Graduate School of
International Development,
Nagoya University

ONLINE SURVEYS OF DEVELOPMENT CHALLENGES IN THE PHILIPPINES

Oversears Fieldwork Report 2021

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Online Surveys of Development Challenges in the Philippines

March 2022

Graduate School of International Development

Nagoya University

Nagoya, Japan

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Acknowledgments

GSID students who participated in OFW 2021 and the committee of OFW 2021 are indebted to many people and institutions both in The Philippines and Japan for the successful completion of this year's program. In particular, our appreciation goes to both external advisers and lecturers. From the University of the Philippines Los Baños (UPLB), Dr. Evelie P. Serrano and Dr. Aileen V. Lapitan provided very valuable support and local information on the current development challenges that the Philippines is currently facing. From Kyoritsu Women's University, Dr. Masayoshi Okabe also provided very valuable insights on the development issues of the Philippines. We are also grateful for the contributions of external lecturers. Specifically, Ms. Yurika Suzuki from IDE-JETRO and Ms. Marjorie Resuello from Ritsumeikan University provided a solid foundation for understanding the society and economy of the Philippines.

From GSID, we greatly benefited from the excellent lectures of Prof. Francis Peddie and Prof. Wataru Kusaka. Their knowledge about the Philippines has always been inspiring for us. Also, Prof. Adam Smith provided excellent support and leadership in the design and implementation of online surveys. Finally, we also would like to thank Prof. Jeremy Wood for the English editing of this volume.

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Introduction

The twenty-eighth Overseas Fieldwork (OFW 2021) of the Graduate School of International Development (GSID), Nagoya University, was carried out for the first time completely online. Each year, GSID carries out OFW in a developing country in Asia in cooperation with a local partner university of GSID. In this year, however, the COVID-19 pandemic has largely limited our regular face-to-face interactions with people both outside and inside Japan. OFW is an integral part of GSID's curriculum, designed to provide students with exposure to the "real world" development issues of a developing country. The COVID-19 pandemic has forced us to find alternative ways to provide exposure to development issues using new online technologies. For the first time, OFW has been carried out using online surveys. In close collaboration with the University of the Philippines Los Baños (UPLB), GSID students gained valuable research experience and a foundational understanding of educational development challenges in the Philippines. Although this online experience is not equivalent to the usual fieldwork experience, it provides opportunities for research innovation and fosters data-driven analytical capabilities.

We believe that the online OFW experience is also helpful for students seeking future careers in international development as it fosters data-driven insights that complement theoretical perspectives. Online OFW also enables students to understand the importance of inter-disciplinary approaches. Considering the relevance of topics to the context of the Philippines and the expertise of GSID professors, we divided participating students into three working groups: primary education (WG1), gender inequality in education (WG2), and higher education (WG3). After acquiring a foundational understanding of sustainable development in the context of the Philippines, students designed an online questionary using the online survey software Qualtrics. The questionary was distributed through the online market research tool Lucid Marketplace. After collecting representative samples, students analyzed the results using various statistical programs such as Stata, GeoDa, R, and Python. Finally, students presented their results in multiple occasions, including the academic sessions of the GSID 30th anniversary. The present volume is an outcome of all the efforts mentioned above.

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List of Participants

GSID Faculty Members (3)

Working Group	GSID, Nagoya University
WG1: Primary Education	Yuki Shimazu
WG2: Gender	Christian Otchia
WG3: Higher Education	Carlos Mendez

GSID Students (14)

Working Group	Name	Country
WG1: Primary Education	Abdoul Wahabou Koanda	Burkinabe
	Catia Antonio Victor Joaquim De Oliveira*	Mozambican
	Gabriel Flores*	Venezuelan
	Kengo Umeda	Japanese
	Yuki Kobayashi	Japanese
WG2: Gender	Aldino Maria Andre	Mozambican
	Gerald Chizonda	Malawian
	Ryo Tsukamoto*	Japanese
	Yoshiki Ito	Japanese
	Yuka Kimura	Japanese
WG3: Higher Education	Andrea Dyah Rahandini*	Indonesian
	Bilqis Oktaviani Putri	Indonesian
	Darleen May Claro	Filipino
	Jie Zhu	Chinese

* Group leaders

Program of OFW 2021

Preparatory Seminar at GSID

Date	Time	Title of the Lecture	Lecturer(s)
Apr. 21 (Wed)	14:45-16:15	Introduction & Team-building	OFW Committee
Apr. 28 (Wed)	14:45-16:15	Understanding Culture and Current Development Trends in the Philippines	Ms. Marjorie Resuello, Ritsumeikan University
May. 12 (Wed)	14:45-16:15	Migration as a Family Livelihood Strategy: a case study of the Overseas Filipino Workers from the Municipality of Rizal, the Philippines	Dr. Francis Peddie, Nagoya University
May. 19 (Wed)	16:30-18:00	An Introduction to Philippine Politics	Dr. Wataru Kusaka, Nagoya University
May. 26 (Wed)	14:45-16:15	Philippine Economy	Ms. Yurika Suzuki, Area Studies Center, IDE-JETRO
Jun. 2 (Wed)	16:30-18:00	Education Issues of the Philippines	Dr. Masayoshi Okabe, Kyoritsu Women's University
Jun. 9 (Wed)	14:45-16:15	Group presentation to share research interests	OFW Committee
Jun. 16 (Wed)	14:45-16:15	Research methods 1: Secondary macro and meso data	Dr. Carlos Mendez, Nagoya University
	16:30-18:00	Research methods 2: Secondary micro data	Dr. Christian Otchia, Nagoya University
Jun. 23 (Wed)	14:45-16:15	Research methods 3: Primary micro data	Dr. Adam Smith and Dr. Yuki Shimazu, Nagoya University
Jun. 30 (Wed)	14:45-16:15	Data analysis methods 1: Macro and meso data	Dr. Carlos Mendez and Dr. Christian Otchia, Nagoya University
Jul. 7 (Wed)	14:45-16:15	Data analysis methods 2: Micro data	Dr. Adam Smith, Nagoya University
Jul. 14 (Wed)	14:45-16:15	Group presentation of the research proposal	OFW Committee
Jul. 21 (Wed)	14:45-16:15	Questionnaire survey form preparation	OFW Committee Teaching Assistants
Jul 28 (Wed)	14:45-16:15	Group presentation of the online survey form	OFW Committee

Schedule of Online Survey in the Philippines

The students developed their online survey forms by using a program called Qualtrics, and a survey company distributed them in the Philippines between August 28th and 31st, 2021. The collected data was handed to the students on September 3rd, 2021.

Interim Presentations of Research Findings

The interim presentation of research findings was held online on September 29th, 2021. Each working group presented for 20 minutes, followed by a Q&A session. Dr. Evelie P. Serrano and Dr. Aileen V. Lapitan, College of Public Affairs and Development (CPAf), University of the Philippines Los Baños (UPLB), and Dr. Masayoshi Okabe, Kyoritsu Women's University attended the presentation to give feedback.

Presentation of Research Findings at the GSID 30th Anniversary Event

The online session titled "GSID's overseas fieldwork 2021" was held during the GSID 30th anniversary event. Two working groups presented their research findings, and representatives from each group discussed what they learned and the challenges they faced during the OFW 2021.

Working Group 1

Elementary Education in Philippines and COVID-19 pandemic: A Case of Study of National Capital Region (NCR)

Group Members:

Abdoul Wahabou Koanda

Catia Antonio Victor Joaquim De Oliveira*

Gabriel Flores*

Kengo Umeda

Yuki Kobayashi

Advisor:

Dr. Yuki Shimazu

* Group Leaders

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1. Introduction

There is no doubt that the COVID-19 pandemic presents severe challenges to the world. Many governments had to adopt drastic measures like travel restrictions, mass vaccinations, and lockdowns. The lockdowns affected various public and private services, including education. The lockdowns deprived students of the direct enjoyment enjoyment of a school environment. This forced the schools to adopt new learning methodologies using online and offline alternatives. Remote learning was introduced in most schools from pre-primary to high school levels. However, it is challenging for students to adapt to these innovative ways of learning. Many families are also struggling to adapt to the new situation. Especially, parents with children in elementary schools face many challenges. Since it is difficult for these children to study by themselves, their parents have to facilitate homeschooling and play the role of teachers in many cases.

The situation of elementary school level homeschooling in the Philippines is smiliar to the other countries. Filipino parents are facing challenges in fulfilling the remote learning of their children. There are challenges from different dimensions, for example resources related challenges and lack of their skills. This research aims to analyze the impact of COVID-19 and identify the challenges that parents of elementary school children in the Philippines have faced. The location for this research was limited to the National Capital Region (NCR), also known as Metro Manila. The study will explore the two types of homeschooling in the Philippines, online and offline print-based learning. This study focuses on families with children in elementary schools because they face various challenges of homeschooling since the children need much support from their parents. In addition, the lack of resources, including physical ones such as devices for communication, and non-physical ones like teaching capacity and time for teaching, is also a problem.

This study presents parents' perceptions regarding their main challenges of homeschooling and the support they need to overcome these education challenges during the COVID-19 pandemic in Metropolitan Manila, Philippines.

2. Literature Review

Many scholars have discussed homeschooling. This type of learning is seen as "a progressive movement around a country and the world in which parents educate their children at home instead of sending them to a traditional public or private school (Martin, 2020)." Parents choose to homeschool for diverse reasons, including dissatisfaction with educational philosophies and the belief that children are progressing within the traditional school structure. A movement towards homeschooling began growing in 1970 when some famous researchers and experts in education started working on possible education reforms (ibid).

Conceived this way, homeschooling is another form of education that existed long before the COVID-19 pandemic. Home schooling was widely used in teaching children with disabilities in the past. The COVID-19 crisis has persuaded various government institutions and the education sector to reimagine and reshape the present curriculum. These reforms are known in the Philippines as modular learning, including homeschooling.

Cahapay (2020) researched how Filipino parents' home educate their children who live with autism during COVID-19. He found that COVID-19 positively impacted children's education with autism. First, the

pandemic had a positive effect, as it had "brought family members together at home for a considerable long period" (Cahapay, 2020). This allowed most family members to be mainly involved in the education of children with autism. Second, the pandemic crisis forced many families to create new activities for their children with autism, demonstrating that their routines had changed somewhat. The pandemic finally increased solidarity between families: families assisted each other during COVID-19.

Reyes (2012) also discusses the positive aspects of homeschooling. Based on the psycho-pedagogy perspective, she explains that homeschooling allows for the personalization of curriculum content. Therefore, in this type of learning, it is necessary to understand the child's competence, whether they are ready for the new lesson, and if they understand enough to move on to the next content. Although homeschooling has its advantages, Reyes's explanation shows that isome expertise is required in order to conduct effective homeschooling.

Agaton and Cueto (2021) also conducted a different study in 2021 to explore the lived experiences of the parents of both regular students and those living with disabilities, who act as learning supervisors, tutors, and homeschooling teachers for modular learning during the COVID-19 crisis in the Philippines. Their findings showed that Parents fully supported the government's educational policies during COVID-19. These policies include closing all the educational establishments and delaying the reopening of schools "to give teachers enough preparation time for the new normal." Parents also supported the "government's strategic plan of helping students pursue learning at home (Agaton & Cueto, 2021)." However, the findings have underscored the fact that parents have encountered various challenges from the new learning mode in virtual settings since the pandemic started. Some of them are as follows: delivery of instruction; unsatisfactory learning outcomes; financial difficulties while working for the family during lockdown; struggle with the use and availability of technology; and personal problems regarding health, stress, and learning style.

Cahapay (2021) has conducted a similar study, with the main focus on mothers' involvement in the remote learning of their children amid the COVID-19 crisis. This study found that parents consider remote learning strategies as "bringing many changes in the ways of learning (Cahapay, 2021, p.7)," and they have not only to "adjust some spaces and routines at home but they also to adjust to the new environment (ibid, p.7)." Therefore, this sudden adjustment was very "difficult as they also have to deal with changes in other spheres of their daily lives such as work (ibid, p.9)." The research also showed a kind of optimism among parents despite these difficulties. Some parents thought that the remote learning due to the crisis helped them somehow to connect with the child physically and emotionally. Parents also tried to "adapt to the new situation created by the covid-19 outbreak as much as possible and therefore focus on the essential end that learning may still occur amid the difficult situation (ibid, p.7)."

Palma (2021) conducted a study in the Philippines. The researcher described the parents with children at elementary school perception toward the new learning modalities adopted because of the COVID-19 pandemic. The study concluded that many parents changed their children from private to public schools. Many of them were committed and supportive of their children's homeschooling, especially the parents with children in private schools. The study also mentions that parents perceive that teachers have a vital role in adopting any changing of learning modalities. The parents were not aware of their duties and skills (Palma, 2021).

Against these findings, the present study aims to identify parents' main challenges with homeschooling

during the COVID-19 pandemic in the Philippines. The novelty of this research lies in its particular focus on lived experiences of the parents who only have children at elementary schools in the Philippines.

3. Problem Statement

Education is a universal right and is crucial for fulfilling other rights. Primary Education is universal and compulsory (UNESCO, 2020). However, the fulfillment of this right might be threatened because of the COVID-19 pandemic.

Like many countries worldwide, since 2020, the Philippines has been affected by the COVID-19 pandemic. After approximately a year of school closures, they are still not open (Joviland, 2021). As a result, the Ministry of Education of the Philippines released Alternative Learning Modes. The document is referred to as Order #21 and is a guideline for homeschooling methods. In general, two remote learning methods are indicated, namely, remote and online. Modular style is individualized and consists of self-learning through printed or digital modules like textbooks, activity sheets, and other materials. Students can progress in learning with the assistance of teachers by telephones calls, messages, and other means (Llego, 2020). It requires schools to prepare a set of exercises and the children to complete and return them within the deadline.

The other homeschooling method is online. This mode uses online resources such as computers, smartphones, and the internet to deliver lessons to students. The online learning method is internet-based, live, and requires teachers and students to have a stable internet connection during the lessons, interactions, and real-time responses (Llego, 2020). Both homeschooling modalities are being implemented in the Philippines and assumed as a new normal. However, there are some challenges when implementing these methods.

Challenges include a lack of resources like electricity, internet connection, and electronic devices like computers, iPad, and smartphones necessary for online learning. In the Philippines, many students face the challenges of unstable and slow Internet connections (Baticulon, 2021). For the Modular style, parents play an essential role. It was reported that they have to struggle with unwilling children, and sometimes teachers discovered that parents or guardians completed the activities on behalf of their children (De Guzman, 2021). In general, there are many challenges associated with homeschooling, such as the requirement of parents' supervision and knowledge to help with their children's homeschool tasks (Nakpil, 2019). The participation of parents in homeschooling their children at the elementary level is more demanding, since at this level the students do not have the ability to guide their own self-learning.

4. Research Objectives and Research Questions

This study aims to research the current situation and parents' experience of homeschooling in the Philippines during the COVID-19 pandemic by conducting a questionnaire survey. The main objective of this study is to identify Filipino parents' opinions on homeschooling during the COVID-19 pandemic and the challenges they have encountered. This research attempts to answer the following questions in order to achieve this objective.

Main research question

- How have parents experienced homeschooling during the COVID-19 pandemic in the Philippines?

Sub-research questions

- What are the main challenges parents have encountered when implementing homeschooling during the COVID-19 pandemic?
- What are the parents' opinions regarding their homeschooling experience during the COVID-19 pandemic?

5. Research Methodology

This study adopted a quantitative research method for data collection. This method allowed us to work with complex data and better analyze the challenges of homeschooling at the elementary school level. The data collection instrument was an online survey. It was designed to collect information about the experience of parents living with children in elementary school in the National Capital Region (NCR). The survey was divided into the following sections:

1. Basic information – the questions are related to the social demographic background, including gender, family composition, and economic situation.
2. Homeschooling experience – this section collects data about the characteristics of the homeschooling situation during the COVID-19 pandemic—facts like hours of studying, educational resources, and family members' involvement with children's studies.
3. Homeschooling Opinions – parents were asked to express their opinions regarding the homeschooling experience. The responses are given through the Likert scale.
4. Final comments – the questions are open-ended for the respondents to answer.

This study also used secondary data from the Philippine government, such as an official report published by the Ministry of Education and K12 Program Education Guidelines. The data contributes to understanding the Philippian education system.

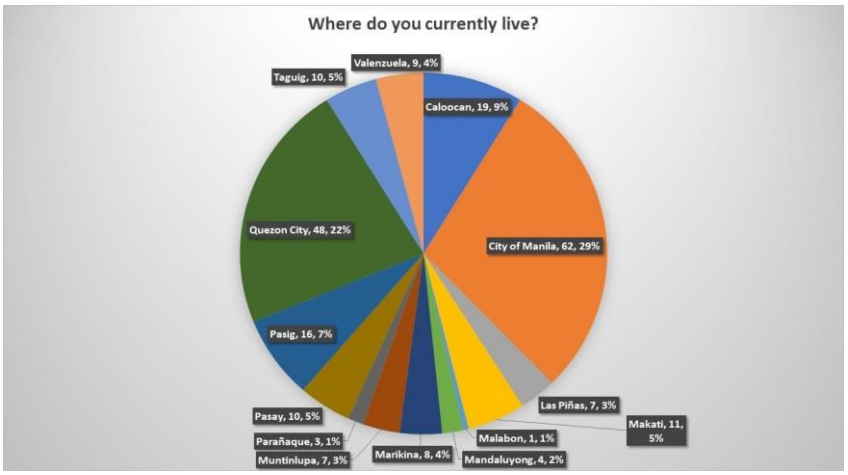
6. Summary of Data

6.1 Characteristics of Respondents (Parents)

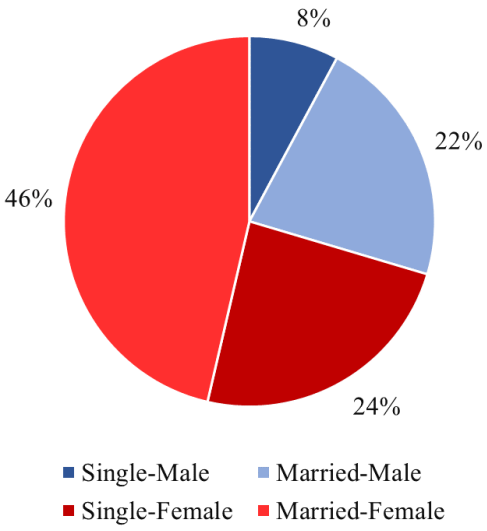
179 parents living in the NCR assisting their children's homeschooling at the elementary level answered the online survey. Half of the respondents reside in Manila and Quezon City. The majority of respondents have full-time jobs; the rest of them have either part-time jobs or are self-employed in one way or another, with only 11 of them being unemployed. A third of the respondents said they work 40 hours per week, accounting for an average income of 43,000 PHP, with a couple of cases averaging a more significant amount than this. More than 80% of the respondents have either a Bachelor's or Master's degree. These figures show the respondents of this survey have a higher level of education and more income than average in the Philippines.

Figures 1: Demographics of Respondents

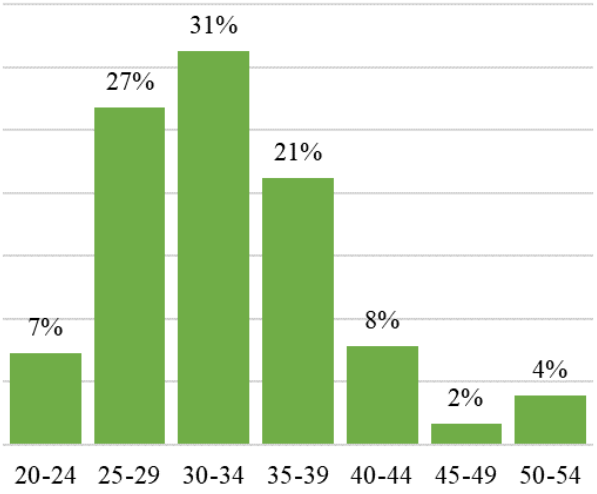
(a) Residence



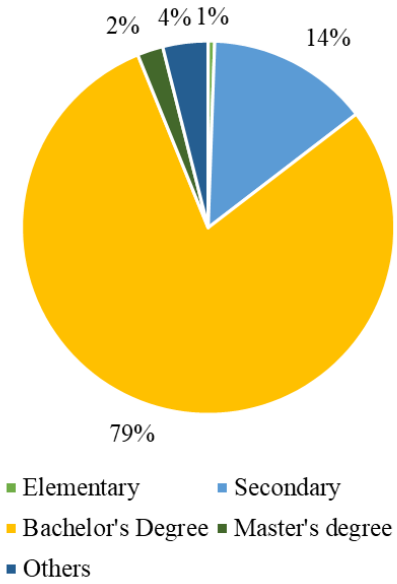
(b) Gender and Marialites



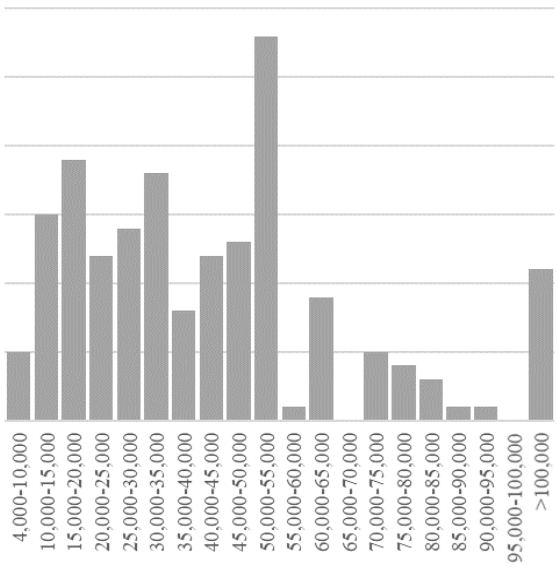
(c) Age



(d) Educational background



(e) Monthly income (unit: PHP)

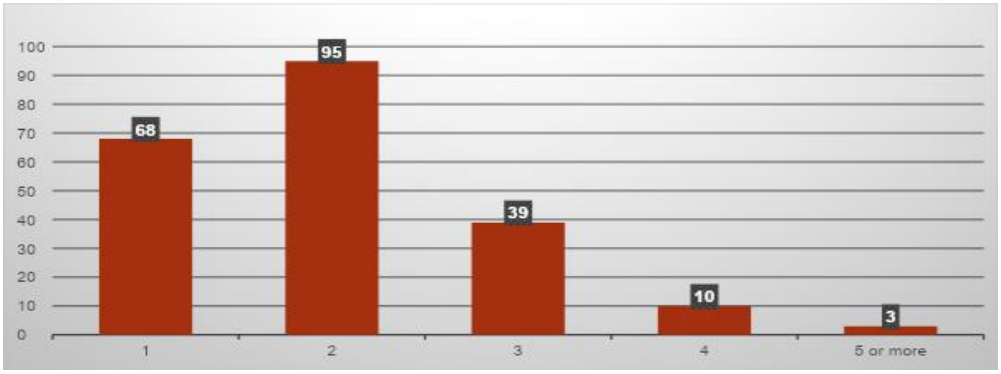


6.2 Characteristics of Respondents' Children (Elementary School Students)

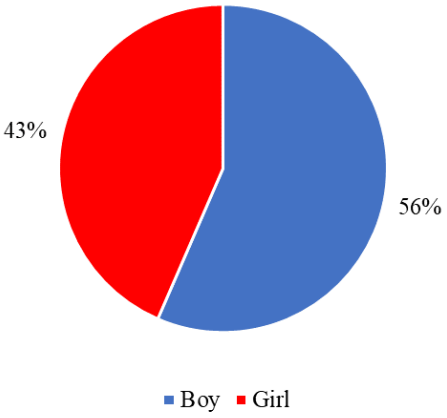
One hundred seventy-nine parents provided information of 224 elementary school level children because some of them have more than one child going to elementary schools simultaneously. One of the households had four elementary school students in Grade 6, 5, 4, and 3. As the following figures show, more than half of them are boys. There is a similar percentage for each grade, but slightly more children in the lower ones. 66% of children go to public schools, and most of them experience both online and modular homeschooling styles. Online-style homeschooling was adopted more at public schools than private schools.

Figures 2: Demographics of Respondents' Children

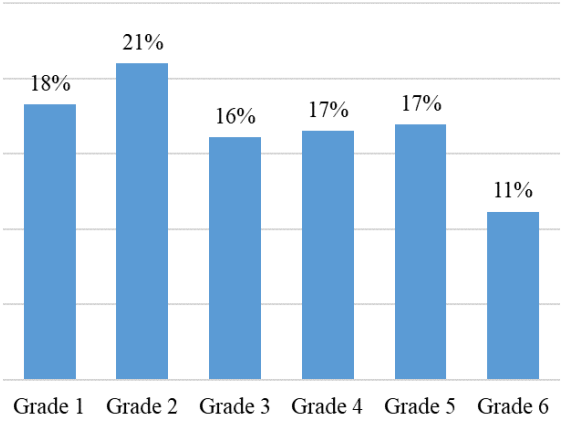
(a) Number of children per household (unit: number of children)



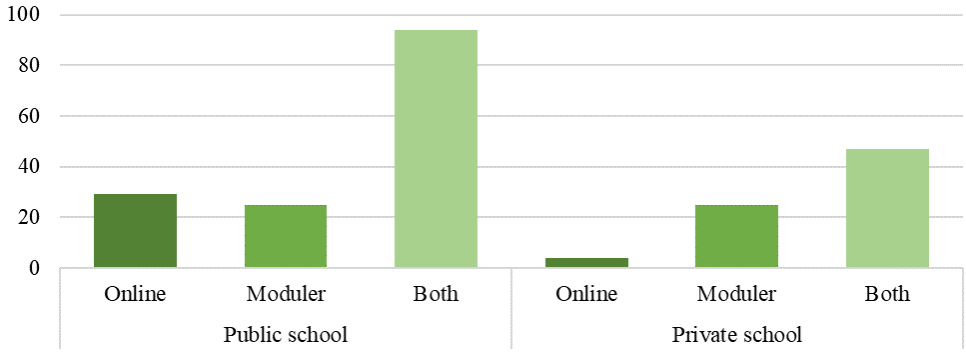
(b) Gender



(c) Grade



(d) Type of school and homeschooling (unit: number of children)

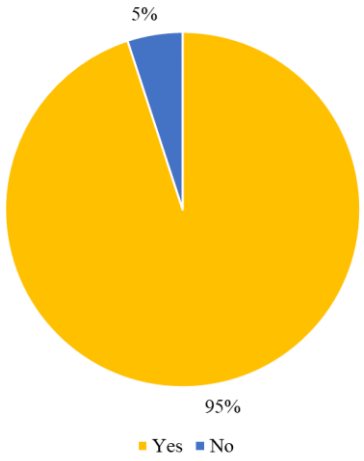


6.3 Internet Access and Connection

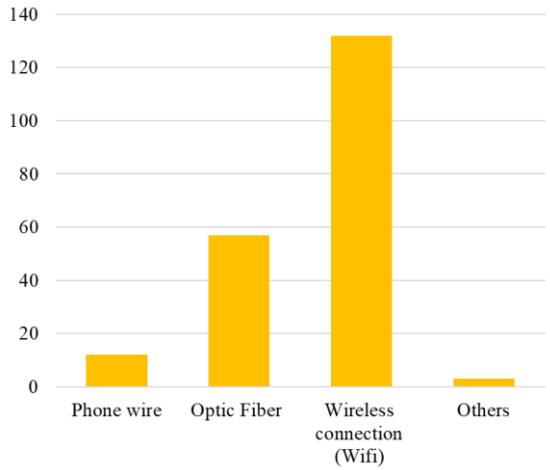
Since many schools offer online-style homeschooling in the Philippines, the survey also asked about the situation of internet access and connection. Since they live in the NCR, internet access and connection are much better than in other regions. 95% of them have a stable internet connection at home. Most of them have Wi-Fi, but around 10% use only phone wire internet connection. It means they might face difficulties if their children have to attend many online classes or other family members want to use the phone during the classes.

Figures 3: Internet Access and Connection

(a) Stable internet access at home



(b) Type of internet at home (unit: number of respondents)

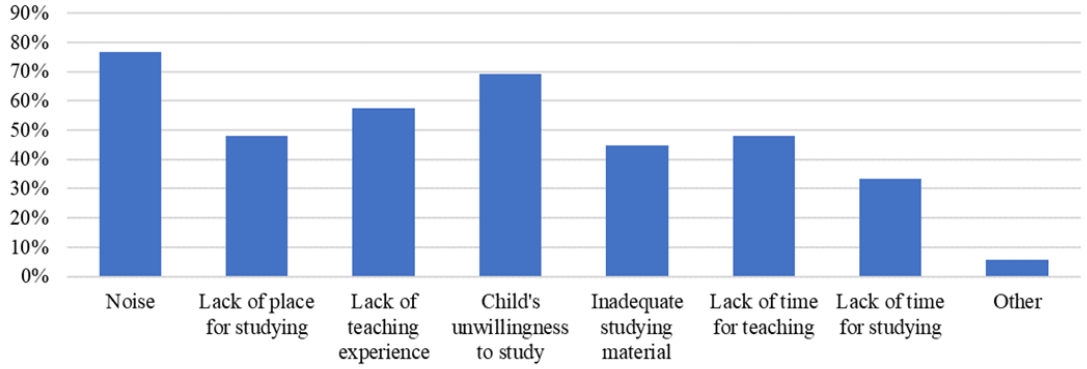


7. Findings

7.1 Challenges of homeschooling in Manila

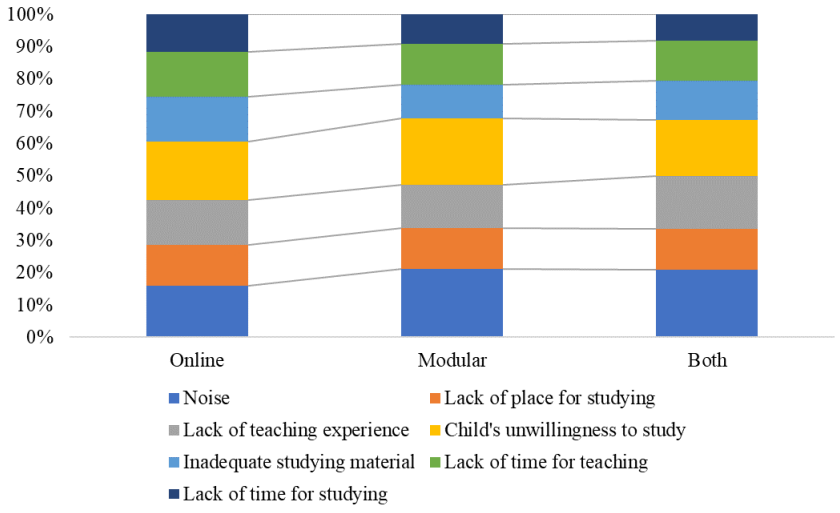
In the survey, parents were asked to answer the question: What are the challenges of home studying you have experienced? A list of possible challenges was provided, and the parents selected as many as applied to their experiences. As a result, it was found that most of the parents have faced several challenges regarding their children's homeschooling, which include financial issues, internet-related, material, time, teaching, difficulty concentrating, space, electricity, and others. The biggest challenge was noise, which was pointed out by almost 80% of the parents. More than half of them mentioned children's unwillingness to study and lack of teaching experience.

Figure 4: Challenges of Homeschooling



No significant differences were observed based on characteristics of children (age, gender, grade, number of siblings) or characteristics of parents (age, gender, job, and working hours). Nevertheless, the type of homeschooling may be affected differently. As Figure 6 shows, noise and children's unwillingness to study are higher in Modular compared with Online. This may indicate that online learning is more attractive for children than the modular type.

Figure 5: Challenges of Homeschooling by Type of Homeschooling



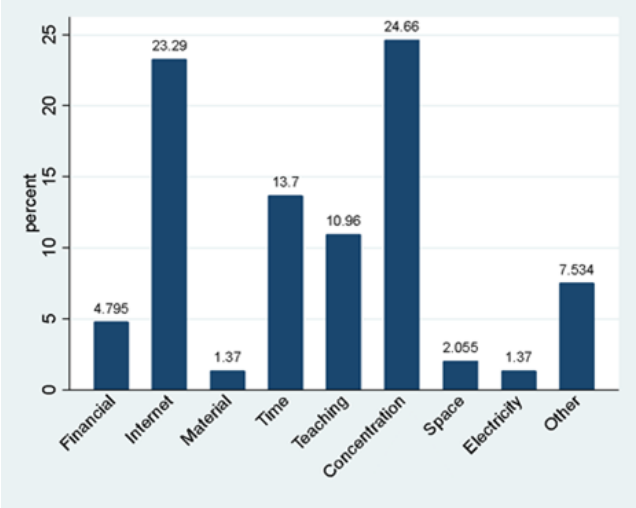
In addition to the multiple-choice question, the parents were also asked to write about the challenges as an open-ended question. For the question, about 25% of parents indicated that an unstable internet connection was one of the problems. One father mentioned that his daughter's study time was reduced during the pandemic because of internet connection problems. He worried that his daughter might not be able to go to the next grade because of the lack of knowledge. Although they live in NCR, which is the economic center of the Philippines, the internet condition is not good enough for attending many classes online.

Previous studies pointed out mothers and a fathers play different roles in their children's education. For example, Petts et al. (2020) said that child care issues fall in household activities, and it is not expected to be assumed mainly as a father's activities. The answers for the multiple-choice question led to the conclusion that regardless of the gender, the COVID-19 pandemic resulted in the same challenges. Both males and females face similar challenges for their children's homeschooling. However, the answers for the open-ended question show that males and females have slightly different perceptions toward these challenges. As the figures below show, the female respondents, mothers, wrote more about lack of time, difficulties in teaching, and children's concentration. On the other hand, the male respondents, fathers, mentioned more about the material challenges, such as lack of necessary hardware or internet connection.

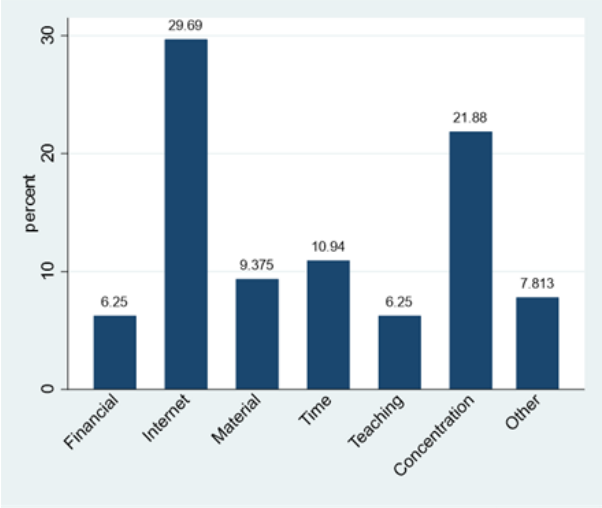
There was no marked difference in the challenges by their residence.

Figures 6: Challenges of Homeschooling by Gender

(a) Female respondents (Mothers)



(b) Male respondents (Fathers)

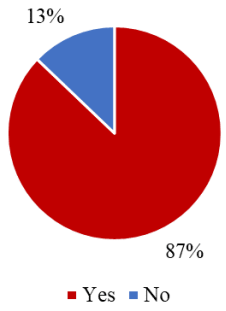


7.2 Necessary Support for Homeschooling

More than 85% of parents answered that they need support for homeschooling. 22% indicated they need financial support. They need support to solve internet connection problems and to purchase the hardware necessary to attend online classes. About 23% needed teaching support since they were worried about whether or not they could teach their children properly. Some parents expressed that they needed some form of mental support.

Figures 7: Support for Homeschooling

(a) Demand for support



(b) Type of support needed by parents

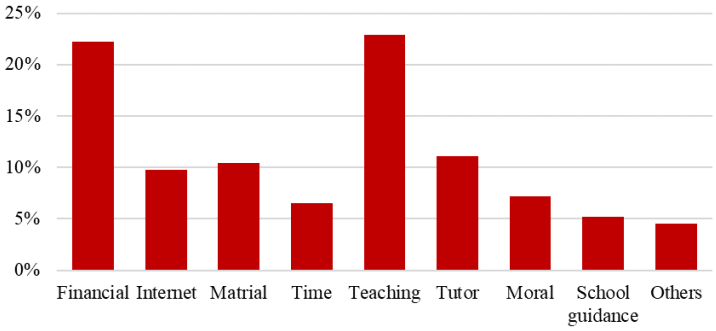


Figure 8 shows that fathers and mothers have different opinions about homeschooling support. Fathers tend to point out the technical aspects, such as financial, time, and teaching support. On the other hand, mothers tend to mention mental or moral support, in addition to the technical side. For instance, nearly 15% of mothers mentioned support for tutoring, while only 4.5% of fathers said so. The opinion toward necessary support seems to be related to the challenges they pointed out in the previous section.

In addition, as Figure 9 shows, most of the parents need support no matter where they live.

Figure 8: Support for Homeschooling by Gender

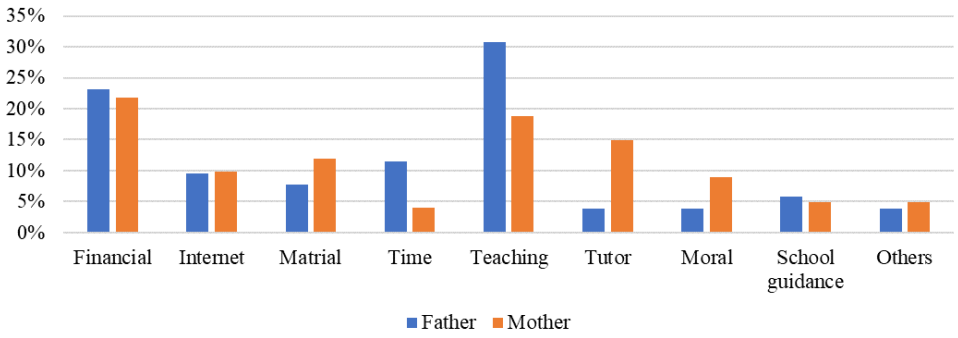
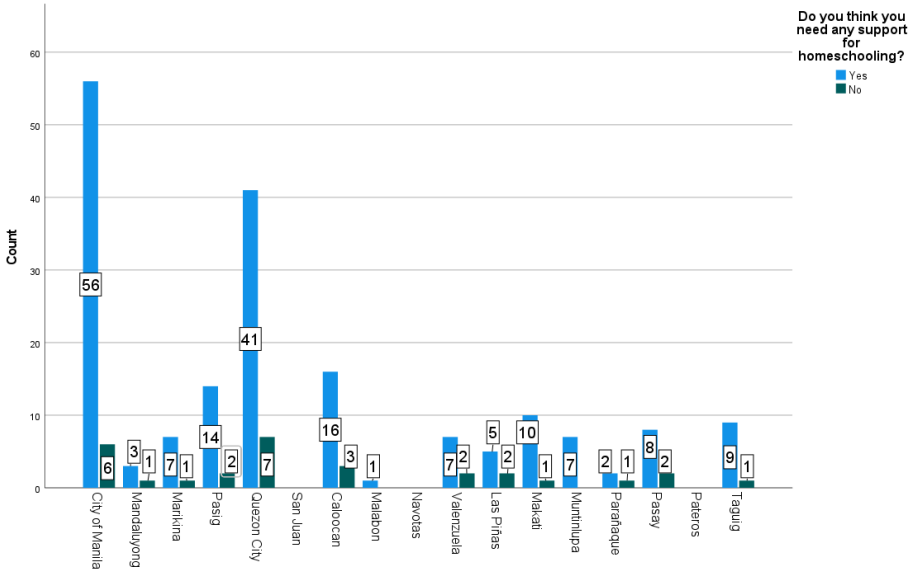


Figure 9: Support for Homeschooling by Residence



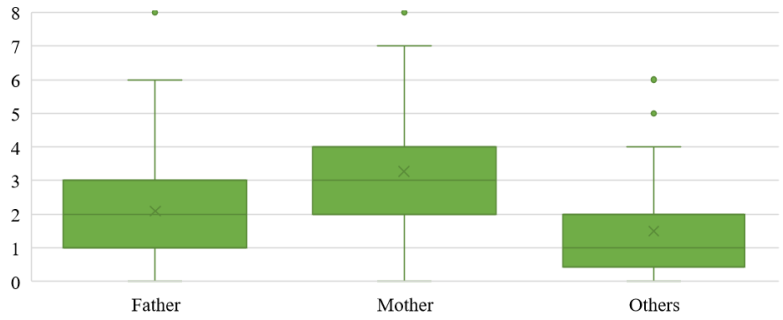
7.3 Assistance for Children

Over 95% of parents feel that their children need assistance for homeschooling. According to the parents, there are two types of assistance they provide to their children. The first one is teaching/helping them to answer printed worksheets. One of the parents said, "*I may like a teacher. I tell him what to do.*" As pointed out in the previous section, some parents feel the questions on the modules are hard. One said, "*They need assistance on answering the modules; there are lectures that appear confusing for grade 3.*" Another also mentioned that "*The question in the module is sometimes hard to understand and someone needed to clarify the question.*" However, as Figures 7 in the previous section show, many parents feel they need support for teaching. It means that they think that they cannot teach as well as teachers at schools.

The other assistance is setting up necessary gadgets for online classes. Since some students are not familiar with starting up the computer, connecting to Wi-Fi, or entering a password to see the school's website, parents have to do all of the preparation.

According to the parents, most of them always support their children's studies. There is an extensive range, from a few minutes to 10 hours per day. Some families have a strategy: "*mother supports from 10:00 AM to 2:00 PM, and father supports from 2:00 to 3:00 PM.*" Other family members, including cousins, siblings, uncles, aunts, and grandparents also spend their time helping children study. However, as Figure 11 shows, mothers tend to spend more time on their children's studies than other family members. It means mothers tend to have more burden of implementing homeschooling.

Figure 10: Time for Supporting Children's Study



7.4 Perception toward Homeschooling

Almost 80% of parents believe regular schooling before COVID-19 was better than homeschooling. Most of them mentioned that the students could focus more on studying in the classrooms with teachers. They also pointed out that children could have more experience at school by joining various activities with their friends. One of the parents answered, "*I think my child will discover a lot at school, and he will socialize more.*" It means that parents consider school a place to gain new knowledge and interact with others and develop social skills. However, there are still some parents who prefer homeschooling. One of them gave the reason as "*We have plenty of time together and can join his class and see how he behaves.*" As some previous studies pointed out, homeschooling might be good for parents who are willing to spend more time with their children.

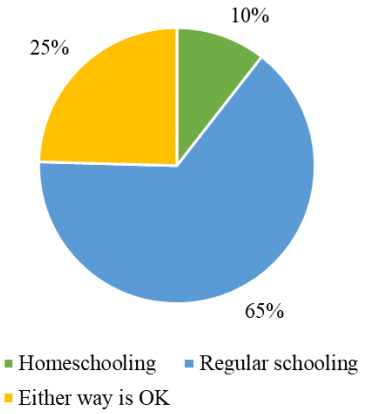
However, as Figures 11 shows, father and mother have different opinions. Fathers are less opposed to the

introduction of homeschooling, while mothers prefer regular schooling over homeschooling. The bias in the responses between males and females is apparent because mothers are more burdened than fathers about homeschooling.

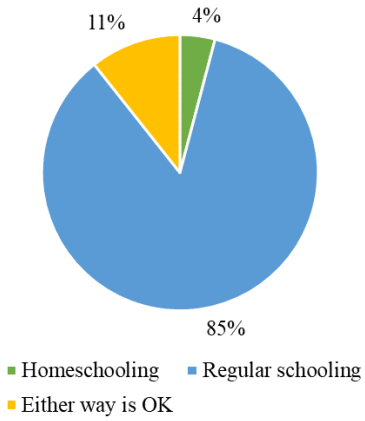
There was no correlation between their current living place and their preferences. No matter where they live, they answered that they preferred regular schooling as before the pandemic.

Figures 11: Parents Preference of Schooling Type

(a) Male respondents (Fathers)

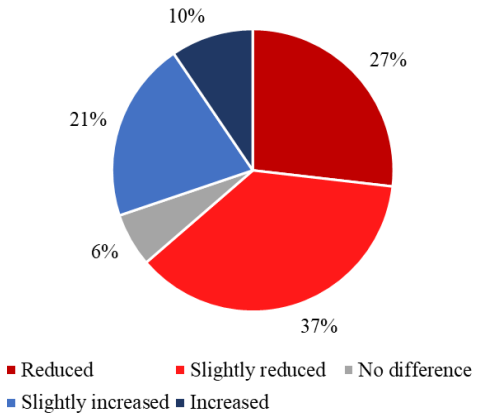


(b) Female respondents (Mothers)



One of the reasons for parents preferring regular school was study time. About 60% of parents feel children's study time decreased or slightly decreased during homeschooling (Figure 12). There was no difference based on the type of homeschooling, characteristics of children (like age, gender, grade, number of siblings), or characteristics of parents (age, gender, job, and working hours). The reasons can be divided into two. First, it was because the actual time of the lesson had been reduced. One of them said that "*From Monday to Friday, from 7 AM to 4 PM classes had been reduced to fewer days.*" Another parent also mentioned that "*before the pandemic, the school hours were about 6 hours. In the online class, it's only 3 hours.*" It shows the challenges for schools in securing enough study time for children during the COVID-19 pandemic.

Figure 12: Study Time compared to Regular Schooling



Moreover, according to the survey, some subjects such as arts, music, and physical education have been canceled in some schools. However, these are important for children's social and emotional development, especially for young children. The schools also have to consider how to provide these opportunities to children. The other reason for the reduced study time is that children cannot focus on studying while at home. Some parents are worried when they see their children watching TV, playing games, and playing at home during the daytime on weekdays.

Some parents answered that the study time had been increased. According to them, it was because they were watching children studying. Some of them said the contents of printed modules seem to be more difficult than regular schooling's contents, so it takes more time to understand. One of the parents gave a different answer. He said his children came to study more because they could advance as far as they liked.

8. Conclusion

The COVID-19 pandemic has impacted the lives of millions of people worldwide. From education to politics and even the status of the health system itself, there is no untouched area by the effects of the pandemic. In many developing countries, such as the Philippines, these effects have had a profound impact on the people, affecting their lifestyles, their ability to work, and the education of their children. The government of the Philippines, like many other countries, has implemented various measures to alleviate the situation with regard to the education of children in the lower primary grades. Most of them, however, were borne by parents who had to take on the role of educators of children who were physically unable to attend school.

The situation was no different in the National Capital Region (NCR), where parents pointed out various challenges they faced while spending time with their children through homeschooling. The majority of the respondents agreed with the need for support because of the many challenges they faced during this time. Noise, quality of teaching materials, lack of parents' teaching experience, and children's unwillingness to study were the main challenges during the homeschooling experience. It is not surprising, therefore, that "teaching" and "finances" were the two areas of support most desired by the respondents. When comparing the municipalities in NCR, there does not seem to be a marked difference. The need for help and difficulties in homeschooling, both online and in modular styles, were common in all municipalities. Of course, the type of support varied from case to case, but the responses were more uniform in this regard.

Finally, we must mention the difficulties that this study had. Because of the COVID-19 restrictions still in place at the time of data collection, it was not possible to obtain a more in-depth perspective from parents. There were several sections in the questionnaire where parents expressed their concerns and opinions, but this may not be enough to gain a deeper understanding of their overall experience. Further research is needed to better identify the regional differences in the NCR in the Philippines.

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Appendix: Survey Questions

Section I - Basic information

1. What is your gender?
   a. Man b. Woman c. Non-binary/third gender d. Prefer not to answer
2. What is your age?
3. Where were you born? (Please write your country of origin)
   a. In the Philippines b. Other (Please specify_____)
4. Where do you currently live?
   a. City of Manila b. Mandaluyong c. Marikina d. Pasig e. Quezon City f. San Juan
   g. Caloocan h. Malabon i. Navotas j. Valenzuela k. Las Piñas l. Makati m. Muntinlupa
   n. Parañaque o. Pasay p. Pateros q. Taguig
5. Which languages are you capable of speaking fluently? (Select all that apply)
   a. Filipino b. English c. Other (Please specify _____)
6. What is the highest degree or level of education that you have **completed**?
   a. Elementary b. Secondary (Before K-12) c. Lower Secondary: JHS (K-12)
   d. Senior Secondary: SHS(K-12) e. Bachelor's degree f. Master's degree g. Ph.D. degree
   h. Other (Please specify)
7. What is your current marital status?
   a. Single b. Married c. Widower/Widow d. Separated
   e. Other (Please specify_____)
8. What is your employment status?
   a. Full-time b. Part-time c. Freelancer d. Self-employed e. Retired f. Unemployed
9. Approximately how many hours do you work per week?
10. What is your job?
11. Approximately, what is your house's average monthly income (including everyone in your household)?
12. Do you receive financial support besides your salary (from government, NGOs, relatives, and so on.)?
    a. Yes (Please specify how much you received _____ PhP/Month) b. No
13. Do you have stable internet access or contract-based internet access (pre-paid) at your home?
    a. Yes b. No
14. What is the type of internet connection you have?
    a. Phone wire b. Optic Fiber c. Wireless connection (Wifi)
    d. None of the above (Please specify_____)
15. How many people live with you? Please write the number.
16. With whom do you live? (Select all that apply)
    a. Spouse/partner b. Child/children c. My parent(s) d. My spouse's/partner's parent(s)
    e. Others (Please specify_____)

17. How many children do you have? Please write the number.

18. Please tell us about your children.

18-1. Does your 1st child live with you?

a. Yes b. No (Go to the next child)

18-2. How old is your 1st child? Please write the number.

18-3. What is your 1st child's gender?

a. Male b. Female c. Non-binary/third gender d. Prefer not to answer

18-4. What is your 1st child's education status?

a. Not a student (Go to the next child) b. Kindergarten student (Go to the next child)

c. Elementary school student d. Lower secondary school (JHS) student (Go to the next child)

e. Senior secondary school (SHS) student (Go to the next child)

f. University or higher education student (Go to the next child)

g. Other (Please specify_____) (Go to the next child)

18-5. What type of elementary school does your 1st child attend?

a. Public school b. Private school c. Other (Please specify_____)

18-6. Which grade is your 1st child in? Please write the number.

Section II - Homeschooling experience

Please answer the following questions about your children attending **elementary school.**

19. Do your children going to elementary school have any experience of homeschooling?

a. Yes b. No

20. What kind of homeschooling system do your children receive?

a. Online classes b. Printed worksheet c. Both printed worksheets and online classes

d. Other (please, specify_____).

21. How many times per month do you communicate with the school?

22. How do you communicate with the school?

a. Visit the school b. Talk to teacher on phone c. Send text messages

d. Other (Please specify_____)

(Worksheets only)

23. Do you receive any assistance from the school on how to use the worksheet?

a. Yes b. No

24. What assistance do you receive from school?

a. Printed guideline of how to use the worksheet

b. Lecture/Seminar about how to use the worksheet

c. Individual consultation to ask how to use the worksheet

d. Other (Please specify_____)

25. How frequently do you receive the worksheets from the school?
26. How do you receive the worksheets from the school?
    a. I go to the school to receive the worksheets
    b. My children go to the school to receive the worksheets
    c. My family members go to the school to receive the worksheets
    d. The school send the worksheets by email
    e. Other (Please specify_____)

(Online classes only)

27. Are the online classes recorded or live?
    a. Recorded (videos) b. Live (online meeting)
28. Which software do your children use for online classes? (Select all that apply)
    a. Zoom b. Microsoft Teams c. Facebook d. WhatsApp e. Youtube
    f. Google classroom g. Google meet h. Other (Please indicate_____)
29. Which equipment do your children use for online classes? (Select all that apply).
    a. Smartphone b. Tablet c. Laptop d. PC e. TV
    f. Other (Please, specify_____)

(For everyone)

30. Do the children need any assistance with homeschooling?
    a. Yes b. No
31. Please tell us what assistance they need?
32. Please select all the subjects your children had been learning ***before*** the COVID-19 pandemic.
    a. Language (Filipino) b. Language (English) c. Language (Other languages)
    d. Natural Sciences e. Mathematics f. Social Sciences g. Music h. Arts
    i. Physical Education j. Others (please specify_____)
33. Please select all the subjects your children learn/ have been learning ***under*** the COVID-19 pandemic.
    a. Language (Filipino) b. Language (English) c. Language (Other languages)
    d. Natural Sciences e. Mathematics f. Social Sciences g. Music h. Arts
    i. Physical Education j. Others (please specify_____)
34. How many days do your children have lessons per week ***before*** the COVID 19 pandemic?
    a. 1 to 2 days per week b. 3 to 4 days per week c. 5 or more days per week.
35. How many days do your children study per week ***during*** the COVID 19 pandemic (including homeschooling)?
    a. 1 to 2 days per week b. 3 to 4 days per week c. 5 or more days per week.

36. Compared with the time before COVID-19, what do you think about the study time of your children? (Likert scale)
37. Please tell us why do you feel like Q36.
38. How often do your family members support your children's homeschooling? (Likert scale)
    You Your spouse/partner Elder children Others (Please specify_____)
39. How many minutes a day, on average, **do you** spend on your children's studies?
40. How many minutes a day, on average, **do your partner or spouse** spend on your children's studies?
41. How many minutes a day, on average, **do people other than you or your partner/spouse** spend on your children's studies?
42. Do you believe your child will be able to go to the next grade in School Year (SY) 2022?
    a. Yes (Go to Q44) b. No (Go to Q43)
43. Please tell us why you think your child will not be able to go to the next grade?
44. What are the challenges/obstacles of home studying? (Select all applicable)
    a. Noise b. Lack of place for studying (study room) c. Lack of teaching experience
    d. Child's unwillingness to study e. Inadequate studying material f. Lack of time for teaching
    g. Lack of time for studying h. Other (Please, specify_____)
45. Comparing to the regular schooling before COVID19, how do you think about homeschooling?
    a. I prefer homeschooling b. I prefer normal schooling as before COVID-19
    c. Either way is OK for us d. Other (Please specify_____)
46. Please let us know the reason for your answer to Q45.
47. If you had to choose, which homeschooling mode for your children would you prefer?
    a. Printed worksheet b. Online classes c. Combination of Printed worksheet and online classes
    d. Other (Please specify_____)
48. Please justify your answer for Q47.

Section III - Homeschooling perceptions.

49. Please, answer honestly the questions provided by selecting a proper grading from 1 to 5 (Likert scale).

- It has been difficult to teach my children at home.
- The quality of education of my child has changed for the better after the COVID-19 pandemic commencement?
- The performance of my child at studying has improved during the COVID-19 pandemic.
- My current teaching abilities are more than enough to teach my children at home.
- I think my children are learning what they need to learn.
- COVID-19 has impacted my children's education in a negative way.
- COVID-19 has had a bigger effect on public schools rather than private schools.

Section IV

50. What other problems do you have with homeschooling besides those mentioned above?
51. Do you think you need any support for homeschooling?

    a. Yes (Go to Question 51) b. No (End of the questionnaire)

52. Please explain what kind of support you need.

Working Group 2

Gender Inequality in Education Attainment in the Philippines: Does Return to Education Perception Matter?

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Abstract

Education is critical for a country's development and vital for poverty alleviation. When it comes to the case of the Philippines, there is a stagnant gender disparity in educational attainment, where men's educational attainment is lower than that of women despite men having higher returns to education than women. It poses a danger of failing to achieve equality in education attainment. This study, therefore, explores how to promote gender equality in educational attainment in the Philippines. It investigates the role of the perceived returns to education in explaining the gender disparity in educational attainment. We conducted regression analysis and Oaxaca decomposition on our primary data and made two main findings. Firstly, the regression analysis supports our hypothesis that a gender difference in anticipated returns may affect educational attainment. Our results are robust as adding control factors such as fathers' and mothers' education levels, location, age, and respondent's education level, the magnitude, and sign of gender coefficient remained almost constant. The findings reveal that only gender was a significant determinant in our sample's variations in anticipated returns to schooling. Secondly, the Oaxaca decomposition reveals that risk, father's education, willingness to share, and individual personality explain the gender gap in perceived returns to education.

Our results have several policy implications. Policymakers can improve men's education attainment by increasing risk-taking behavior among males by including subjects in the school curriculum that emphasize the importance of taking education as an investment. Life skills centered on transforming individual behavior such as giving to the needy, volunteering without expecting something in return would also reduce the motive of dropping out from school to get faster money. Most importantly, making information available to students in schools about possible opportunities in the future would motivate them to pursue further education hence achieving the goal of gender equality in educational attainment.

Key Words: Educational Attainment, Gender, Subjective Expectation, Philippines

1. Introduction

1.1 Background and Motivation

Education plays a vital role in developing a country, and it is a crucial instrument in poverty alleviation. Most importantly, it serves also as a tool to close the gap between the rich and the poor; hence it is considered a global concern (Walker J. et al. l. 2019, 5). The United Nations addressed the need for inclusive and equitable education through various actions and plans such as the Dakar Framework for Action on Education for All (2000). The Johannesburg Plan of Implementation (JPOI 2002) reaffirmed the Millennium Development Goal 2 (MDGs 2). It compromised to achieve universal and eliminate gender disparity in primary and secondary education at all levels by 2015. This commitment was then re-adopted by the UN General Assembly and included in the SDGs to be achieved by 2030 as a post-2015 agenda and urged countries to achieve this goal. One of the primary targets of this goal is to "eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations" (SDGs 4.5). Although countries or international organizations, including the UN or African Development Bank, are trying to achieve the desired outcome, statistics worldwide show that there is still a long way to this achievement. Promoting women's education has been one striking feature of education policies, mainly because women were lagging in different parts of the world, especially Africa, Asia, and the Middle East.

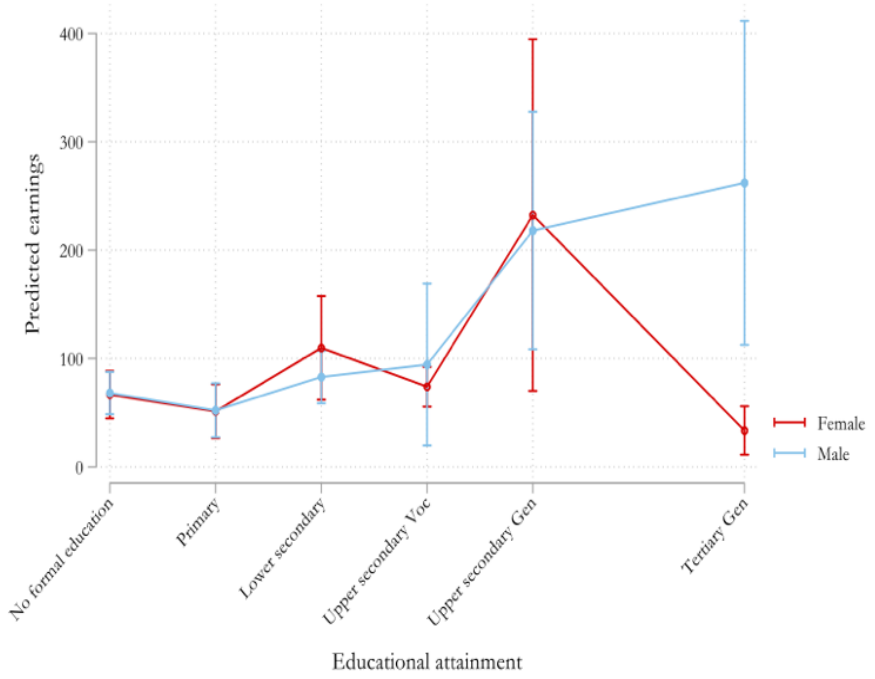
While the world strives to reach gender parity in education, the Philippines is one of the few countries that has overcome the gender gap in senior roles and professional and technical positions, changing the common trends of males ahead of women and achieving gender parity (Global Gender Report 2021). In fact, after World War II, the government had more educated males than females. A Medium-Term Philippine Development Plan 2004-2010 Report (2004) indicated that the participation rate of female pupils at the elementary level was slightly higher than that of the male pupils, 90.87 % and 89.26%, respectively. However, the female pupils' participation rate was far more than that of the male pupil at the secondary level, 62.35%, and 53.80%, respectively. The trend started reversing around the 1970s when women surpassed males in educational attainment (ibid).

The 2000 Global Gender Gap Report of the World Economic Forum indicated that school enrolment in primary education is almost equal for both boys and girls. However, the gap is larger at the higher education level in the Philippines (WEF 2020), where the ratio is approximately 1.32 women per 1 male in the tertiary education enrolment (ibid). This makes the Philippines rank 39th globally on educational gender disparity and 1st in secondary and tertiary education.

1.2 Statement of the Problem

Despite the impressive progress in women's educational attainment, recent evidence suggests that gender wage gaps remain persistent, especially at higher levels of education. Figure 1 shows estimates of the returns to schooling in the Philippines from the World Bank's STEP Skills Measurement 2016 data. It also shows that returns for men are higher than women for those who have a college degree.

Figure1: Actual returns to education by gender and degree, Philippines



Source: Authors' calculations, based on the World Bank STEP Skills Measurement Household Survey 2015-2016 data.

Note: This figure shows the returns to education estimated from the World Bank STEP data. The data was collected in 2016 in Urban Philippines, but women are underrepresented in Tertiary education. The figure shows that males' returns to education are higher in tertiary education.

Despite men having higher returns to education, their educational attainment is lower than that of women, as was discussed previously. They are behind women in terms of educational attainment. What is puzzling is why men invest less in education while their returns are high? From the STEP data, we understand that perception rather than wages influence people's choices in attaining education. This study, therefore, explored whether the perceived return to education is different between women and men in the Philippines. Jensen (2012) states that it is not actual wages that influence educational attainment, rather it is the perceived returns. For instance, a case study of the Dominican Republic found that the perceived returns by secondary school students are low despite high measured actual returns (ibid).

1.3 Research Objectives

This paper explores how to promote gender equality in educational attainment in the Philippines. It investigates the role of the perceived returns to education in explaining the gender disparity in educational attainment. Specifically, we ask the following questions:

- Is there a gender gap in the perceived returns to education?
- What factors explain the gender gap in the perceived returns to education?

2. Literature Review

2.1 Perceived Return to Education

Since the emergence of human capital theory in the 1950s, scholars turned to view education as a form of investment, where costs are viewed as a discounted stream of expected benefits, particularly in the form of wages (Jensen, 2012). In other words, investment in education turned out to be dealt with as a means to increase future productivity.

This shift in academic perspective attracted much attention from educational economists and produced many empirical studies (Ashenfelter & Krueger, 1994; Card & Krueger, 1992; Duflo, 2001; Oreopoulos, 2006). Mainly, they aimed to estimate the increased level of wages by multiple variables in the supply side, such as an additional year of schooling led by compulsory law, school quality, teachers' quality, school construction, and the like. The key finding of their research is that especially low-education subgroups affected by policy intervention can benefit from the higher marginal return to education, reflecting their high marginal cost of schooling (Card, 2001). Previous studies also suggest that returns are highest for primary education, the general curricula, the education of women, and countries with the lowest per capita income (Psacharopoulos, 1985). Another generally shared finding is that investment in the secondary academic curriculum is better in return than the vocational track because of the higher unit cost of vocational education (Psyacharopoulos, 1994). Also, those who work in the competitive private sector tend to get higher returns than those in the public sector (Psyacharopoulos, 1994).

However, once we move our scope and ask what defines youth's choice behavior in education, Jensen (2012) mentions that "typical students make their schooling decisions based on limited or imperfect information" (p.515). In other words, they are most likely to have less information that suggests their future return. Therefore, it is recognized that parents' or students' perceived return to education is a more plausible indicator that contributes to their schooling choices. While there is usually an antipathy among economists for collecting subjective data, there are a number of important studies. For instance, a case study of the Dominican Republic by Jensen (2012) found that the perceived returns by secondary school students are low despite high measured actual returns. He argued that their low perception of the return to education would result in an undersupply of skilled laborers that inhibit domestic development, which is why his suggestion includes the provision of information to them. Mcguigan et al. (2016) conducted a randomized controlled trial in secondary schools in London, where they implemented an information campaign with treated groups via a website. They found that the intervention strongly influenced their intention to pursue post-compulsory education. It is exceptionally robust for those more likely to drop out early from full-time education (i.e., students from lower-income backgrounds). Bleemer & Zafar (2018) also conducted randomized information experiments in the US. Their survey provided two independent pieces of information to the treated group: (1) college-educated workers' annual earnings relative to those who have not attended, and (2) the average annual net costs of public and private universities in the US. Their finding is that respondents, especially disadvantaged, are more reactive to the former information rather than cost beliefs. Those who received the information of future returns have increased attendance expectations. Supposedly, household heads may have underestimated the benefits and overestimated the net costs of obtaining a college degree.

These previous studies imply that providing information to marginalized groups is likely to significantly enhance their perceived return to education, which may, in turn, improve school attendance. This analytical scope can better fit with the context of developing countries where people might obtain less information due to multiple reasons, such as poverty and credit constraints, high discount rate, the disparity between urban and rural areas, or simply mismeasured returns (Attanasio, 2009; Jensen, 2012). Their situation that educational attainment is generally low despite the high level of measured returns also implies the importance of analyzing the perceived return to education rather than the actual return to education to understand their choice behavior better.

2.2 The Local Context in the Philippines

The Philippines is known for its uniqueness in an educational situation where women receive more schooling than men. Confronted with this rare situation, multiple previous studies have reported boy's lagging behind-situation in education. David et al. (2009) found through the average score of the National Achievement Test in the year 2006-2007 that girls outscored boys in every single subject, especially in English, Filipino, and the like. Since their dropout rates are also higher than that of women, they suggest that policymakers need to address the motivational challenge for boys in attending school and its underlying causes.

This disparity might be attributed to parental choice behavior linked to social conditions. Estudillo et al. (2001), for example, argued that in the recent generation, male children prefer to inherit land whereas female children are treated favorably to receive schooling investment. According to the authors, this is related to parents' assumption that rice farming is intensive in male labor to gain a higher return. In contrast, women tend to receive higher returns on their education. In a nutshell, parents might decide based on their children's comparative advantage, either in agricultural or non-agricultural occupation; since women have a comparative advantage in the non-agricultural sector, they are more likely to be enrolled in education. They also mention that this diversification of investment in children is a parent's strategy to be taken care of by them: an intergenerational support system (Estudillo et al., 2001).

This inheritance pattern equals the lifetime wealth level between sons and daughters. However, other studies imply that this pattern would be preserved across generations, which is undesirable for gender equality in education. Okabe (2015), for example, argued that maternal education level is associated with that of both her daughters and sons, while paternal education level is dominantly favorable to their sons. This result signifies boys would be stuck in a vicious cycle of low educational attainment.

Yamauchi & Tiongco (2013) explained the educational investment pattern from a different point of view. They found that women in the Philippines still suffer from the total penalty in wages relative to men, which is unrelated to their human capital in the labor market. Therefore, they argue that schooling investment in females is an optimal response to this labor market discrimination.

Some research tries to identify the factors that affect their educational choice behaviors, where females are likely to get more educational attainment than males. This study, mainly focusing on their perceived return to education, also contributes to this matter.

2.3 Policy Practice: K-12 Program

To equalize the disparity in educational attainment between men and women, the "K-12 Program" is adopted in primary education in the Philippines. The K-12 Program is a basic education program based on the Enhanced Basic Education Act of 2013. In addition to compulsory preschool education in kindergartens, a total of 12 years has been set as the basic education period, including six years of primary education, four years of secondary school, and two years of high school (DepEd, 2019). Until then, basic education in the Philippines was ten years, including six years of primary education and four years of secondary education.

Various factors led to the implementation of the K-12 program. The primary purpose is to cultivate information, media, and technology skills, learning and innovation skills, and communication skills, which are necessary for the 21st century through the implementation of this program (DepEd, 2019). In addition, the decline in basic academic ability in the Philippines has also become a significant problem. One of the reasons for this is that dropouts have occurred due to the crammed education of 10 years of basic education. Thus, the Philippines is currently reforming its basic education program.

In the Philippines, which is undergoing such reforms in basic education programs, the gender gap between boys and girls has not yet been closed. David (2009) suggested closing the gender gap in 2009, but he points out that the gap was not completely closed by 2018, nine years later (David, 2018). The cause of this gender gap is the existence of out-of-school children, and David argues that the lack of schooling by the child, the cost of education, and illness or disability are involved. Although the K-12 program is expected to solve these problems, no specific interventions were carried out to address the unique challenges faced by boys.

3. Data and Methodology

3.1 Data

This study combines the World Bank STEP Skills Measurement Household Survey 2015-2016 data and primary data collected online using Qualtrics, an online survey tool, to collect primary data in the Philippines. The World Bank's STEP Skills Measurement Program is the first-ever initiative to measure skills in low and middle-income countries. It gathers data that enables policymakers to have a better understanding of skill requirements in the labor market, backward linkages between skills acquisition and educational achievement, personality, and social background, and forward linkages between skills investment and living standards, reductions in inequality and poverty, social inclusion, and economic growth.

We conducted online field-data collection using Qualtrics, a state-of-the-art online tool that enables researchers to efficiently and reliably collect online data. Fields data remains one of the most direct and effective means of gathering critical information about people's actual situations. The questionnaire had three sections: individual characteristics, time preference, and locus of control. This study took place in September 2021 and included 233 participants from rural and urban Philippines. See appendix A for the full version of our questionnaire.

3.2 Sampling

Participants were selected through a randomized sampling method. Due to the study being conducted during the COVID-19 pandemic, it could only be implemented online. Only those aged 18-25 were allowed to participate in the survey to improve accuracy due to the nature of the questions. Most of the questions required logical thinking, which would challenge other age groups. Since age was a critical variable, the questionnaire included two age filter questions. The first one was a YES/NO question that required the participant to indicate if they belonged to the 18-25 age group. The second question asked participants to input the actual age. This helped us identify inconsistent respondents who were later removed, remaining with 198 valid responses.

3.3 Variables

We constructed the expected returns to education by combining information from our survey and the World Bank STEP-data in 2015 in the Philippines. The STEP data collected actual earnings segregated by level of education. Two questions were asked to quantify expected returns to education: respondent's expected returns and other people's expected returns to education, assuming they completed the next level of education. This study, however, used data from the question on expected returns to education for others instead of their expected returns to education. As confirmed by Jensen (2010), own expected returns suffer a problem of optimism bias, a mistaken belief that fewer chances of experiencing an adverse event are lower than that of one's peers.

The next step was to standardize the variable by subtracting actual returns (obtained in STEP data 2015) from expected returns to education collected from the survey, as shown in Equation 1. The rationale for standardizing the variable was to reduce the differences in expected returns and actual returns to education.

$$\text{ExpectedReturn}'i = \frac{Xi - \text{mean(RealWage)}}{\text{mean(RealWage)}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Where Xi is the expected return from primary data, and mean (RealWage) is an average real return from STEP data.

Figure 2 is skewed to the right showing that many respondents had lower expected returns than actual earnings. We used the density graph shown in Figure 2 to identify the group with lower expected earnings. The graph for males is to the right and above the graph for women when we move towards the left, showing that most males had lower expected returns.

Figure 2: Expected Returns to Education (others)

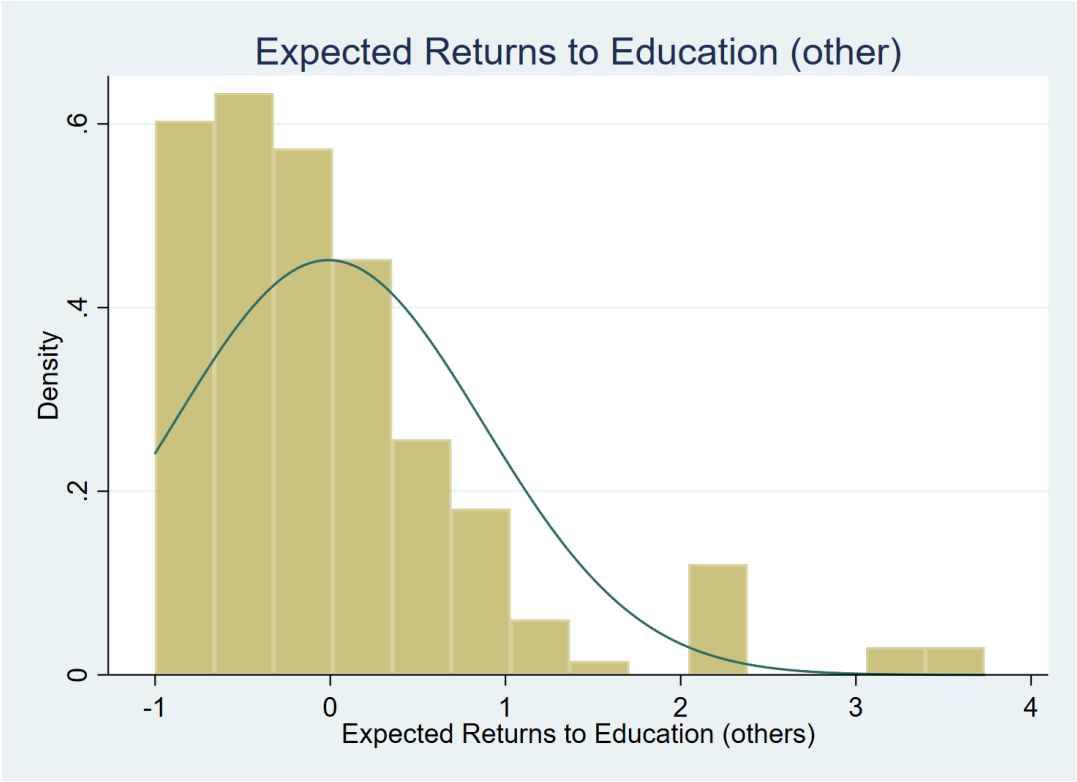
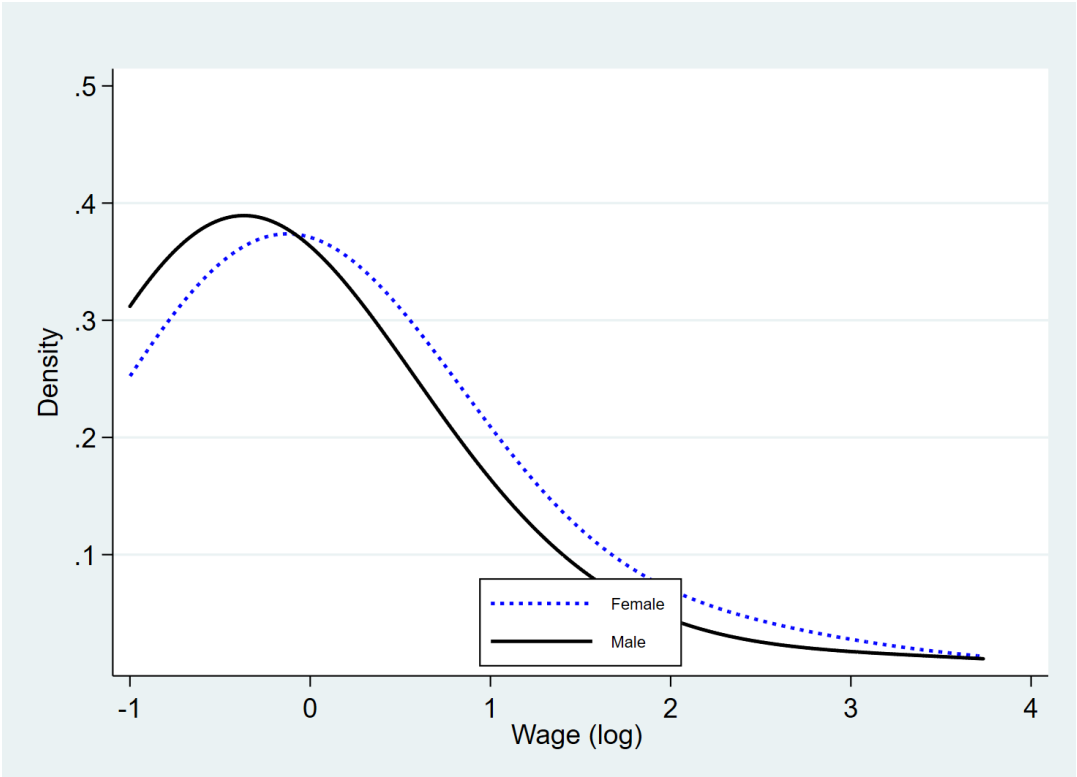


Figure 3: Expected Returns to Education of Male and Female (others)

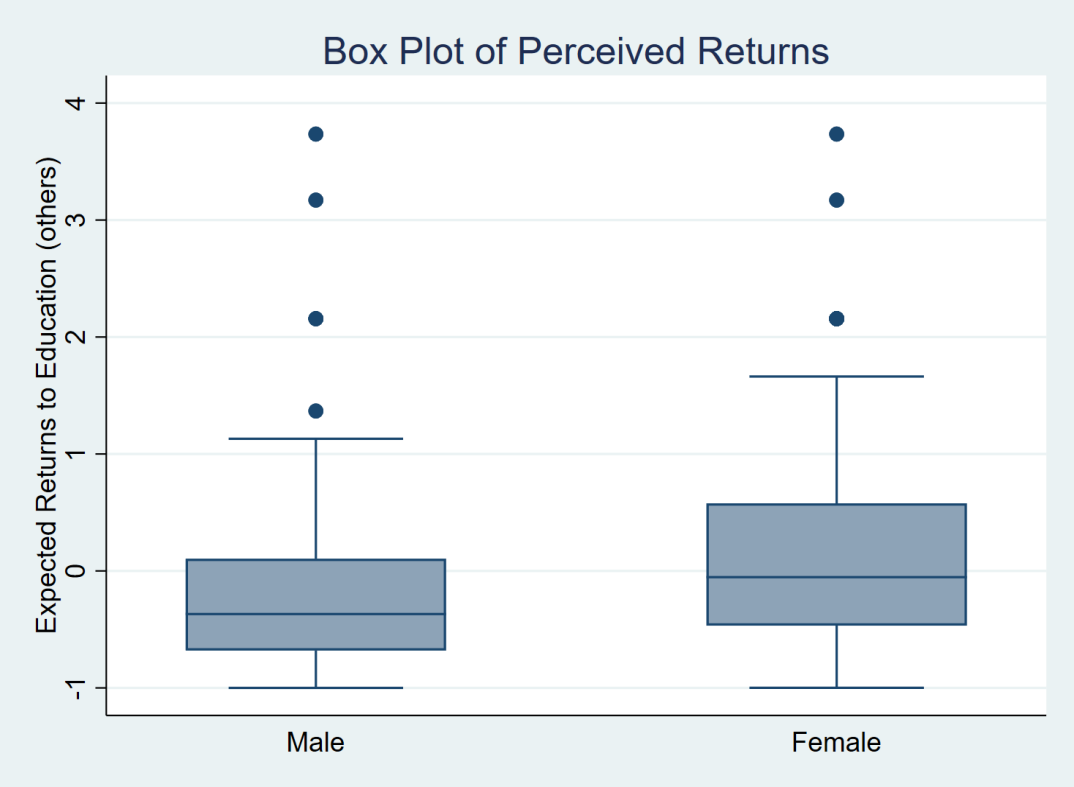


We also collected other important variables, including risk, discount, willingness to share, donation, and individual personality. The risk variable is generated by asking, "Imagine that you have a choice between the following two options: Option 1 – Receive 1,000 pesos for sure. OR Option 2 – Flip a coin and receive 0 if it's tailor 3,000 pesos if it's head. Which option would you take?" The discount variable is based on a question such as "Now I am going to propose to you two different options. Imagine that you have a choice between the following two options: Option 1 – Receive 10,000 pesos today. OR Option 2 – receive 15,000 pesos for sure one year from now. Which option would you take?" The variable, willingness to share, means "How would you assess your willingness to share with others without expecting anything in return." The donation came from the question of "Imagine the following situation: Today you unexpectedly received 10000 pesos. How much of this amount would you donate to charity?" The question of "How well explains the variable of individual personality does the following statement describe you as a person?" I do not understand why people spend a lifetime fighting for a cause that is not beneficial to them (On a scale from 0 to 10). – Scale."

3.4 Descriptive Analysis

Table A.1 shows descriptive statistics for our sample, disaggregated by gender (See Appendix B). In our data, perceived returns to education by women were higher than for men, as shown in Figure 4 below. This indicates why women pursue further education than men in the Philippines.

Figure 4: Box Plot of Perceived Returns



3.5 Methods

Our study has two research objectives. The first objective was to investigate a gender gap in perceived returns to education. We achieved this objective by using the Ordinary Least of Squares (OLS) method to estimate the gender gap in perceived returns to education. The study employs a Mincerian wage estimation equation, relating wage to schooling level, work experience, and other demographic factors (Biltagy 2014). However, as Jensen (2010) suggested, perceived returns influence schooling decisions, not actual returns obtained from earnings data. Therefore, we used perceived returns in our equation instead of actual wages. Independent variables included in the gender gap estimation regression include gender, age, schooling level (for both respondent and parents), and location.

$$\text{ExpectedReturn}i = \alpha + \beta\text{female}i + \gamma X'i + \varepsilon \quad \ldots\ldots (2)$$

Where female is a dummy variable for gender, X'i is a vector of individual characteristics, and ε is the error term.

The second objective was to examine factors that explain the gender gap in the perceived returns to education. We use the Oaxaca Decomposition to investigate factors leading to the gender gap in the perception of returning to education.

4. Results and Discussion

4.1 Regression Results

Table A.2 shows a regression test on the perceived monthly earnings of males aged 30 to 40. We find that the dummy variable of gender is significant at a 5% confidence level through regression analysis, with females having higher expected returns than males. The results confirm our hypothesis that a gender gap in expected returns may influence educational attainment; The coefficient is 0.25 higher for females than males. Adding the control variables, namely fathers' education, mothers' education, age, location, and respondents' education level, the results do not change, and gender remains significant. This shows that our results were robust. Secondary and bachelor's degrees have negative and significant coefficients because attending further education reduces expected returns. People tend to be more realistic with how much they wish to receive at each level of education. Perceived returns to education also slightly increased with age.

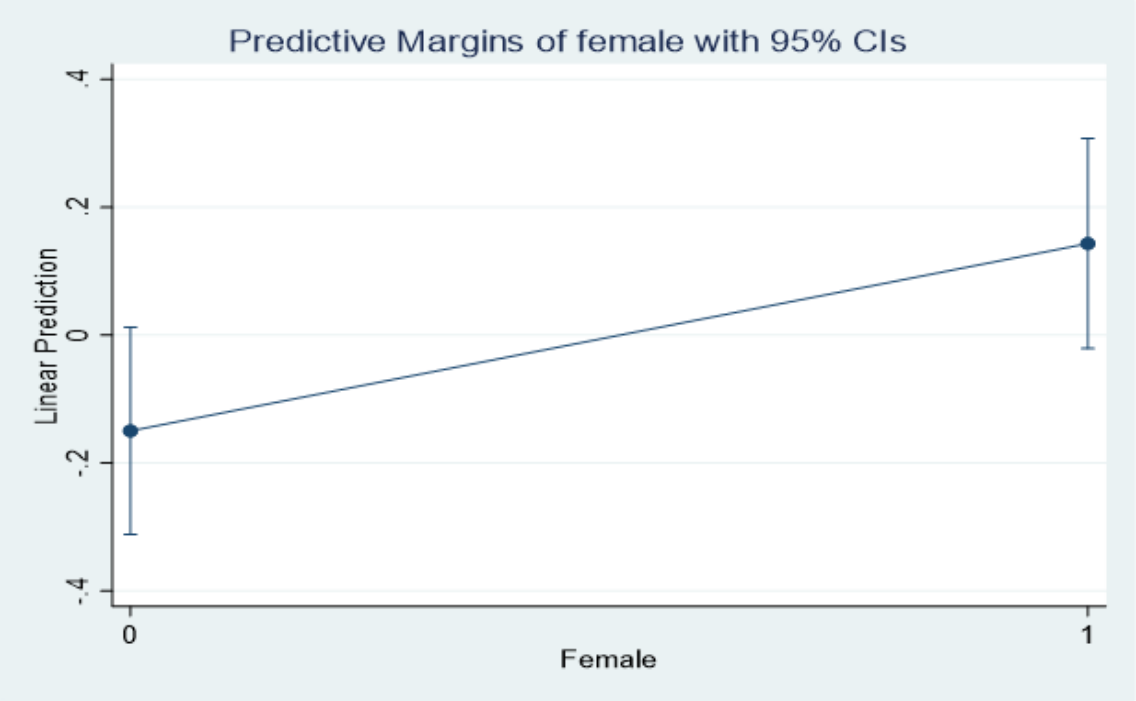
Table A.2: Regression Result

Dependent variable: Perceived Return to Education

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Female	0.25**	0.29**	0.25**	0.25**	0.26**	0.25**
	(0.13)	(0.12)	(0.12)	(0.13)	(0.13)	(0.13)
Secondary		-1.52***				
		(0.42)				
bachelor's degree		-0.96**				
		(0.42)				
Age			0.06**			
			(0.03)			
location				0.12		
				(0.13)		
fa_educ_secondary					0.21	
					(0.18)	
fa_educ_bachelor's					0.21	
					(0.19)	
fa_educ_postgrad					0.34	
					(0.32)	
mo_educ_secondary						-0.10
						(0.20)
mo_educ_bachelor's						0.19
						(0.20)
mo_educ_postgrad						-0.15
						(0.34)
Constant	-0.14	1.06**	-1.45**	-0.33	-0.33*	-0.16
	(0.09)	(0.41)	(0.62)	(0.21)	(0.17)	(0.18)
Observations	196	196	196	196	196	196
R-squared	0.02	0.16	0.04	0.02	0.03	0.04
Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1						

The margins plot in the figure provides a visual illustration of the gender gap in expected returns to education.

Figure 5: Gender Gap in Expected Returns to Education



4.2 Oaxaca Decomposition

The OLS regression helped confirm the gender gap in perceived returns to education. However, the methodology could not explain factors influencing the gender gap in perceived returns to education. Therefore, the study uses Blinder-Oaxaca (B-0) Decomposition to identify factors influencing the gap. As Rahimi & Hashemi Nazari (2021) argued, the B-O methodology can show how much of the difference in mean outcome between two groups is due to group differences in the levels of observed characteristics and how much is due to discrimination; in this study, unknown associated factors. By identifying factors influencing the gender gap in perceived earnings, policymakers can intervene, especially on modifiable factors identified in the study.

Table A.3 is the result of Oaxaca decomposition on expected returns to education to identify the factors affecting the gender gap (See Appendix B). The variable, employment, stands for employment status. Table A.3 shows that all the variables are statistically insignificant. The result was insignificant, probably because the sample size was too small. Hence, we use the magnitude of coefficients to identify variables explaining the gender gap perceived returns. The coefficients associated with the following variables have a high magnitude: risk at -0.0364, father's education at -0.0100, willingness to share at -0.0699, donation at -0.0055, beneficial at -0.0293.

The result indicates that the risk, father's education, willingness to share, donation, and individual personality cause a gender gap of expected returns to education. Females in our sample can be considered as risk-takers. Hence, they chose to forgo receiving money, hoping that they would earn more in the future. Such risky behavior influences them to pursue higher education, hoping to make more in the future. They were also

more willing to share with others without expecting anything in return, ready to donate. They had a positive personality by understanding people's actions of helping others without any expectation. These results indicate that women are more eager to spend money on uncertain things that might be valuable in the future. In other words, these factors suggest that women consider education as an investment more than their male counterparts, which explains why they pursue further education.

5. Conclusion and Policy Implication

This paper presents the research findings on gender discrepancy in educational achievement in the Philippines. It examines a gender gap in the perceived educational returns and whether they may account for gender disparities in educational attainment. We created a measure of expected returns to education by combining information from our survey and the STEP World Bank data in 2015 in the Philippines.

The regression analysis findings support our hypothesis that a gender difference in anticipated returns may affect educational attainment. All control factors, including fathers' and mothers' education levels, location, age, and respondent's education level, were negligible. The findings reveal that only gender was a significant determinant in our sample's variations in anticipated returns to schooling. The Oaxaca decomposition reveals that risk, father's education, willingness to share, and individual personality contribute to the gender disparity in expected returns to education.

The results gained above should prove informative to policymakers. One way to improve males' education attainment would be to increase risk-taking behavior among males by including subjects in the school curriculum that emphasize taking education as an investment. Life skills centered on transforming individual behavior such as giving to the needy, volunteering without expecting something in return would also reduce the motive of dropping out from school to get faster money. Most importantly, making information available to students in schools about possible opportunities in the future would motivate them to pursue further education hence, achieving the goal of gender equality in educational attainment.

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Appendix A: Survey Questionnaire

Section I – Individual and household characteristics

Q1 What is your age?

Q2 How many are you in your household? (people eating from the same pot)

Q3 What is the highest degree or level of education that you have completed?

- Primary education
- Secondary education
- Bachelor's degree
- Master's degree
- Ph.D. degree

Q4 How can you describe the location of the school you obtained your highest degree or level of education?

- Urban
- Rural

Q5 What is the highest degree or level of education of your father?

- No Schooling
- Primary education
- Secondary education
- Bachelor's degree
- Master's degree
- Ph.D. degree

Q6 What is the highest degree or level of education of your mother?

- No schooling
- Primary education
- Secondary education
- Bachelor's degree
- Master's degree
- Ph.D. degree

Q7 What is your current marital status?

- Single
- Married
- Divorced
- Widow
- Separated

Q8 What is your employment status?

- Full-time job
- Part-time job
- Freelancer (Self-employed)
- Unemployed but looking for job
- Student

Q9 What is the usual task of this job? (For example: typing, keeping account books, filing, selling cars, operating printing press, laying bricks) Please specify.

Q10 Does your work require the use of the following tasks and competencies? Answer for each (Yes or No).

- ○ Advanced functions in spreadsheets such as macros and complex equations
- ○ Book-keeping, accounting or financial software
- ○ Presentation, graphics software
- ○ Designing websites
- ○ Statistical analysis or other analysis
- ○ Software programming
- ○ Managing computer networks

Q11 Approximately how many hours do you work per week?

Q12 Approximately, which is the most close number to your household's TOTAL average monthly income (including everyone in your household)?

Section II: Availability of Jobs and benefits of schooling

Q13 How easy is it to get employed after finishing primary school

- ○ Very easy
- ○ Easy
- ○ Difficult
- ○ Very difficult

Q14 How easy is it to get employed after finishing secondary school

- ○ Very easy
- ○ Easy
- ○ Difficult
- ○ Very difficult

Q15 How easy is it to get employed after finishing high school (First Degree, Master or Ph.D.)

- ○ Very easy
- ○ Easy
- ○ Difficult
- ○ Very difficult

Q16 Do you think that a person has a better or worse chance of getting a job if he/she stays in education up to age 18 compared to leaving school after Year 11? Would you say it is: much worse; worse; same; better; much better.

- ○ Much worse
- ○ Worse
- ○ Same
- ○ Better
- ○ Much better

Q17 Do you think that a person has a better or worse chance of getting a job if he/she goes to university compared to leaving education at age 18? Would you say it is: much worse; worse; same; better; much better.

- ○ Much worse
- ○ Worse
- ○ Same
- ○ Better
- ○ Much better

Q18 If I get a higher degree, I will earn about the same no matter what subject I study: strongly agree; agree; disagree; strongly disagree; don't know.

- ○ Strongly disagree
- ○ Disagree
- ○ Agree
- ○ Strongly agree

Q19 If I get a higher degree, I will earn about the same no matter what university I go to: strongly agree; agree; disagree; strongly disagree; don't know.

- ○ Strongly disagree
- ○ Disagree
- ○ Agree
- ○ Strongly agree

Q20 Suppose, hypothetically, you were to complete the next degree after Q3's answer, and then stop attending school. Think about the kinds of jobs you might be offered and that you might accept. How much pesos do you think you will earn in a month when you are about 30 to 40 years old?

Q21 Now, we would like you to think about adult men who are about 30 to 40 years old and who have completed only the next degree after Q3's answer. Think of anyone in the above age category throughout the country (not just those you know personally). On average, how much pesos do you think they earn in a month?

Section III – Time Preference Game

Q22 Imagine that you have a choice between the following two options:

Option 1 – Receive 1,000 pesos for sure. OR

Option 2 – Flip a coin and receive 0 if it's tail or 3,000 pesos if it's head. Which option would you take?

- ○ Option 1 (TAKE THE SURE MONEY)
- ○ Option 2 (FLIP THE COIN)

Q23 Now imagine that you have a choice between the following two options:

Option 1 – Receive 1,000 pesos for sure. OR

Option 2 – Flip a coin and receive 0 if it's tail or 4,000 pesos if it's head. Which option would you take?

- ○ Option 1 (TAKE THE SURE MONEY)
- ○ Option 2 (FLIP THE COIN)

Q24 Now imagine that you have a choice between the following two options:

Option 1 – Receive 1,000 pesos for sure. OR

Option 2 – Flip a coin and receive 0 if it's tail or 2,000 pesos if it's head. Which option would you take?

- Option 1 (TAKE THE SURE MONEY)
- Option 2 (FLIP THE COIN)

Q25 Now I am going to propose to you two different options. Imagine that you have a choice between the following two options:

Option 1 – Receive 10,000 pesos today. OR

Option 2 – receive 15,000 pesos for sure one year from now. Which option would you take?

- Option 1 (TAKE THE MONEY TODAY)
- Option 2 (MONEY IN 1 YEAR)

Q26 Now imagine that you have a choice between the following two options:

Option 1 – Receive 10,000 pesos today. OR

Option 2 – receive 20,000 pesos for sure one year from now. Which option would you take?

- Option 1 (TAKE THE MONEY TODAY)
- Option 2 (MONEY IN 1 YEAR)

Q27 Now I am going to propose to you two different options. Imagine that you have a choice between the following two options:

Option 1 – Receive 10,000 pesos today. OR

Option 2 – receive 12,000 pesos for sure one year from now. Which option would you take?

- Option 1 (TAKE THE MONEY TODAY)
- Option 2 (MONEY IN 1 YEAR)

Section IV: Social preference

Q28 For each of the following statements, indicate the extent to which you agree or disagree by writing in the appropriate number; 4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree.

- When I make plans, I am almost certain/guaranteed/sure to make them work
- I am usually able to protect my personal interests
- When I get what I want, it's usually because I worked hard for it
- My life is determined by my own actions
- I feel like what happens in my life is mostly determined by powerful people
- My life is chiefly controlled by other powerful people
- People like myself have very little chance of protecting our personal interests when they conflict with those of more powerful people
- Getting what I want requires making those people above me (people with higher status) happy with me
- In order to have my plans work, I make sure that they fit in with the desires of people who have power over me
- To a great extent my life is controlled by accidental/chance happenings

- Often there is no chance of protecting my personal interests from bad luck happenings
- When I get what I want, it's usually/mostly because I'm lucky
- My experience in my life has been that what is going to happen will happen
- It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune
- Going to university would mean waiting too long before I could earn a full-time wage

Q33 How would you assess your willingness to share with others without expecting anything in return, for example your willingness to give to charity? (On a scale from 0 to 10).

Q34 Imagine the following situation: Today you unexpectedly received 10000 pesos. How much of this amount would you donate to charity?

Q35 How well does the following statement describe you as a person? "I do not understand why people spend a lifetime fighting for a cause that is not beneficial to them." (On a scale from 0 to 10).

Q36 Imagine a 10-step stairs where on the bottom, the FIRST step, stand the low income people, and on the highest step, the TENTH, stand the high income people. On which step do you think your household was when you were 15 years old?

Q37 Before you reached the age of 15, did you ever work outside the home, for money or in-kind?

- Yes
- No

Appendix B: Results

Table A.1: Variable Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ereturn2	196	-0.0104952	0.8833245	-1	3.734848
edulevel	196	2.464286	0.5394679	1	3
age	196	21.67347	2.194518	18	25
risk	196	1.933673	1.202855	1	4
discount	196	1.780612	1.158173	1	4
father's edu	196	4.056122	2.244518	1	6
mother's edu	196	3.785714	2.334798	1	6
employment	196	3.464286	1.216869	1	5
willingness to share	196	7.714286	2.186204	1	10
donation	196	3682.112	2760.512	0	10000
individual personality	196	5.433673	2.790219	0	10
income level	196	4.535714	2.312452	0	10

Table A.3: Oaxaca Decomposition

ereturn2	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
Overall						
group_1	-0.1398802	0.0931611	-1.5	0.133	-0.3224726	0.0427121
group_2	0.1087419	0.0929051	1.17	0.242	-0.0733486	0.2908325
difference	-0.2486222	0.1315687	-1.89	0.059	-0.5064922	0.0092478
explained	-0.1522313	0.0741634	-2.05	0.04	-0.2975889	-0.0068737
unexplained	-0.0963909	0.1402585	-0.69	0.492	-0.3712925	0.1785108
explained						
edulevel	-0.0028685	0.0171153	-0.17	0.867	-0.0364139	0.0306769
age	-0.0003918	0.0037327	-0.1	0.916	-0.0077077	0.0069241
risk	-0.0364321	0.0383679	-0.95	0.342	-0.1116318	0.0387677
discount	0.0011027	0.0069668	0.16	0.874	-0.0125519	0.0147574
father's edu	-0.0100156	0.0193441	-0.52	0.605	-0.0479293	0.0278982
mother's edu	0.0015509	0.009756	0.16	0.874	-0.0175705	0.0206723
employment	0.0006088	0.0048269	0.13	0.9	-0.0088516	0.0100693
willingness to share	-0.0699071	0.0446557	-1.57	0.117	-0.1574307	0.0176165
donation	-0.0055477	0.0182555	-0.3	0.761	-0.0413278	0.0302323
individual personality	-0.0292843	0.0357037	-0.82	0.412	-0.0992624	0.0406937
income level	-0.0010467	0.0124296	-0.08	0.933	-0.0254082	0.0233148
unexplained						
edulevel	-0.208906	0.6912545	-0.3	0.762	-1.56374	1.145928
age	-0.6839211	1.43733	-0.48	0.634	-3.501035	2.133193
risk	0.4820285	0.23462	2.05	0.04	0.0221816	0.9418753
discount	0.3123556	0.21499	1.45	0.146	-0.1090171	0.7337284
father's edu	-0.0103303	0.2821444	-0.04	0.971	-0.5633232	0.5426625
mother's edu	0.3183818	0.2396196	1.33	0.184	-0.151264	0.7880277
employment	0.1015642	0.3874874	0.26	0.793	-0.6578972	0.8610257
willingness to share	0.4841584	0.5046667	0.96	0.337	-0.5049701	1.473287
donation	0.0019988	0.1966371	0.01	0.992	-0.3834028	0.3874003
individual personality	-0.3048351	0.2480522	-1.23	0.219	-0.7910086	0.1813383
income level	-0.0268735	0.2514873	-0.11	0.915	-0.5197796	0.4660326
_cons	-0.5620122	1.642582	-0.34	0.732	-3.781413	2.657389

Working Group 3

University Student's Perception and Expectations towards Flexible Learning in the Philippines

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1. Introduction

1.1 Problem Statement

The COVID-19-Pandemic has forced humanity into a new normal and ushered in changes that most societies are ill-equipped to deal with. The education sector has been hit the hardest, and the implementation of remote learning has come with considerable challenges. The Philippine government has been heavily criticized regarding its policies and measures in handling the COVID-19 pandemic. In particular, University students are voicing their discontent with flexible learning through social media and street rallies. They believe that they are not learning enough and that remote learning amidst the challenges of the pandemic is an added burden to the students and their families (University Student Councils Call for Suspension of Online Classes amid COVID-19 Community Quarantine, 2020; UNESCO 2020).

The Commission on Higher Education (CHED) is an agency under the Office of the President that "Formulates and recommends development plans, policies, priorities, and programs on higher education" among others (CHED: Power and Functions, n.d.). The CHED has issued Memorandum Order No. 4 series of 2020, which sets the Guidelines on the Implementation of Flexible Learning on September 20, 2020. The memorandum defined flexible learning as "a pedagogical approach allowing flexibility of time, place, and audience, including but not solely focused on the use of technology; commonly uses the delivery methods of distance education and facilities of education technology" (CHED MO 4-2020). The Higher Education Institutions (HEIs) shall have the academic freedom to implement available distance learning, e-learning, and other alternative modes. The Memo also gives HEIs the discretion to decide how to design their curriculum based on the institution's capacity. However, the memorandum was not well-received by the students, with some student activists calling for an academic break (Mendoza, 2020). According to student activists, flexible learning is an added burden to students who are already struggling during the pandemic. To that, CHED Commissioner Prospero de Vera III said that the students do not understand flexible learning. There seems to be a gap between Government policy intentions and the practical applications of the flexible learning System.

This study will examine how university students perceive flexible learning. Moreover, the authors would also like to understand the expectations of university students regarding the flexible learning mechanisms that their universities currently utilize.

1.2 Literature Review

The Philippine government has implemented one of the longest lockdowns in the world as a policy response to the COVID 19 Pandemic (Hapal, 2021). As part of these lockdowns, schools closed down. According to Tria (2020), physical distancing measures have forced the implementation of online learning, resulting in different problems for students and teachers. One of the significant policies implemented in schools and universities is online learning or virtual classrooms. Learning online may be difficult for the Philippines, where internet connectivity is the lowest in Asia and internet access and electronic devices are inaccessible to poor households.

Flexible learning (FL) has no universal definition, but most literature agrees that the center of FL is the students' choice on how they want their learning experience to proceed (Li, 2014). FL is a paradigm shift from

traditional learning where the teachers or institution solely decides the method of instruction and curriculum design. A study by Barrera et al. has explained eight principles on how to do flexible learning (2020). Flexible access, where learners decide whether they can work individually, attend class or combine both. Recognition of prior learning means recognizing formal and non-formal education. Flexible content is under a problems-based curriculum that allows learners to adapt to the curriculum at their most suitable level. Flexible participation is learners having a choice on how to participate in class; it could be scheduled or on-demand. Flexible learning and teaching methods mean that the delivery mode is set according to the needs and capacities of the teachers and the students. Flexible resources mean that university resources should be accessible to students inside and outside the campus. Flexible assessment means assessment based on what competencies the learner has earned and not solely on the number of requirements they have submitted. Lastly, ongoing evaluation means formative and overview assessments should be regularly checked and updated so the curriculum could be changed in time for changes in the needs of the students.

Furthermore, the study by Barrera et al. concludes that their respondents, students, and teachers from St. Michael College of Caraga, a private college in the Philippines, are ready for flexible learning because they have relatively easy access to the devices necessary for online learning. Barrera et al. recommended that HEIs have their official learning platforms and systems to allow a more engaging educational exchange. It was also suggested that teachers be trained to maximize the use of online platforms.

It is apparent that education has been transformed because of the health measures. In an empirical study by Khan et al. (2020), the authors reveal an increasingly positive attitude by both students and teachers toward e-learning. However, several factors could affect this perception. These factors are age, gender, and computer literacy. College students have a positive perception and full acceptance towards e-learning as a new learning system to substitute offline teaching. Zabadi and Al-Alawi (2016) explored determinants of students' attitudes towards e-learning. Gender, technology usage, and students' skills have a significant impact on the attitudes of students towards e-learning. Additionally, e-learning serves valuable opportunities for educational improvement regardless of economic status, spatial, and social barriers. Rhema and Miliszewska (2014), in particular the case of Engineering students in Libya, student attitudes and beliefs towards e-learning related to demographic characteristics and access to technology. Moreover, levels of access to several technologies, such as better access to technology and strong internet speed, generate significant positive attitudes.

Moreover, qualitative research done on 32 university students in the Philippines showed that factors such as technological infrastructure, inadequate learning resources, conflict with home responsibilities, overloaded lesson activities, and financial problems are some of the challenges that make FL more challenging (Rotas & Cahapay, 2020).

1.3 Research Objective

This survey seeks to identify university students' perceptions of and expectations regarding flexible learning, especially under the conditions of the COVID-19 pandemic. First, this survey aims to identify the university students' perception of this new learning model, including increased use of technology, different class structure, new teaching methodology, etc. The second aim is to compare perceptions and expectations of different groups of students in terms of various variables such as major, gender, economic background, and locations. Finally,

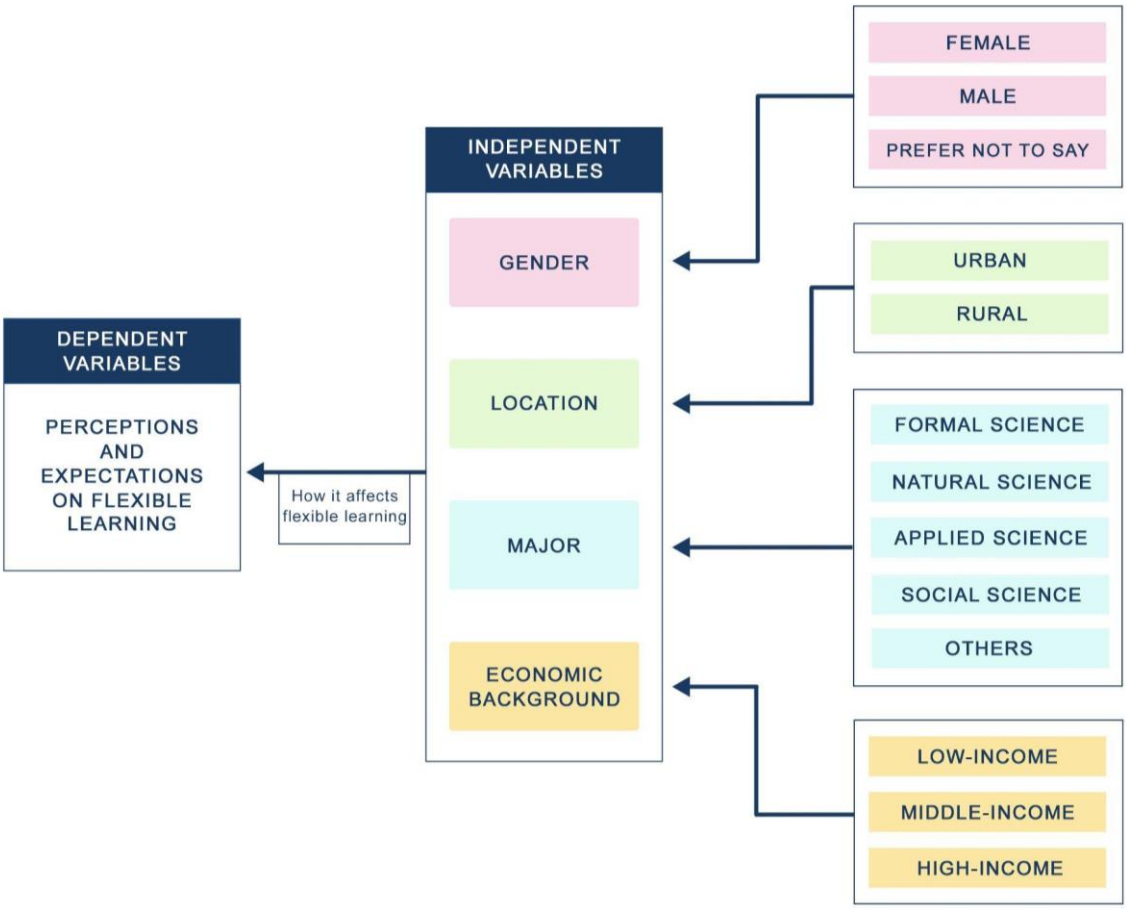
policy improvement strategies for the Philippine government shall be identified.

1.4 Research Questions

To achieve the above research objectives, this survey focuses on the following research questions accordingly. First, what are university students' perceptions towards the current flexible learning system in their university? Second, how do the different variables such as major, gender, economic background, and location affect university students' perceptions and expectations of flexible learning? Finally, what are the suggestions for improvement this survey can put forward to the government, thereby achieving a better flexible learning system for university students in the Philippines?

1.5 Conceptual Framework

Figure 1: Conceptual Framework



To identify students' perceptions and expectations toward flexible learning, we have selected four variables as our conceptual framework; Gender, University Major, Living Location, and Economic Background. We believe each variable has an effect on students' experience with flexible learning. With gender, we would like to see whether female students have different perceptions and expectations towards flexible learning compared to male students. With the university major, we would like to see whether certain majors have more difficulties studying under flexible learning and therefore have different perceptions and expectations. With the living

location, we would like to see whether students in rural areas have more difficulties studying under flexible learning compared to those living in urban areas. Last but not least, with the economic background, we would like to see if different income levels affect students' experience with flexible learning.

1.6 Significance of Research

This research will contribute to providing a general view and feedback to the government on possible improvements for the flexible learning system. In addition to, it serves several ways of making the system application easier for students to participate in, especially when the government is planning to continue the program. By understanding the perceptions and expectations among different groups of students towards the increased use of technology for learning, it enriches the scientific development for the policymakers, especially in educational policy resilience strategy amidst erratic global dynamics.

2. Methodology

2.1 Research Method

For the research design, we decided to use a quantitative research method and created an online survey questionnaire. The online survey questions are divided into three sections; the first section asks about the common background and demographic questions, the second section asks about the main questions which incorporated our conceptual framework of the different variables such as Major, Gender, Economic Background, and Urban/Rural Classification to identify how they affect the respondents' perceptions and expectation with flexible learning. In the third and final section, using a five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), we asked the respondents to rate our proposal regarding flexible learning. Ideally, we would like our respondents to be currently participating in flexile learning. However, to anticipate several respondents who might not be participating, we have prepared a different set of questions in order to identify the reason why they are not participating and how do they manage their studies during the pandemic.

2.2 Research Site Selection

For the 2021 Overseas Field Work (OFW), Nagoya University has chosen the Philippines as the place to conduct our research.

2.3 Respondents

For the online survey, we focused on undergraduate students who are currently enrolled in a university/college in the Philippines as our target respondents. In collaboration with LUCID, an online research market company, we used their survey sampling platform called LUCID Marketplace to distribute our online questionnaire survey to the target respondents.

2.4 Sampling Design

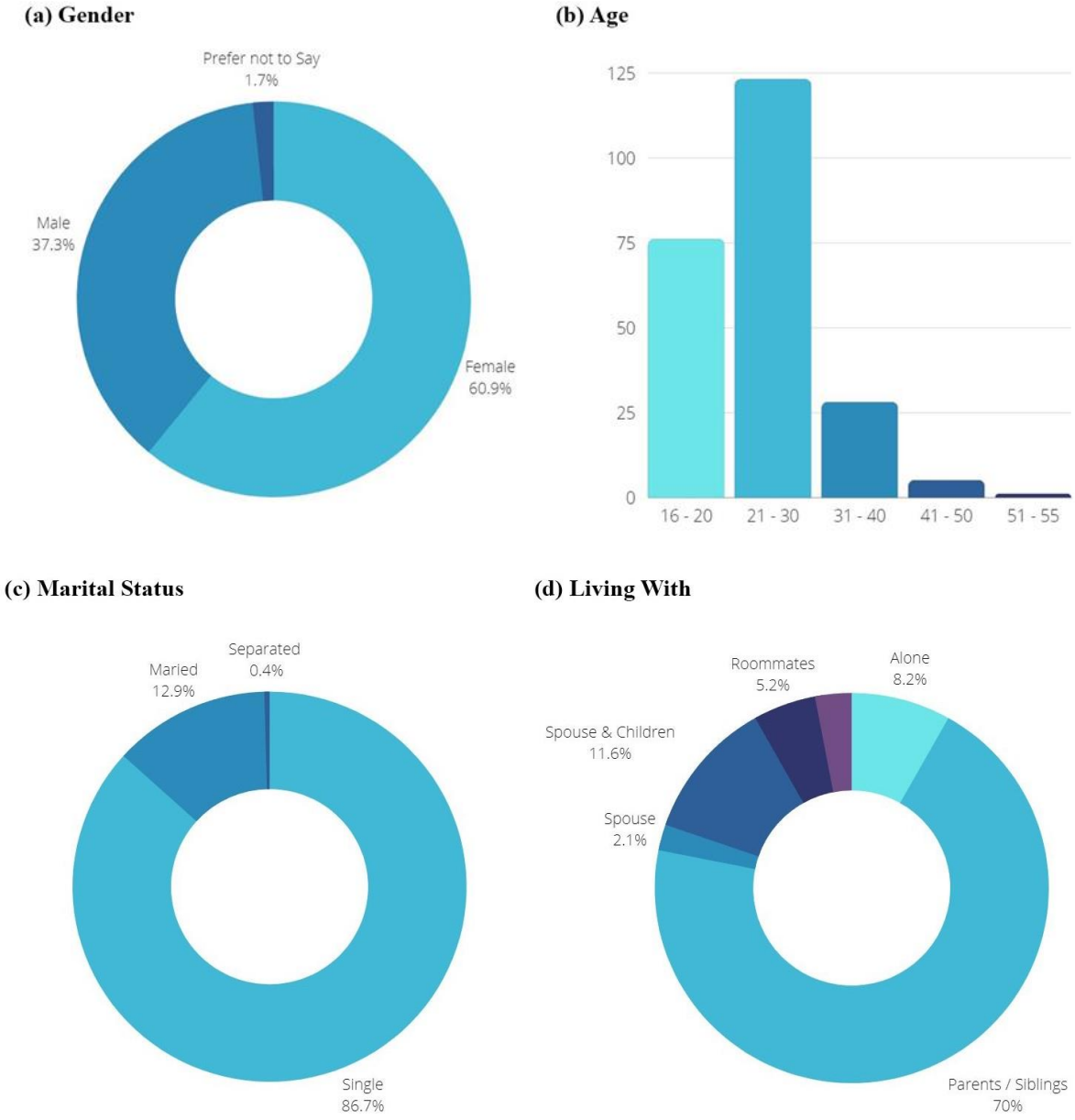
To gather up our respondents, we used one of the non-probability sampling methods, convenience sampling, to target undergraduate students who are currently enrolled in a university/college in the Philippines. As part of our screening process, we also set a quota to make sure we received an equal ratio of students from urban and rural areas.

2.5 Research Instrument for Data Collection

Ideally, part of the Overseas Field Work (OFW) in GSID is to travel to other countries and collect the data directly from the research site. However, due to the travel restrictions caused by Covid-19, we have switched to doing an online survey this year. Using Qualtrics as our online survey platform, we created an online questionnaire survey to identify the perceptions and expectations of university students towards the flexible learning system within their university. For our second research instrument, we used Deepnote, an online platform where the team members can collaborate to analyze and process our survey data. This includes validating, documenting, and profiling our survey data.

3. Respondents' Demographics

Figure 2: Demographics of Respondent



As shown in figure 2(a) on gender, 142 respondents are female, 87 respondents are male, and four respondents preferred not to specify their gender. As can be seen in figure 2(b) on age, 76 respondents are between the ages 16 - 20, 123 respondents are between the ages 21 - 30, 28 respondents are between the ages 31 - 40, 5 respondents are between the ages 41 - 50, and 1 respondent is between the ages 51 - 55. As shown in figure 2(c) on marital status, 202 of our respondents are single, 30 respondents are married, and one respondent is separated. As shown in figure 2(d) on living companions, 19 respondents live alone, 163 live with their parents/siblings, 5 live with their spouse, 27 live with their spouse and children, and 12 live with their roommates.

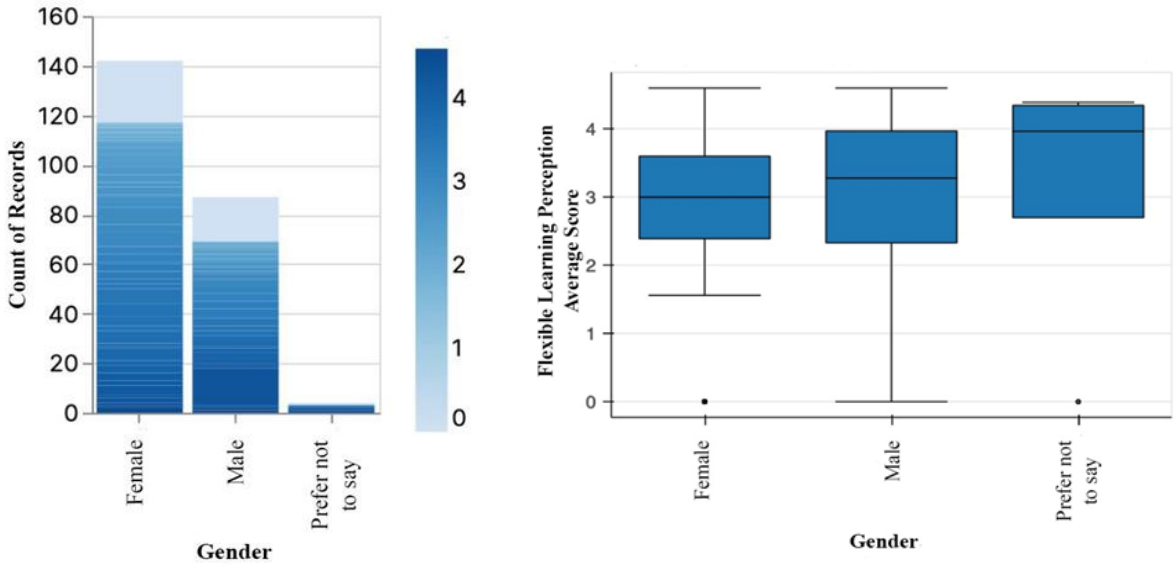
4. Data Results

4.1 Gender-based Perceptions and Expectations

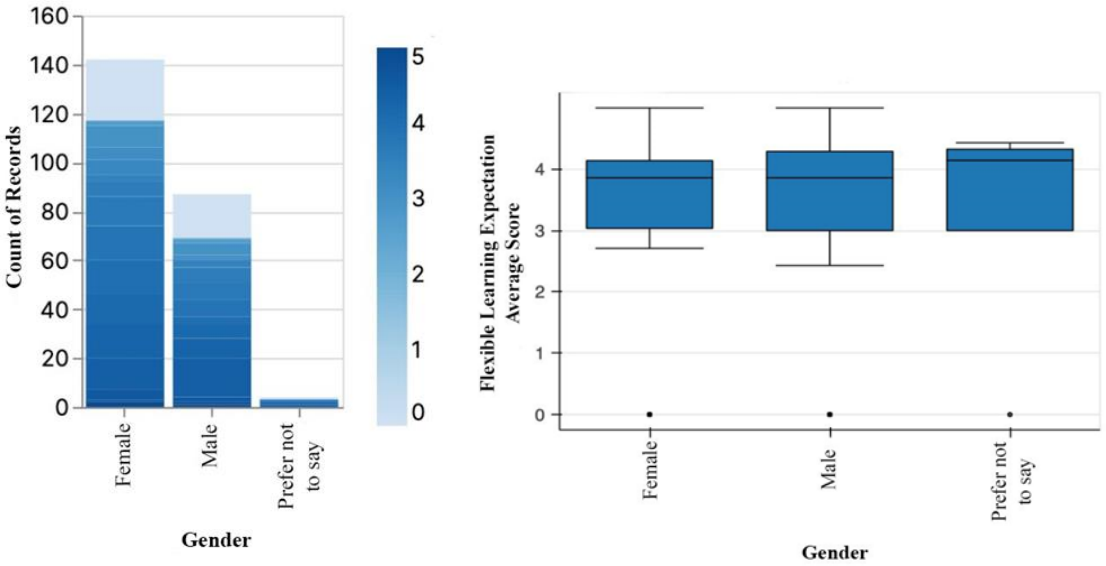
In this section, using the gender variable and the survey data, we will discuss whether gender has any influence on the respondents' perceptions towards flexible learning.

Figure 3: Gender-Based Perception & Expectation

(a) Gender-based Perceptions



(b) Gender-based Expectations



4.1.1 Gender-Based Perceptions Analysis

(1) Female

According to the results shown in Figure 3(a), 60.09% of the respondents are female, and out of 142 female

respondents, 25 respondents' answers (17.6%) are considered invalid for this specific question because they have never participated in flexible learning. Our data analysis found out that 37.6% of valid respondents have an average score below 3.0, which means they have unfavorable perceptions about flexible learning. 46.2% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 16.2% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have favorable perceptions towards flexible learning. Besides, we found out that the data shows a median of 3.00 which means they have a "neutral" perception towards flexible learning.

(2) Male

According to the results shown in Figure 3(a), 37.03% of the respondents are male, and out of 87 male respondents, 18 respondents' answers (20.7%) are considered invalid for this specific question because they have never participated in flexible learning. Our data analysis found out that 21.7% of valid respondents have an average score below 3.0, which means they have unfavorable perceptions about flexible learning. 46.4% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 31.9% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have a favorable perception towards flexible learning. The data shows a median of 3.28 which means they have a "neutral" with a tendency of "somewhat favorable" perceptions towards flexible learning.

(3) Prefer not to say

Referring to Figure 3(a), 1.07% of the respondents are female, and out of four respondents who preferred not to disclose their gender, one respondent's answer (25%) is considered invalid for this specific question because they have never participated in flexible learning. Our data analysis found out that 33.3% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 66.7% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have a favorable perception towards flexible learning. The data shows a median of 3.96 which means they tend to have favorable perceptions towards flexible learning.

4.1.2 Gender-based Expectation Analysis

(1) Female

Referring to Figure 3(b), 60.09% of the respondents are female, and out of 142 female respondents, 25 respondents' answers (17.6%) are considered invalid for this specific question because they have never participated in flexible learning. Our data analysis found out that 1.7% of valid respondents have an average score between 2.0 - 2.9 which means they have low expectations towards flexible learning. 47.0% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat high expectations towards flexible learning. 49.6% of valid respondents have an average score between 4.0 - 4.9 which means they have 'high' expectations towards flexible learning. 1.7% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Also, we found

out that the data shows a median of 3.86 which means they have a tendency to have a “somewhat high” expectation towards flexible learning.

(2) Male

Referring to Figure 3(b), 37.03% of the respondents are male, and out of 87 male respondents, 18 respondents’ answers (20.7%) are considered invalid for this specific question because they have never participated in flexible learning. Our data analysis found out that 2.8% of valid respondents have an average score between 2.0 - 2.9 which means they have low expectations towards flexible learning. 43.5% of valid respondents have an average score between 3.0 - 3.9 which means they have ‘neutral’ to ‘somewhat high’ expectations towards flexible learning. 52.2% of valid respondents have an average score between 4.0 - 4.9 which means they have ‘high’ expectations towards flexible learning. 1.5% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Also, we found out that the data shows a median of 3.86 which means there is a tendency to have a “somewhat high” expectation towards flexible learning.

(3) Prefer not to say

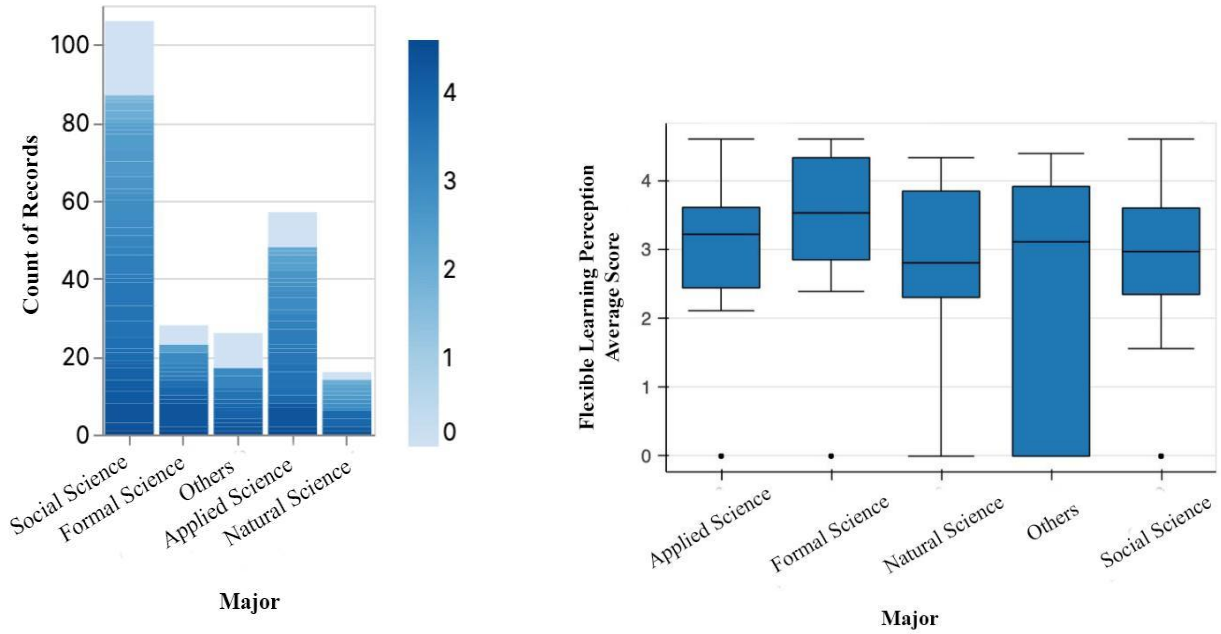
Referring to Figure 3(b), 1.07% of 4 respondents who preferred not to disclose their gender, one respondent’s answers (25%) is considered invalid for this specific question because they have never participated in flexible learning. Our data analysis found out that 100% of valid respondents have an average score between 4.0 - 4.9 which means they have ‘high’ expectations towards flexible learning. Also, we found out that the data shows a median of 4.14 which means they have a “high” expectation towards flexible learning.

4.2 Major-based Perceptions and Expectations

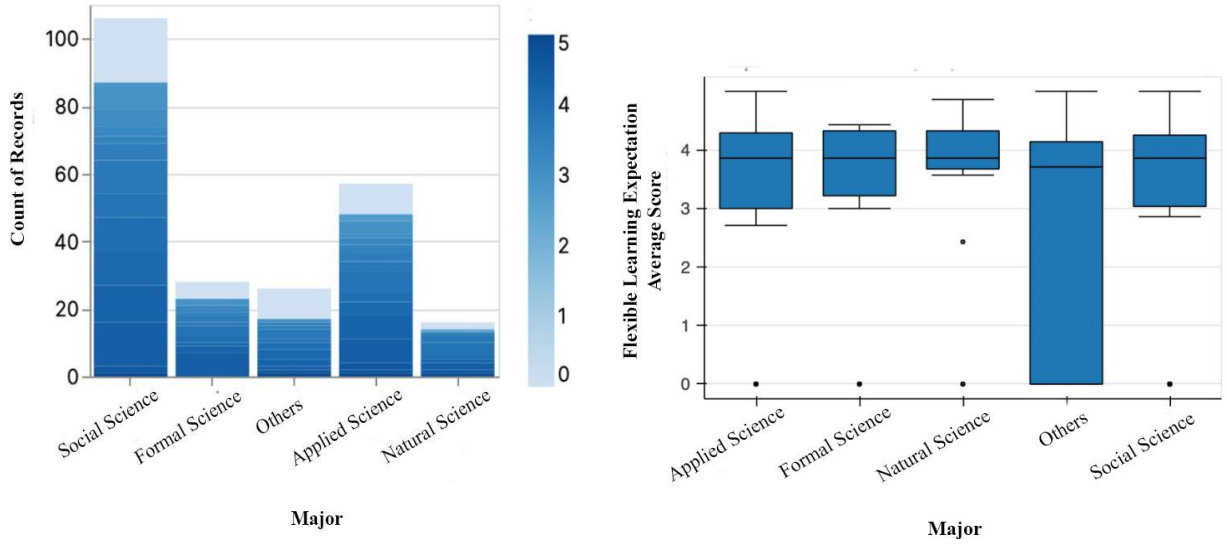
By analyzing major-based variables, we investigated whether the respondents’ major background influences their perceptions and expectations of flexible learning. Out of 233 respondents, 44 respondents’ answers (18%) are considered invalid for this specific question because they have never participated in flexible learning. The major-based variable is identified into four prevalent branches of major, namely Social Science (Business Administration, Management, Political Science, etc.), Formal Science (Mathematics, Computer Science, Statistics, etc.), Natural Science (Biology, Chemistry, Agriculture, etc.), Applied Science (Electrical Engineering, Medical, Nursing, etc.), and others. These classifications are produced with close consideration to the learning nature of each major, whether in content or practical context.

Figure 4: Major-Based Perception& Expectation

(a) Major-based Perceptions



(b) Major-based Expectations



4.2.1 Major-based Perceptions Analysis

(1) Social Science

Referring to Figure 4(a), our data analysis found out that 39.1% of valid respondents have an average score below 3.0, which means they have unfavorable perceptions about flexible learning. 41.4% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 19.5% of valid respondents have an average score between 4.0 - 4.9 which means

they tend to have favorable perceptions towards flexible learning. Also, we found out that in Social Science, the data shows a median of 2.97 which means they have an almost 'neutral' perception towards flexible learning.

(2) Formal Science

Referring to Figure 4(a), our data analysis found out that 8.7% of valid respondents have an average score below 3.0, which means they have unfavorable perceptions about flexible learning. 47.8% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 43.5% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have favorable perceptions towards flexible learning. Also, we found out that in Formal Science, the data shows a median of 3.53 which means they have a "neutral" with a tendency of "somewhat favorable" perceptions towards flexible learning

(3) Natural Science

Referring to Figure 4(a), our data analysis found out that 42.9% of valid respondents have an average score below 3.0, which means they have unfavorable perceptions about flexible learning. 42.9% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 14.2% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have favorable perceptions towards flexible learning. Also, we found out that in Natural Science, the data shows a median of 2.8 which means there is a tendency to have a 'neutral' perception towards flexible learning.

(4) Applied Science

Referring to Figure 4(a), our data analysis found that 33.3% of valid respondents have an average score below 3.0, which means that they have unfavorable perceptions about flexible learning. 50.0% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 16.7% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have favorable perceptions towards flexible learning. Also, we found out that in Applied Science, the data shows a median of 3.22 which means they have a "neutral" with a tendency of "somewhat favorable" perceptions towards flexible learning.

(5) Others

Referring to Figure 4(a), our data analysis found out that 64.7% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 35.3% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have favorable perceptions towards flexible learning. Also, we found out that in 'Others,' the data shows a median of 3.11 which means they more or less have a "neutral" perception towards flexible learning.

4.2.2 Major-based Expectations Analysis

(1) Social Science

Referring to Figure 4(b), our data analysis found out that 1.2% of valid respondents have an average score between 2.0 - 2.9 which means they have low expectations towards flexible learning. 44.8% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat high expectations towards flexible learning. 53.0% of valid respondents have an average score between 4.0 - 4.9 which means they have 'high' expectations towards flexible learning. 1.2% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Also, we found out that in Social Science, the data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(2) Formal Science

Referring to Figure 4(b), our data analysis found out that 47.8% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat high expectations towards flexible learning. 52.2% of valid respondents have an average score between 4.0 - 4.9 which means they have 'high' expectations towards flexible learning. Also, we found out that in Formal Science, the data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(3) Natural Science

Referring to Figure 4(b), our data analysis found out that 7.1% of valid respondents have an average score between 2.0 - 2.9 which means they have low expectations towards flexible learning. 50.0% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat high expectations towards flexible learning. 42.9% of valid respondents have an average score between 4.0 - 4.9 which means they have 'high' expectations towards flexible learning. Also, we found out that in Natural Science, the data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(4) Applied Science

Referring to Figure 4(b), our data analysis found out that 4.2% of valid respondents have an average score between 2.0 - 2.9 which means they have low expectations towards flexible learning. 43.7% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat high expectations towards flexible learning. 50.0% of valid respondents have an average score between 4.0 - 4.9 which means they have 'high' expectations towards flexible learning. 2.1% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Also, we found out that in Applied Science, the data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(5) Others

Referring to Figure 4(b), our data analysis found out that 41.2% of valid respondents have an average score

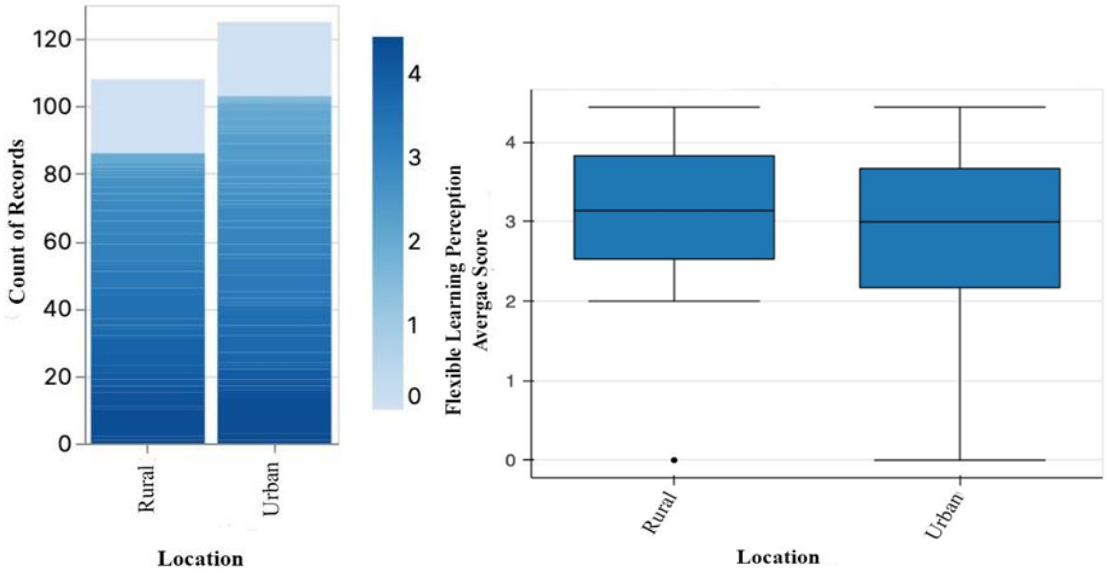
between 3.0 - 3.9 which means they have neutral to somewhat high expectations towards flexible learning. 52.9% of valid respondents have an average score between 4.0 - 4.9 which means they have 'high' expectations towards flexible learning. 5.9% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Also, we found out that in 'Others.' The data shows a median of 3.71 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

4.3 Location-based Perceptions and Expectations

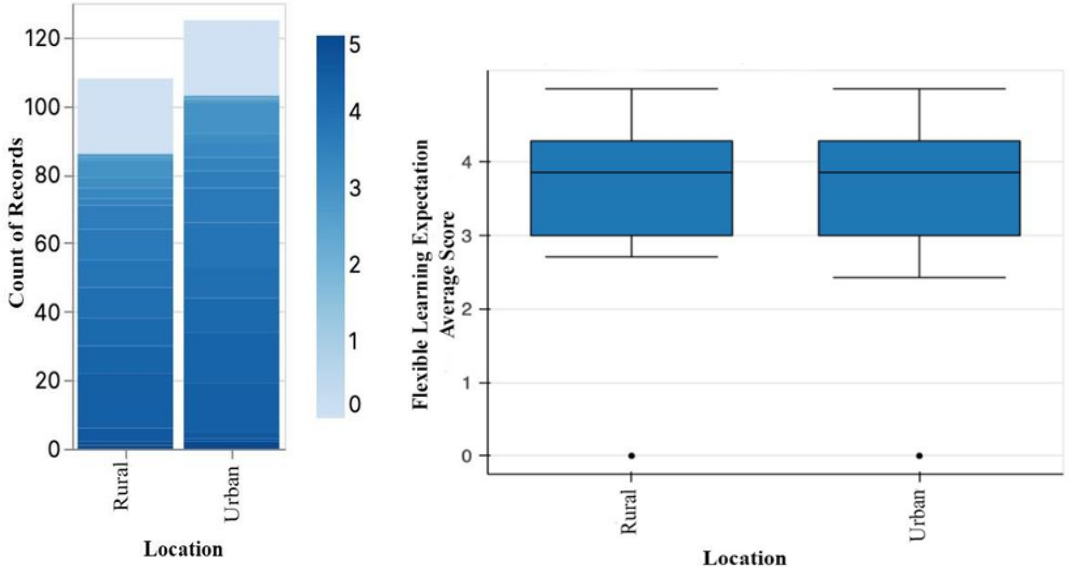
Using this variable, we would like to know whether the respondents currently live influences their perceptions and expectations of flexible learning. Using the categorization of Philippine cities and municipalities, we classified locations into either urban or rural.

Figure 5: Location-based Perception & Expectation

(a) Location-Based Perceptions



(b) Location-based Expectations



4.3.1 Location-based Perception Analysis

(1) Urban

Referring to Figure 5(a), 53.65% of the respondents were from urban areas, and out of 125 respondents, 22 respondents' answers (17.6%) are considered invalid for this specific question because they have never participated in flexible learning. Referring to Figure 9, our data analysis found out that 37.9% of valid respondents who live in urban areas have an average score below 3.0, which means they have an unfavorable perception of flexible learning. 40.8% of them have an average score of 3.0 - 3.9 which means they have a neutral to a somewhat favorable perception of flexible learning. While 21.3% of respondents from urban areas scored 4.0 - 4.9, which means they have a favorable perception of flexible learning. Subsequently, we found out that data shows a median of 3.00 which means they have a "neutral" perception towards flexible learning.

(2) Rural

Referring to Figure 5(a), 46.35% of the respondents were from rural areas, and out of 108 respondents, 22 respondents' answers (20.4%) are considered invalid for this specific question because they have never participated in flexible learning. Referring to Figure 9, our data analysis found out that 23.3% of valid respondents have an average score below 3.0, which means they have an unfavorable perception of flexible learning. 52.3% of valid respondents have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 24.4% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have a favorable perception towards flexible learning. Subsequently, we found out that data shows a median of 3.14 which means they have a "neutral" perception towards flexible learning.

4.3.2 Location-based Expectation Analysis

(1) Urban

Referring to Figure 5(b), 53.65% of the respondents were from urban areas, and out of 125 respondents, 22 respondents' answers (17.6%) are considered invalid for this specific question because they have never participated in flexible learning. Referring to Figure 19, our data analysis found out that 1.9% of valid respondents have an average score between 2.0 - 2.9 which means they have a low expectation towards flexible learning. 46.6% of valid respondents have an average score between 3.0 - 3.9 which means they have 'neutral' to 'somewhat high' expectations towards flexible learning. 49.6% of valid respondents have an average score between 4.0 - 4.9 which means they have a 'high' expectation towards flexible learning. 1.9% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Subsequently, we found out that data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(2) Rural

Referring to Figure 5(b), 46.35% of the respondents were from rural areas, and out of 108 respondents, 22 respondents' answers (20.4%) are considered invalid for this specific question because they have never participated in flexible learning. Referring to Figure 19, our data analysis found out that 2.3% of valid

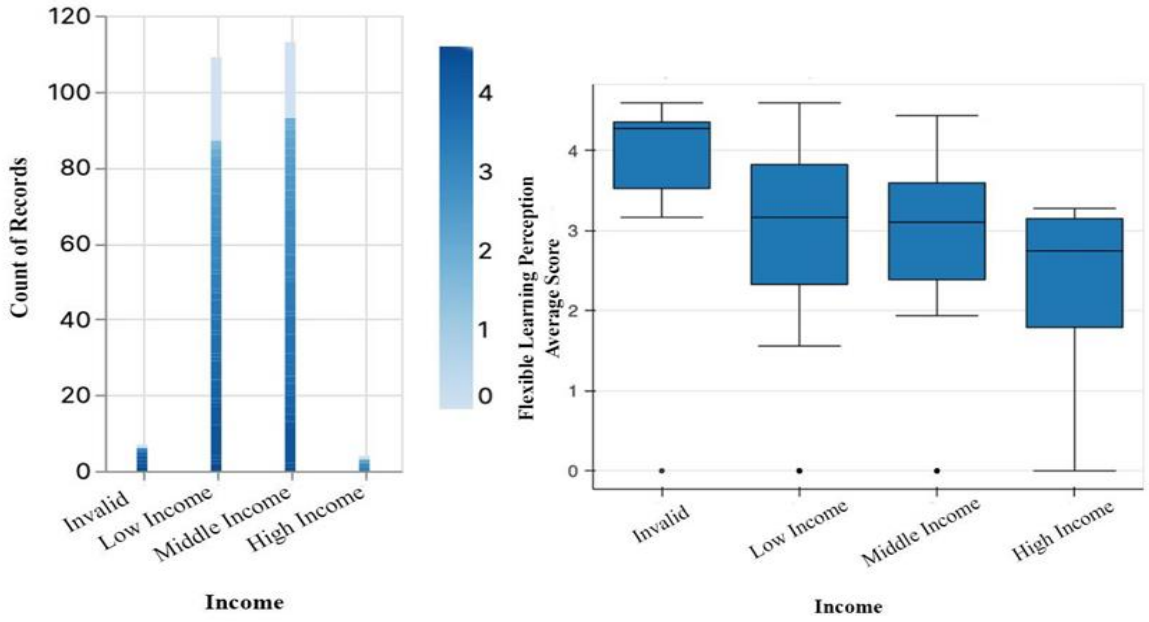
respondents have an average score between 2.0 - 2.9 which means they have a low expectation towards flexible learning. 43.0% of valid respondents have an average score between 3.0 - 3.9 which means they have 'neutral' to 'somewhat high' expectations towards flexible learning. 53.5% of valid respondents have an average score between 4.0 - 4.9 which means they have a 'high' expectation towards flexible learning. 1.2% of valid respondents have an average score of 5.0 which means they have very high expectations towards flexible learning. Subsequently, we found out that data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

4.4 Income-based Perceptions and Expectations

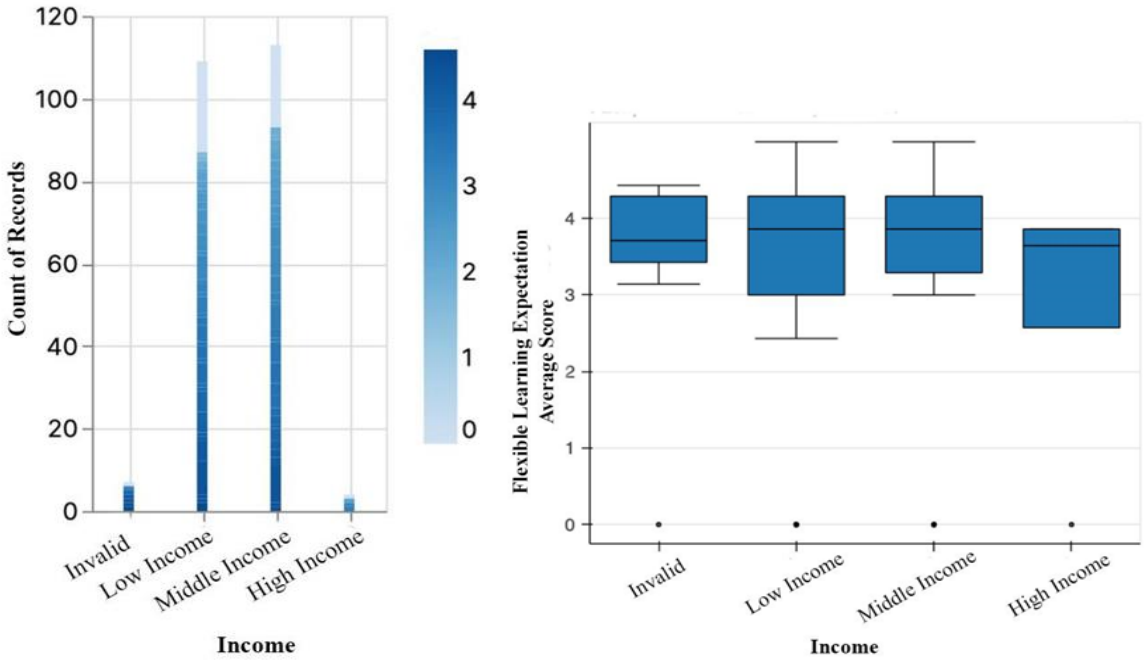
By analyzing income variables, we would like to know whether the respondents' economic background influences their perceptions and expectations of flexible learning. Out of 233 respondents, 50 respondents' answers (27.3%) are considered invalid for this specific question because they have never participated in flexible learning or did not specify their income. According to the criteria announced by the Philippines government, we divided our respondents into three income groups. For a family of 5, families with a monthly family income of less than 19,040 PHP are considered low income. Monthly family income ranges from 19,040 to 114,240 PHP are defined as middle-income family, and monthly income higher than 114,240 PHP are regarded as high-income groups.

Figure 6: Income-Based Perception & Expectation

(a) Income-based Perceptions



(b) Income-based Expectations



4.4.1 Income-based Perception Analysis

(1) Low-Income Group

Referring to Figure 6(a), 28.7% of respondents have an average score below 3.0, which means they have an unfavorable perception of flexible learning. 46.0% of them have an average score between 3.0 - 3.9 which means they have a neutral to somewhat favorable perception towards flexible learning. While 25.3% of them have an average score between 4.0 - 4.9 which means they tend to have a favorable perception towards flexible learning. Subsequently, we found out that data shows a median of 3.17 which means there is a tendency to have a "neutral" perception towards flexible learning.

(2) Middle-Income Group

Referring to Figure 6(a), 35.5% have an average score below 3.0, which means they have an unfavorable perception of flexible learning. 46.2% of them have an average score between 3.0 - 3.9 which means they have neutral to somewhat favorable perceptions towards flexible learning. 18.3% of valid respondents have an average score between 4.0 - 4.9 which means they tend to have a favorable perception towards flexible learning. Subsequently, we found out that data shows a median of 3.11 which means there is a tendency to have a "neutral" perception towards flexible learning.

(3) High-Income Group

Referring to Figure 6(a), 33.3% of our respondents have an average score below 3.0, which means they have an unfavorable perception of flexible learning. 66.7% of them have an average score between 3.0 - 3.9 which means they have a neutral to somewhat favorable perception towards flexible learning. Subsequently, we found out that data shows a median of 2.75 which means there is a tendency to have an "unfavorable" perception towards flexible learning.

4.4.2 Income-based Expectation Analysis

(1) Low-Income Group

Referring to Figure 6(b), 4.6% of respondents have an average score between 2.0 - 2.9 which means they have a low expectation towards flexible learning. 42.5% of them have an average score between 3.0 - 3.9 which means they have a neutral to somewhat high expectation towards flexible learning. 51.7% of them have an average score between 4.0 - 4.9 which means they have a high expectation towards flexible learning. And 1.2% of them have an average score of 5.0 which means they have a very high expectation towards flexible learning. Subsequently, we found out that data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(2) Middle-Income Group

Referring to Figure 6(b), 2.3% of the respondents have an average score between 2.0 - 2.9 which means they have a low expectation towards flexible learning. 43.0% of them have an average score between 3.0 - 3.9 which means they have a neutral to somewhat high expectation towards flexible learning. 53.5% of them have an average score between 4.0 - 4.9 which means they have a high expectation towards flexible learning. 1.2% of them have an average score of 5.0 which means they have a very high expectation towards flexible learning. Subsequently, we found out that data shows a median of 3.86 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

(3) High-Income Group

Referring to Figure 6(b), 100% of valid respondents have an average score between 3.0 - 3.9 which means they have a neutral to somewhat high expectation towards flexible learning. Subsequently, we found out that data shows a median of 3.64 which means there is a tendency to have a "somewhat high" expectation towards flexible learning.

5. Conclusions

Whether the respondents live in a rural or urban area, the location did not affect perceptions and expectations toward flexible learning. Both have a neutral perception but a somewhat high expectation towards flexible learning. There is no significant difference in the median scores of respondents based on their income. However, it was shown that the higher the income level, the higher the tendency to have a "somewhat unfavorable" perception and "high expectations" towards flexible learning. For gender, male respondents have a higher tendency to "somewhat favorable" perceptions towards flexible learning, while respondents who did not disclose their gender have a highly favorable towards flexible learning. Both male and female respondents have somewhat high expectations towards flexible learning. Respondents from the Formal Science major have the highest favorable perception towards flexible learning, while respondents from the Natural Sciences have the lowest perception of flexible learning. However, respondents from all majors agree that they expect more from flexible learning.

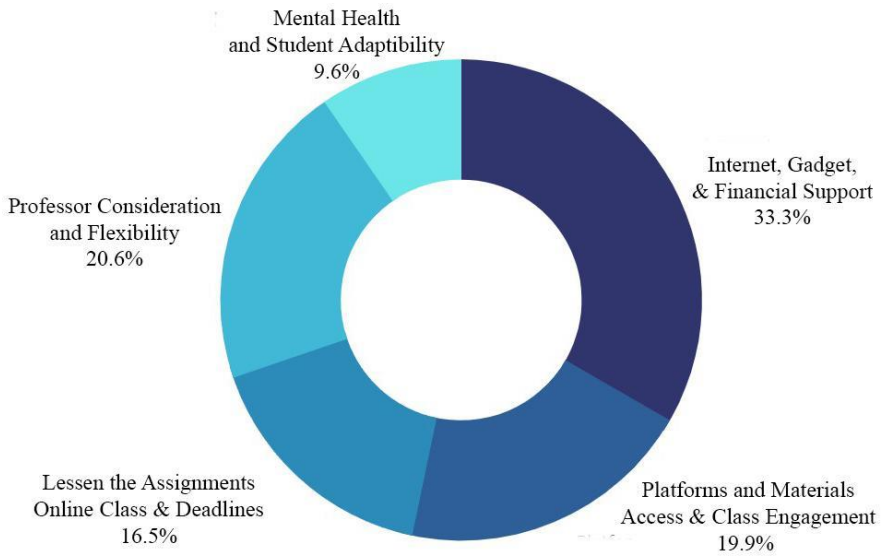
Generally speaking, data collected shows that respondents see flexible learning as somewhat favorable,

contrary to what student activists contend that most students want an academic freeze because they are not learning through the flexible learning schemes. Respondents see flexible learning as the only viable way to continue their education. However, respondents' data shows that they have "somewhat high" expectations towards flexible learning. In the end, university students care about their education and they are willing to accept flexible learning as part of the new normal. However, the added burden of flexible learning should not be solely carried by the students. flexible learning is necessary for the new normal, but students expect more from their universities to do better in implementing the new flexible learning curriculum.

6. Recommendations

6.1 Areas of Improvement

Figure 7: Areas of Improvement



According to our respondents who answered the open-ended question on "How can flexible learning be improved?" we were able to categorize several important areas of improvement for the implementation of flexible learning.

(1) Internet, Gadget, and Financial Support

This area covers internet signal and access, affordability of the learning equipment, tuition fee reduction, and any other financial support to bolster the learning process. Internet connection is indeed a major problem in the Philippines. Apart from expensive internet costs, the average connection speed in the Philippines is classified in the global context as a group of countries with weak internet speeds (Salac and Kim, 2016). It is linear with the data illustrated by 45 respondents who mention their difficulties with unsupportive internet speed amidst the full dependence of the learning process and coordination on the internet.

(2) Professor Consideration and Flexibility

This category encompasses professors' online teaching capability and competence, consideration, and availability for queries and clarification. Online teaching has completely different challenges relating to instructional time and space, virtual management techniques and communication, as well as the ability to engage with students during and after class, particularly on compound courses and assignments (Martin and Wang, 2019). Compared to traditional learning, technology adaptability and the emotional sensitivity of professors have become important requirements in online teaching.

(3) Platforms and Materials Access and Class Engagement

This issue encompasses the need for convenient resources and materials that are easier to access and understand, in addition to adequate learning platforms and the availability of recorded lectures for all students. It addresses the attention to the bigger actor in the flexible learning implementation, such as universities that are responsible for implementing a particular domestic policy for their own educational domain.

(4) Lessen the Online Class and Assignment's Deadlines Flexibility

This issue encompasses demand for a flexible deadline on assignments, a rational number of tasks, a sensible amount, and the length of the online class. In addition to expanding class discussion, balancing synchronous and asynchronous learning was also highlighted. The length, amount, and deadline for assignments present an inseparable role between Professor as an in-class educator and the university as a policymaker in accommodating and ensuring the assessment is appropriate enough to reach the goals of learning amidst the turbulence of a pandemic.

(5) Mental Health and Student Adaptability

This encompasses the demand to notice students' mental health amidst tough and rapid change in the learning experience and put more consideration into students' adaptability. There is a growing demand for this issue, particularly in developing countries like the Philippines, which are constrained by unstable or slow internet speeds and unpreparedness for educational infrastructure. The demographic location and internet access of college students are significant determinants of students' anxiety during the Covid-19 pandemic (Cleofas and Rocha, 2021).

6.2 Improvement Strategies

Considering the wide range of issue diversity, this research provides the top three issues from the survey data analysis as feedback on possible improvements for the flexible learning system.

6.2.1 Poor Internet Connection

1. Government should improve the internet quality both in rural and urban areas in order to provide equal internet access for all students.
2. Government should regulate universities in order to establish the enlargement of the asynchronous

class portions.

3. Government should encourage universities to increase the lecturer's awareness regarding their student's status of internet connection by giving more chances to students to provide valid reasons and proof when they failed to submit assignments/attend class.

6.2.2 Financial Issues

1. Government should provide more financial support to students who cannot afford decent mobile data and adequate PC/smartphone.
2. Government should cooperate with data providers to provide affordable/cheap internet packages for students.
3. Universities should give tuition reductions to students who face economic difficulties.
4. Government and universities should provide free access to online libraries/materials needed by the student.

6.2.3 Academic-Related Issues

1. Government should provide capacity-building training for teachers on how to maximize the use of online equipment to use for flexible learning.
2. Universities should set up a reasonable curricula structure and schedule based on the students' needs.
3. Professors should take the impact of pandemics into consideration when assigning tasks and deadlines.

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Appendix: Survey Questions

Part I: Background Questions

1. What gender do you identify with?
    - Male
    - Female
    - Rather not specify
2. What is your age?
    - (Fill in the answer)
3. What is your marital status?
    - Single
    - Married
    - Separated
4. Which best describes who you currently live with?
    - Alone
    - Roommates
    - Parents and/or siblings
    - Spouse
    - Spouse and children
    - Others (Please specify)
5. How many people are you currently living with?
    - (Fill in the answer)
6. What is your major?
    - (Fill in the answer)
7. Does your major require you to use specialized equipment or laboratory in the university?
    - Yes (Please specify)
    - No
8. Are you enrolled in a private or public college/university?
    - Private
    - Public
9. Which one describes you best as a student?
    - Part-time student
    - Full-time student

10. Are you currently working?
    - Yes
    - No
        - *Branch question for "Yes" answer*
        1. What is your employment status?
            - Full-time
            - Part-time
            - Self-employed
            - Other (Please specify)
11. What is your source of school allowance? (You can choose more than one)
    - Jobs
    - Family
    - Scholarship
    - Others (Please specify)
12. On estimate, how much (in PHP) is your average family monthly income?
    - (Fill in the answer)
13. On estimate, how much (in PHP) is your average family monthly expenditure?
    - (Fill in the answer)
14. Which region are you currently living in and participating in Flexible Learning?
    - (Choose the area from a list of 17 regions)
15. What city are you currently residing in?
    - (Fill in the answer)

Part II: Main Questions

16. Are you currently engaged in online or Flexible Learning?
    - Yes
    - No, I have never participated in Flexible Learning
    - No, but I have participated in Flexible Learning in the past
17. Which Flexible Learning tools are applicable to your university?
    - Offline (Only Modules)
    - Blended (Modules and Online)
    - Online
        - *Branch question only for "Offline (Only Modules)" answer*
        1. How many hours did you spend completing modules in a week?
            - 0 hour
            - 1 - 6 hours
            - 7 - 18 hours
            - 18 - 24 hours
            - 24+ hours

- *Branch question only for "Blended (Modules and Online)" answer*

1. How many hours did you spend doing online classes in a week?
    - 0 hour
    - 1 - 6 hours
    - 7 - 18 hours
    - 18 - 24 hours
    - 24+ hours
2. How many hours did you spend completing modules in a week?
    - 0 hour
    - 1 - 6 hours
    - 7 - 18 hours
    - 18 - 24 hours
    - 24+ hours

- *Branch question only for "Online" answer*

1. How many hours did you spend doing online classes in a week?
    - 0 hour
    - 1 - 6 hours
    - 7 - 18 hours
    - 18 - 24 hours
    - 24+ hours
2. How many hours did you spend completing homework in a week?
    - 0 hour
    - 1 - 6 hours
    - 7 - 18 hours
    - 18 - 24 hours
    - 24+ hours

18. Are you taking more or fewer classes with Flexible Learning?
    - Not applicable
    - Same amount of classes
    - Fewer classes
    - More classes
19. What kind of online learning equipment do you have?
    - Mobile phone
    - Tablets
    - Laptop
    - PC
20. Do you need to share your online learning equipment with someone else?
    - Yes
    - No

- *Branch question only for "Yes" answer*

1. How many people do you need to share your online learning equipment with?
    - One
    - Two
    - Three or more

21. Does your university offer an online teaching platform?
    - Yes
    - No
        - *Branch question only for "Yes" answer*
        1. If yes, what kind?
            - University-owned platform
            - Zoom
            - Messenger
            - WhatsApp
            - Others (Please specify)
22. How would you rate the current mechanism set up by your University/College?
    (Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree)
    1. I prefer Flexible Learning to traditional learning
    2. I can easily engage in the discussion during online class
    3. The materials and modules provided by the university are helpful and adequate
    4. My WiFi and mobile data connection are adequate for my online class needs
    5. I believe that I can learn the same amount through Flexible Learning as in traditional learning
    6. The university is really helpful in offering the resources we need to learn from home
    7. The university's online teaching platform is user friendly
    8. Flexible learning is effective
    9. Flexible learning made attending classes more frequently
    10. Flexible learning has positively affected my interaction with my classmates
    11. I can easily contact my teacher if I have any concerns/questions regarding my course
    12. I have no problems managing my academic schedule
    13. Flexible learning has increased my stress level in school
    14. I spent too much of my day doing online learning
    15. I could finish the modules within the given deadline
    16. I have spent a lot of time reading the required materials in the modules
    17. I understood most of the readings in the modules
    18. At the end of the semester, the objective for each subject have been achieved

Part III: Final Questions

23. How would you rate the following proposal regarding Flexible Learning?
    (Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree)
    1. Lectures should be posted on YouTube so students can access them anytime
    2. Universities should make online libraries available to students
    3. Financial support intended for acquiring gadgets and equipment needed for online learning should be given to those who cannot afford them
    4. Telecommunication infrastructure should be improved to cater for the increasing number of users
    5. The length of online classes per subject should be lessened
    6. There should be 15 minutes break in between 90 minutes online session
    7. Willing to use Flexible Learning even the pandemic
24. Based on your experience, how can Flexible Learning be improved in your university?
    (Write answer)