems and has additional activities to promote them. When it comes to ICT, parents find ways to provide the hardware and software their adolescent needs, from looking for open source software to asking extended family and friends for funds to afford hardware.

The adolescents build on their character by managing their sibling's behavior, doing chores, managing their coursework, and working around parental restrictions. Older homeschoolers are also tasked by the parents to look after their siblings, especially if everyone is homeschooled. They also manage their parent's expectations by honestly letting them know of their struggles and sharing their successes. These adolescents appreciate their homeschooling as character builders and would keep on homeschooling and even use it when they have children of their own. Homeschooling parents' personalized attention aids the development of the adolescent learner by being well-informed and discriminating in curating their resources. It assuredly complied with DepEd standards for those whose materials come from providers. Yet, parents still enrich them with videos, online assessments, and other resources like books, additional online classes, seminars, short courses, and other print media. For interest-led learners and unschoolers, everything they interact with is a learning resource and they capitalize on these as avenues of learning. The most time-consuming issue between homeschooling parents and adolescents is managing the adolescent's online access and monitoring their activities there. They may have not articulated that they are on a journey to independent learning and developing digital literacy and fluency. However, the parents and adolescents were inadvertently working towards that goal as the first step in successfully using ICT as they homeschool.

Discussion

The parents' creative use of ICT in communication and as a facility for learning gives them the tools to homeschool how they want to. Whether it is simply using ICT to connect to people around them, or discovering different resources as they filter what they use to promote the values they want their adolescents to embrace as they learn, the versatility of online resources helps them achieve their homeschooling goals in so many innovative ways. ICT could be the object of homeschooling as they teach and model their digital competence to their adolescents. It has to be noted that parents do concern themselves with the Filipino identity of their adolescent in the face of the influx of foreign content online. Paired with the parents' duty and desire to protect their adolescents, they exercise varied ways. It would be good to explore how parents who do not homeschool use ICT and whether they are as creative and innovative in its use to aid their adolescent's learning, especially in the light of the pandemic and for future blended learning modalities.

The study's findings weave an intricate relationship between Filipino adolescents and ICT. As homeschooling adolescents, their ICT experiences were heavily reliant on their parents' exposure and beliefs. The adolescents' learning experiences with ICT as a tool and ICT as an object of learning revolve around homeschooling and their parents' regulations on ICT use. There is an existing conflict between parents allowing permissive use versus restrictive use, and the implications for the adolescent hinge on how these regulations were introduced. Adolescents who did not wholeheartedly agree with the parents' regulations, whether permissive or not, had the most difficulty in developing their digital competence and digital fluency. The constant communication and mutual give and take between the parent and adolescent made it possible.

Adolescents always found ways to get what they wanted, from gaming and entertainment to developing independent learning skills and following their passions. For the interest-led learner and unschooled adolescent, ICT was instrumental in their homeschooling. However, these Filipino adolescents have very strong relationships with their parents, even when strained. As they struggle with their ICT use while tending to their homeschooling, they rely on these relationships and even use them as their motivation to excel. This innate strong relationship and modeling of parents is a reason homeschoolers often perform better than regular learners (Ray, B. D., 2022).

The depth of the relationships of the families plays a vital role in their ICT use as they homeschool. The dynamics hinge on resolving their conflicts with ICT use. As adolescent finds their way in digital fluency, the parent as models of their use highly influence their attitudes. Friction was apparent for families where communication was strained or trust was being rebuilt, friction was apparent. Note the way parents were dismissive of the privacy of the adolescent in the name of monitoring their activity and ensuring their safety, which is typical of Filipino parents (Bermal, M. L. N. et al., 2022). It is rather difficult to get the parent and adolescent to work together on the issues of the adolescent's

privacy online (Akter, M., et. al., 2022), which is a source of friction within the family.

However, when it comes to homeschooling and the learning journey of the adolescent, the families work together closely to help the adolescent to achieve their goals, maximizing free online resources. The strong Filipino familial ties are also very evident in how the adolescents think of their parents and siblings when making their choices online, how they deal with others, and the resources they use to homeschool. Thus, some of the load of home management falls on the adolescent not only as a natural consequence of homeschooling but also as a learning tool for the parents.

Conclusion

The purely phenomenographic approach to bringing out the varied experiences of the Filipino homeschooling parent and adolescent puts into context the hows and the whys of ICT use in homeschooling. Adolescents, as consumers, learners, and seekers of their own potential, act out their roles in the context expressed in the themes of communication, entertainment and gaming, access and restrictions, and participation in homeschooling. Adolescents may be born into these technologies, but it does not mean that they can quickly master their use. With the emotional, psychological, and social growth adolescents have to contend with, they also have to grapple with the emotional intelligence needed to self-regulate technology use and consumption (Chandra, 2020). The adolescents were cognizant of the disruptive effects of technology, specifically YouTube and social media platforms, on their academics. For those adolescents who had curtailed access and close monitoring, their online social skills were not as developed as the others, but were only digitally fluent in the aspects that were allowed by their parents. Those adolescents who had unfettered access to online messaging and social platforms practice their online social and communication skills and grow in digital fluency. YouTube plays a vital role in Filipino homeschooling adolescents; it acts as their teacher, a source of entertainment, and a venue to explore and showcase their chosen crafts and performances. Adolescents with free access went to YouTube to learn about what interests them, from film editing, a new language, and animation to playing games, a display of their digital literacy and contributions to online content.

Adolescents whom their parents guided into becoming independent learners were more at home with using technology and self-regulating use. Adolescents who were made aware of their parents' motivations behind the restrictions and access were also more respectful and accepting of the guidelines imposed upon them. Those who considered their access positive reinforcement for accomplished coursework often tried to circumvent the restrictions when they were not as closely monitored. Most adolescents with homeschooling providers or following a curriculum considered their coursework as requirements to be complied with, while independent homeschoolers consider their "coursework" opportunities to learn. The interest-led learner and the unschooler were the only ones with no rigorous academic tasks and no academic requirements. Adolescents use messaging to organize themselves and create online content and other social

activities. They also collaborated on Minecraft and animation in forums. ICT made these capacities and competencies possible because the parents had a certain amount of permissiveness to what the learner can do online or offline with the corresponding software. However, the same permissiveness also resulted in unhealthy YouTube watching, scanning social media, and access to adult sites, which required parental intervention. Considering the current educational halt on face-to-face classes, this study provides a view into the dynamic of the family as they act out their roles as consumers, learners, and managers in the contexts expressed in the themes of communication, digital literacy, and character-building. Digital literacy is simultaneously being developed in both the parent and adolescent. The parents promoted digital literacy by modeling the right attitudes towards viewing online content, joining their adolescents in using ICT, and processing any that need explaining. There was a willingness to explore with the adolescent and an openness to address questions. With reasonable limitations on safety, there is merit in allowing the adolescents to explore what they want online to develop their own attitudes and skills in becoming digital citizens. They have to be allowed to make mistakes and learn from them instead of shielding them and curtailing their access. One independent homeschooling mother expressed it best as they lead their adolescent into becoming productive and responsible digital citizens:

> "...I'm not going to shield them from [technology], I am going to equip them. I am going to empower them to deal with this world, I'm not going to tell them "No!" Because somebody else will show them that and I want it to be me. I want them to learn from me, I want me to prepare them for that."

The findings of this study call for more rigorous studies that utilize quantitative or mixed methods. Future research can highlight the utilization of ICT in homeschooling and the development of learning modalities that will prove to be effective against school disruptions. It is likewise recommended that capacity-building programs for independent learning, responsible digital citizenship, and digital fluency for both parents and learners be instituted. Moreover, this study recommends reviewing policies in implementing homeschooling to avoid possible abuse and regulate the delivery of the learning activities while still keeping it flexible enough for the parents to do so.

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