



## SECONDARY STUDENTS' PROFILE AND SCHOLASTIC PERFORMANCE DURING COVID-19: THE CASE OF A LABORATORY SCHOOL IN THE PHILIPPINES

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### ABSTRACT

Students' performance in the classroom can be viewed as vital since an aptitude for learning and intelligence can pave the way for their future success in both the workplace and the economy. This study examined the secondary students' profile and scholastic performance during the COVID-19 pandemic at a laboratory school in Eastern Visayas, Philippines. It utilized the quantitative approach to ascertain the variation among the specified study variables involving 620 secondary students from different grade levels. Secondary data on students' profile variables and scholastic performance were obtained from the school's Learner Information System (LIS). The T-test for two independent samples was likewise utilized to examine the significant difference in the performance of male and female students according to grade levels. Based on the results, majority of the students used mobile data and broadband as means to access the internet. Moreover, the online and blended learning were the student's preferred learning modalities. However, the inadequacy of gadgets available, insufficient load, intermittent mobile or internet access, existing health conditions, difficulty in self-regulated learning, conflict with other activities, and high electrical consumption and distractions were among the challenges students faced during the pandemic. Meanwhile, the students displayed very satisfactory to outstanding scholastic performance amidst COVID-19. Likewise, the study found no significant performance difference between male and female students in grades 8 and 12, in contrast to other grade levels. Therefore, creating flexible and responsive teaching practices in the current and post-pandemic educational environment and the enhancement of internet connectivity is recommended.

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## 1. INTRODUCTION

The educational system has recently experienced an extraordinary health crisis. Policymakers and administrators saw the rapid shift to online instruction delivery due to the COVID-19 pandemic as essential to maintaining the status quo in education. The situation has also prompted governments worldwide to take specific measures to address the challenges brought by the pandemic since learning amid COVID-19 is critical for students in their foundational and exploratory years. In the Philippines, curriculum modifications, the availability of technical resources and infrastructure, adjustments in the academic calendar, and guidelines on instructional delivery and assessment were just a few of the amendments done by the educational system (Barrot, et. al, 2021).

Following the pandemic outbreak in March 2020, different learning modes have been carried out by the Philippine educational system, including blended learning, learning through modules, and traditional learning through limited face-to-face classes. These learning modes were the only ones available because of the significant health concerns that full face-to-face classes can provide. The blended learning method, a mixture of online and modular learning, was adopted by most schools in the Philippines as an alternative teaching method, particularly for situations where the movement of people is significantly restrained (Dridi, et al., 2020). However, the Philippines' Department of Education (DepEd) and Higher Educational Institutions (HEIs) continue to face challenges; blended learning was unfamiliar to the students accustomed to traditional learning, and the abrupt change in the learning environment has caused difficulties.

Furthermore, the inability of the students to manage their time effectively and their diverse backgrounds (Lotrecchiano, et al., 2013) were observed to contribute to the challenges in meeting the demands of blended learning. Another challenge for those implementing blended learning, according to Ma'arop and Embi (2016), is the issue of students' participation. Many students, particularly those at the secondary level, as can be observed, were less inclined to actively engage in the learning process throughout the pandemic. They are more inclined to play games online or utilize other social media platforms than to actively engage in online teaching and learning. When it comes to using technology, several studies also revealed that internet connectivity poses another issue in the virtual classroom environment (Levin, et al., 2013; Barrot, et al., 2021; Alebaikan & Troudi, 2010; Cabuquin, 2022b; Cullinan, et al., 2021). Aside from having a low network connection, one of the downsides of technology is the difficulty of analyzing students' facial expressions and body language in an online setup because, most of the time, students always switch off their video cameras during online class sessions. As these issues continue to be experienced, the student's scholastic performance may be affected.

Scholastic performance refers to a student's learning in the classroom, which is measured by the marks they receive during a predetermined time frame (Narrad & Abdullah, 2016; Masud, et al., 2019; Jolejole-Caube, et al., 2019). Briones et al. (2021) likewise stated that scholastic performance indicates a student's development across different academic courses and is based primarily on classroom performance, graduation rates, and test scores. Students' performance in the classroom can be viewed as vital since an aptitude for learning and intelligence can pave the way for their future success in both the workplace and the economy (Mingoa & Abocejo, 2021; Cabuquin, 2022a). Additionally, several studies have demonstrated the association between blended learning and students' scholastic performance (Kintu, et al., 2017; Obiedat, et al., 2014; Kassab, et al., 2015). Seage and Türegün (2020) also unveiled that the mean performance of students who received instruction in a blended learning setting is statistically higher when compared to the mean performance of students who received a traditional education.

Although numerous studies on the effects of the COVID-19 pandemic on education have been performed, most of them are conducted in foreign settings with an emphasis on students' mental health issues, home learning, blended learning, perceptions, and lived experiences. Moreover, research is scarce in the Philippine context, particularly in the laboratory schools in the region, which investigates students' profiles in terms of several identified variables. A closer look at the analysis of the performance gap between male and female secondary students based on grade level has yet to be thoroughly established within the context of the pandemic. Hence, the present study attempts to explore deeper into this matter to provide light on the pandemic's direct influence on students' challenges in a virtual learning environment. By dealing with these concerns, the school community can develop strategic plans that would then be used by students, teachers, and other interested parties for the new normal education post-COVID-19. The present study contends that knowing how secondary students are doing academically and their profile in light of the pandemic facilitates the development and refinement of research-based policies and new instructional practices in schools to support the students' and teachers' teaching and learning endeavors.

This study generally aimed at determining the students' profile and scholastic performance in the context of the COVID-19 pandemic. Particularly, this study sought to address the following objectives: (1) determine the secondary students' profile in terms of (a) distribution of parents' highest educational attainment, (b) distribution of household members providing instructional support to the students, (c) devices accessible at home that the students can utilize for learning, (d) ways used by the students for connecting to the internet, (e) students' preferred types of distance learning modalities, (f) challenges that affect students' learning process through distance education, and (g) distribution of students' responses when asked if willing to partake in limited in-person classes; (2) determine the extent of student's scholastic performance during the pandemic; and (3) examine whether there exists a significant performance difference between the male and female students based on grade level, or otherwise. This study tested the null hypothesis of no significant performance difference between male and female students across grade levels.

**2. METHOD**

This study employed descriptive and comparative methods of research. The descriptive method was utilized to depict the secondary students' profile variables and their scholastic performance in the academic year 2021-2022. This study also applied the comparative method to determine whether or not a performance gap between male and female students based on grade level exists.

The study was carried out at one public secondary laboratory school in the Eastern Visayas region, Philippines when the country's educational system was still adjusting to the effects of the COVID-19 outbreak. The laboratory school is under the university's College of Education, offering Junior and Senior high school programs. The secondary students were from various municipalities in the Eastern Visayas provinces, namely Biliran, Samar, and Leyte. Further, it is governed and supervised by the Department of Education (DepEd) as a district learning center.

Secondary data on students' profile variables and scholastic performance were obtained from the school's Learner Information System (LIS), a state-of-the-art online tool of the DepEd that allows for the registration of students attending all private and public elementary and secondary schools as well as state universities and colleges (SUCs) that provide elementary and secondary education (Department of Education, 2015). A total of 620 students' profile variables and performance records from the LIS "Learner Enrollment Survey (LES) Quick Count Facility" were gathered out of the 654 secondary students registered during the academic year the study was performed. Table 1 shows the total number of students based on grade level.

**Table 1.**  
Distribution of students according to grade level

Level	Frequency	Percent
Grade 7	99	15.97
Grade 8	116	18.71
Grade 9	89	14.35
Grade 10	108	17.42
Grade 11	101	16.29
Grade 12	107	17.26
TOTAL	620	100.00

The researchers also assured that the data acquired was solely utilized to meet the study objectives and treated with strict confidentiality. The necessary data retrieved by the researchers was also shown to the school's designated Information and Communication Technology (ICT) and LIS coordinator for cross-checking.

The collected data were compiled and presented in textual, graphical, and tabular formats. Frequency counts and percentages were utilized to depict the secondary students' profile in terms of parents' highest educational attainment, household members providing instructional support, learning devices that students utilized, ways used by the students for connecting to the internet, preferred types of distance learning modalities, challenges that affect students' learning, and students' responses when asked if willing to partake in limited in-person classes. The mean and standard deviations were also employed to describe the students' scholastic performances as defined by their grade point average. The performance difference between male and female students according to grade level was investigated using the T-test for two independent samples. Microsoft Excel and the Statistical Package for the Social Sciences (SPSS v. 16.0) were used to process the acquired data. Similarly, the significance alpha for this study was placed at 0.05.

**3. RESULTS AND DISCUSSION**

This section includes graphical and tabular presentations of the findings accompanied by textual descriptions to facilitate understanding. The presentation involves (1) the distribution of parents' highest educational attainment, (2) the distribution of household members providing instructional support to the students, (3) devices available at home that the students can use for learning, (4) ways used by the students for connecting to the internet, (5) students' preferred types of distance learning modalities, (6) challenges that affect students' learning process through distance education, and (7) the distribution of students' responses when asked if willing to partake in limited face-to-face classes; (8) the distribution of students' performance in the context of

the COVID-19 pandemic; and (9) performance differences between male and female students based on grade level.

### 3.1 Parents' highest educational attainment

Fig. 1 displays the parents' highest level of education. The figure shows that nearly nine-tenths (89%) of parents have degrees or other credentials above a high school diploma. While two parents said they had never attended school and three had only attended elementary school, 10% of parents claimed to have completed a high school program. This only shows that most parents may have post-graduate degrees, technical or vocational program graduates, college-level degrees, or have completed college.

Hornby and Blackwell (2018) reported that parents with little formal education were reluctant to assist their children in their academic pursuits. This differs from the finding of Assari (2019), who stated that parents with higher levels of education encourage independent study while providing little to no supervision to their children. This could mean that students whose parents hold advanced degrees may be more engaged in and motivated to learn, possess the proper study habits and skills, and perform well in the classroom (Kalil, et al., 2012; Assari, 2019) which at the same time could be a result of their parents' or guardians' positive influence and participation.

### 3.2 Household members providing instructional support to the students

Fig. 2 presents the distribution of family members supporting the students' online distance education. The figure shows that slightly more than two-fifths (41.77%) of the 620 students received instructional support from their parents or guardians. This suggests that even when the teachers are not physically present to guide them, the students are still supported by their parents or guardians in their academic activities. As education continues despite COVID-19 challenges, the support of the parents is an essential factor for the students to thrive. On the other hand, about one-fifth (19.19%) of the students get instructional support from their parents and siblings. In contrast, only four students said they had yet to receive any form of educational support from anyone. In addition, 39 students could engage in self-directed learning despite difficulties.

Moreover, it is likely to enhance students' potential for self-directed learning if they possess the motivation and ability to learn at their own pace with minimal instruction from the teacher or parents. Most parents support and encourage their children to learn even before the pandemic (Nyanamba, et al., 2021). Due to the pandemic's demand that students stay home, parents devote extra time to nurturing their children and helping them in their online learning endeavors (Pek & Mee Mee, 2020). Some parents, however, are preoccupied with their careers and other commitments to support and sustain their children's needs (Haller & Novita, 2021), resulting in disregarding their children's online learning needs and supervision.

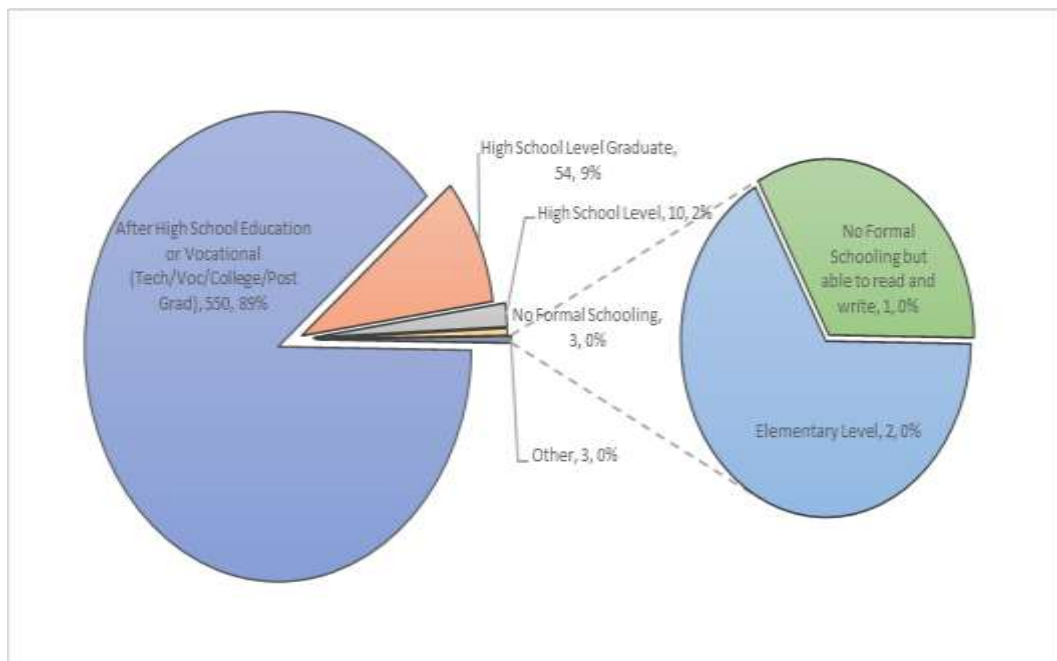
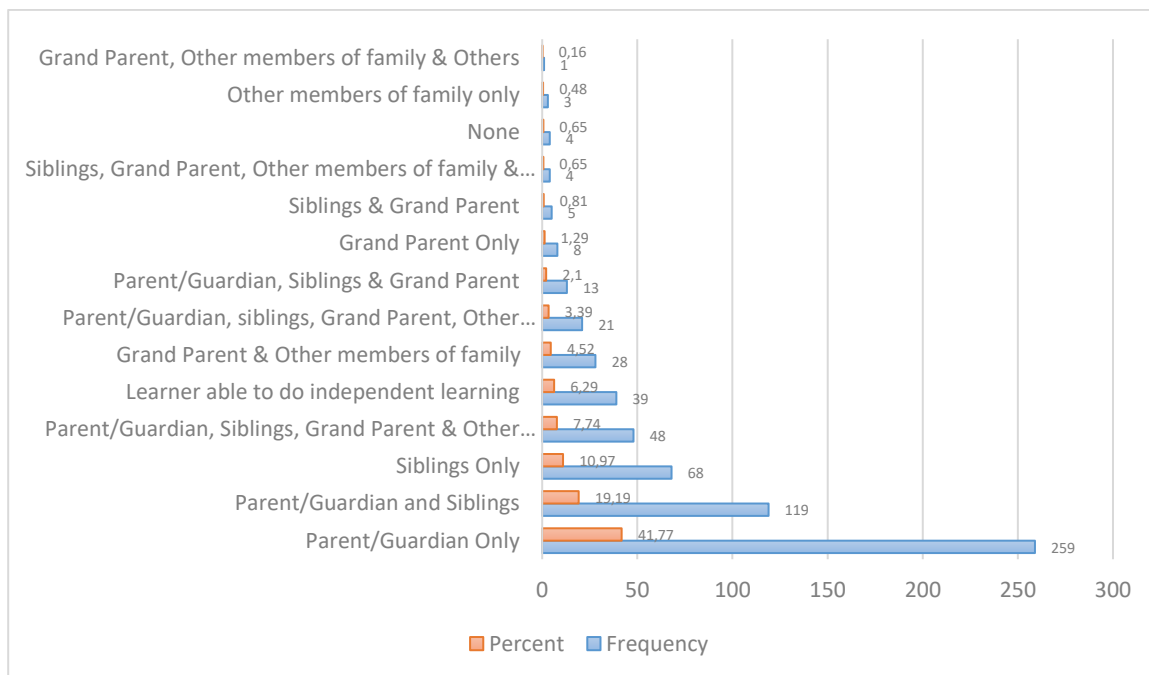


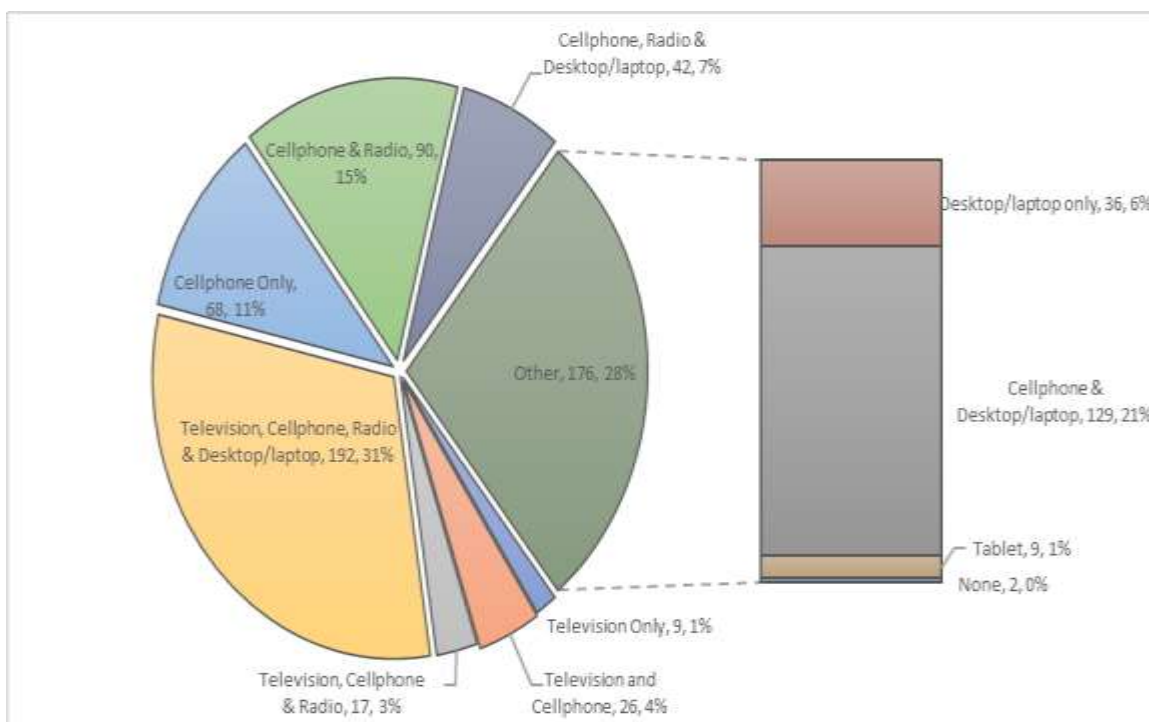
Fig. 1 - Distribution of parents' highest educational attainment



**Fig. 2** - Distribution of household members providing instructional support to the students

**Devices available at home that the students can use for learning**

Fig. 3 shows the students' access to devices at home for educational purposes. As displayed in the figure, almost one-third (31%) of the students have access to television, cell phones, radio, desktops, or laptops. This means that one in three students has adequate family support for their online distance education and faces no difficulties when it comes to attending their virtual classes. In contrast, 90 students claimed to use both radio and cell phones for distance learning, as opposed to 68 students who said they only use cell phones. Meanwhile, slightly more than one-fifth (21%) of the students used cell phones, desktops, or laptops for learning.

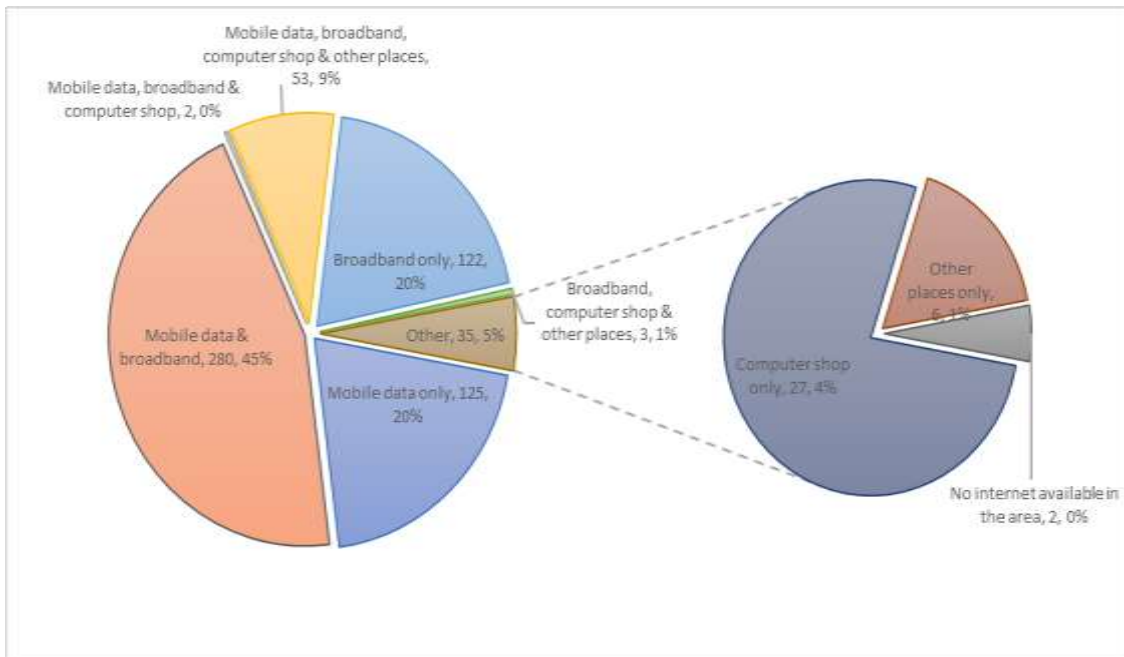


**Fig. 3** - Devices available at home that the students can use for learning

According to Haller and Novita (2021) and Estira (2020), middle-class or higher-class families are at a distinct advantage in providing for their children because they can afford to buy and own high-end technology such as cell phones, laptops, desktop computers, and other devices that could aid in online learning. On the same note, Cleofas and Rocha (2021) noted that as many low-income households prioritize their family's necessities, they frequently need more technology tools for online learning. Yra et al. (2020) further emphasized that it is difficult for those in the lowest socioeconomic group to obtain devices that can be used for learning during the pandemic, which could hinder their academic development.

**Ways used by the students for connecting to the Internet**

Fig. 4 shows the means that students employ to connect to the internet. As the provision of basic education services was carried out in both synchronous and asynchronous setups in times of the pandemic, the need for reliable internet accessibility was viewed as one of the primary concerns confronted by both teachers and students.



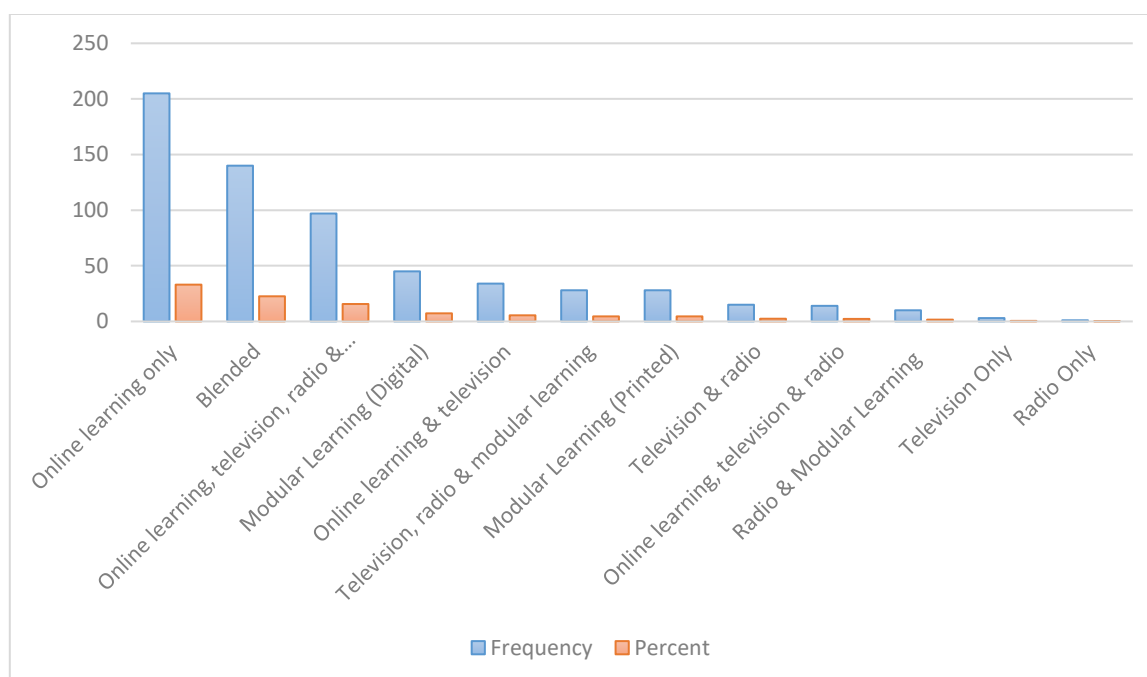
**Fig. 4 - Ways used by the students for connecting to the Internet**

In the figure, it can be shown that nearly one-half (45%) of all the students accessed the internet using mobile data and broadband. Meanwhile, six students described connecting to the internet at other places where there is free internet usage and where they can take their lessons online, whereas two students said there is no internet access in their area. These issues, which the students dealt with throughout the pandemic, may have affected their motivation to learn and perform better in class. Additionally, 27 students said they would visit the computer shop to take their real-life lessons and activities.

As explained by Li and Lalani in the research entitled *The COVID-19 Pandemic has Changed Education Forever in 2020* (<https://www.weforum.org/agenda/2020/04/>) mobile data and broadband are the preferred alternatives during COVID-19 since students cannot visit computer stores. Similarly, students needed access to internet-connected devices like cell phones and laptops to successfully engage in their new learning environments during the pandemic (Ignacio, 2021). As explained by Matsuda in the research entitled *Access to the Internet, Access to the World: Students' Experiences of Online Learning in Bangladesh During COVID-19 in 2021* (<https://webfoundation.org/2021/08/>) while it is true that cell phones are highly usable for students' online learning activities, they have limited functionality for applications like word processing software or interactive learning platforms, which may deter students from taking part in online classes. In addition, as education was given online for some secondary schools in the Philippines during the pandemic, many students, especially those who live in remote areas, need help accessing the internet and find it challenging to engage in online classes using mobile data and broadband.

**Students' preferred types of distance learning modalities**

Fig. 5 showcases the students' preferences on the modalities of implementing distance learning.



**Fig. 5 - Students' preferred types of distance learning modalities**

The results showed that the two most common forms of distance learning that students prefer are online and blended learning. The students were compelled to accept the new learning norm due to the abrupt transition to distance education caused by the unexpected influx of the COVID-19 pandemic. The preference for online learning was expressed by about one in three students (33.06%), who may have been motivated by their fear of contracting a virus or the distance between their homes and the school. Furthermore, nearly a quarter (22.58%) of the students said they were interested in the blended learning mode. In contrast, a combined 73 students (11.78%) preferred the modular approach, whether it was delivered in print or digital form.

Despite the difficulties and glaring gaps in access to technology, including those between the wealthy and the poor, rural and urban areas, as well as across countries, most public and private schools have started to use online platforms regularly (Ignacio, 2021; Leech, et al., 2022). Similarly, the educational system in the Philippines employs a variety of learning modalities, including blended learning, learning through modules, and traditional learning through a limited number of in-person classes. These learning modes were the only ones available because of the significant health concerns that full in-person classes can provide. As explained by Hernando in the research entitled DepEd: Most Students Prefer 'modular' Learning Over Online in 2020 <https://mb.com.ph/2020/07/03/dep-ed-most-students-prefer-modular-learning-over-online/> that aside from the online learning setup, modular distance learning was extensively utilized by most students because of its practicality during challenging times. This is also because students from remote localities and rural areas cannot afford online platforms (Amir, et al., 2020).

### **Challenges that affect students' learning process through distance education**

Due to the significant health concerns that in-person instructional delivery can provide, modular and online learning were the only ones to choose from. Moreover, the government established health protocols restricting people's movement and prohibited face-to-face instruction. The fact that classes were held in a virtual classroom makes it challenging for the students to thrive in their academic studies. As can be gleaned from the figure above, the inadequacy of gadgets available, insufficient load, intermittent mobile or internet access, existing health conditions, difficulty in self-regulated learning, conflict with other activities (i.e., household chores), and high electrical utilization and interruptions (i.e., social media, noise from neighbor or community) were among the challenges that students faced during the pandemic.

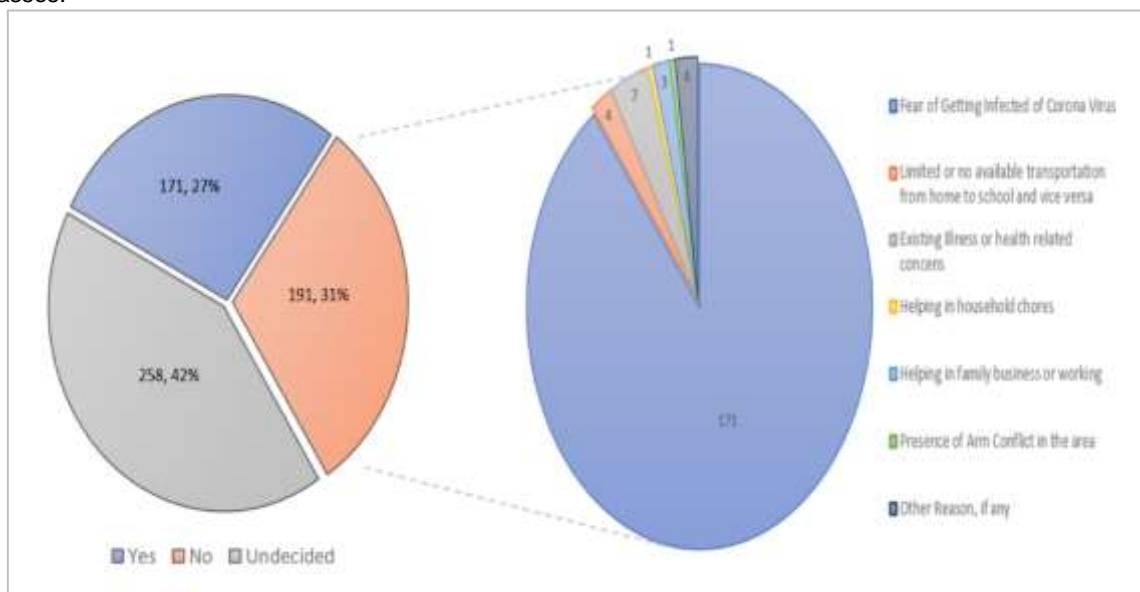
While taking classes online is the optimal choice for distance learning, most students struggle with an unreliable network connection, making it difficult to access the internet consistently (Leech, et al., 2022). This agrees with the finding of Fast et al. (2022), who also mentioned that students have trouble studying because it is done remotely. Other students asserted that regular usage of Google Meet or Zoom applications has led to health problems like radiation-induced eye strain. Iradel et al. (2021) further noted that several students, especially those from remote areas, are the ones who were greatly challenged attending classes due to their geographical locations. It is also difficult for parents and guardians to guide and assist their children as they are also challenged to carry out their duties and responsibilities in the new normal (Ignacio, 2021).

Moreover, Fabito et al. (2021) also highlighted challenges that impact how well students learn through distance education, such as the difficulty in accessing quality and reliable learning resources due to their high cost. Online distance learning was regarded to be constrained by the expense of acquiring laptops or computers, accessing the internet, and other learning equipment (Amir, et al., 2020), while interruptions and scheduling conflicts were also thought to be barriers that hindered effective learning during the pandemic. As explained by Li

and Lalani in the research entitled *The COVID-19 Pandemic has Changed Education Forever* in 2020 <https://www.weforum.org/agenda/2020/04/> also highlighted that when students are at home, they are occasionally distracted from their studies by their parents or siblings, who direct them to complete household chores while they are supposedly taking classes online.

### **Students' responses when asked if willing to partake in limited face-to-face classes**

Fig. 6 shows students' responses when asked if they would be interested in participating in the limited face-to-face classes.



**Fig. 6 - Distribution of students' responses when asked if willing to partake in limited face-to-face classes**

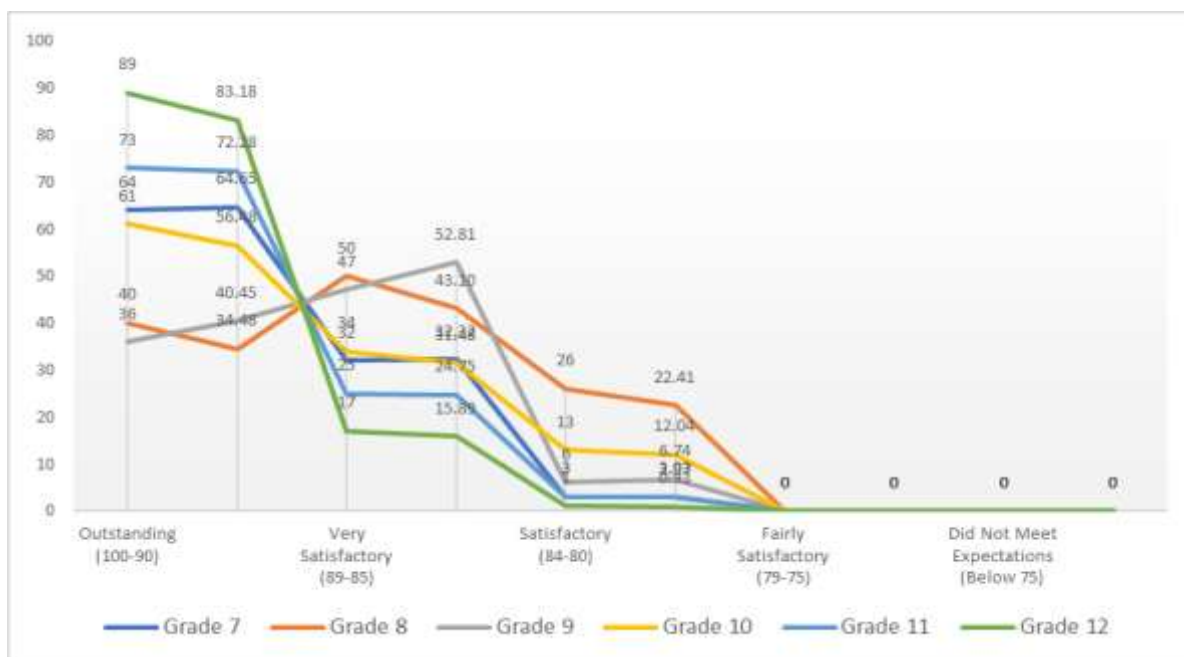
The figure reveals that slightly more than two-fifths (42%) of the students were unsure about participating in the limited face-to-face classes, whereas slightly more than one-fourth (27%) favored it. Mathera & Sarkans (2018) claimed that compared to online learning, students tend to engage in face-to-face classroom interactions with teachers and peers since this promotes learning through immediate feedback, and teachers offer course topics more excitingly and understandably than online. Similarly, Kemp and Grieve (2014) stated that students preferred general in-class activities, especially when discussing academic matters.

On the other hand, nearly one-third (31%) of the students did not favor participating in limited face-to-face classes. As further illustrated in the figure, the fear of contracting the coronavirus was the most frequent excuse given by students for avoiding in-person classes during the pandemic. While awareness of the virus, COVID-19-associated symptoms, and COVID-19 practice are the elements that also contribute to anxiety and depression, fear is one of the leading causes of these conditions during the pandemic (Wang, et al., 2022; Ahshan, 2021). Bagarić and Jokić-Begić (2022) further concluded that fear of infection encapsulates unfavorable emotional states due to its anticipated effects on one's physiological health and the welfare of loved ones.

### **Scholastic performance of students in the context of the COVID-19 pandemic**

Fig. 7 presents the academic progress of students in times of the pandemic. As exemplified in the figure, most students across grade levels exhibited very satisfactory to outstanding scholastic performance, with one-third (33.09%) displaying very satisfactory performance and nearly three-fifths (58.59%) demonstrating outstanding scholastic performance during the pandemic. The result indicates that although classes were held in a virtual classroom setting, it did not prevent the students from performing well in their academic studies; instead, they became more resilient to the difficulties caused by the pandemic in education, with the support and encouragement provided by teachers and parents. The students may have experienced challenges in online distance learning, like the inadequacy of gadgets available, insufficient load, and intermittent mobile or internet access. However, they were able to find ways to cope with these challenges.





**Fig. 8** - Distribution of students' performance in the context of the COVID-19 pandemic

Zheng et al. (2021) noted, however, that the rapid transition to online learning modality has resulted in several issues and challenges that have not been resolved, especially regarding student course performance. Panagouli et al. (2021) emphasized that while some parents said that their children's performance had declined, other parents believed that online learning had been advantageous, whereas teachers also indicated that students experienced academic gaps and problems in both reading (Cuñado & Abocejo, 2018) and mathematics when compared to previous years. Due to reports that children's reading comprehension had decreased due to COVID-related school closures (Where are we on Education Recovery, 2022), countries opted to gradually reopen schools despite COVID-19 threats. In addition, the loss of mathematics learning can be attributed to various factors, including students' lack of engagement, teachers' restricted use of effective teaching strategies, the socioeconomic position of families, and their lack of cooperation with teachers (Haser, et al., 2022; Ahshan, 2021).

**Differences in the scholastic performance between male and female students based on their grade level**

Table 2 displays the grade level performance difference between male and female students based on the T-test.

**Table 2.**

Performance differences between male and female students based on grade level

Grade Level	Sex	N	Mean	SD	t-value	p-value
7	Male	51	89.65	2.75	-2.607	0.011
	Female	48	91.12	2.89		
8	Male	55	87.87	3.81	-1.092*	0.277
	Female	61	88.64	3.74		
9	Male	47	88.36	3.09	-2.049	0.044
	Female	42	89.52	2.23		
10	Male	61	88.59	3.54	-3.855	0.000
	Female	47	90.91	2.73		
11	Male	47	90.26	3.41	-2.516	0.014

	Female	54	91.83	2.81		
12	Male	57	90.21	2.08	-1.966*	0.052
	Female	50	90.86	1.29		

As reflected in the table, the T-test revealed that the difference in scholastic performance between male and female students in grades 8 and 12 is not statistically significant, as described by the p-values of 0.277 and 0.052, respectively. This means there is no difference between the scholastic performance of male and female students in the said grade levels within the context of the pandemic. However, the difference in the scholastic performance between male and female students in other grade levels demonstrated statistical significance ( $\alpha < 0.05$ ), indicating a variation in the performance between the male and female students, as further illustrated in the table.

The results imply that despite COVID-19 challenges, male and female students performed well in the virtual classroom setting, as can also be described by their mean grades. This supports the study of Seage and Türegün (2020), who unveiled that the mean performance of students who obtained instruction in a blended learning context is statistically higher than that of students who received traditional instruction. However, the disparity between male and female students' performance in other grade levels may be influenced by the student's desire for online and modular learning, family background, family involvement, or other activities they engaged in while learning at home during the pandemic. As explained by Li and Lalani in the research entitled *The COVID-19 Pandemic has Changed Education Forever in 2020* <https://www.weforum.org/agenda/2020/04/> when students are at home, they are occasionally distracted from their studies by their family members, who direct them to complete household chores while supposedly taking online classes, which could affect their motivation to learn.

Although the student's scholastic performance was highly favorable, as evidenced by their mean grades, this cannot be generalized as other underlying conditions could affect the consistency of the results. Furthermore, the abrupt change in the learning environment created challenges because the idea of blended learning was foreign to the students who were used to traditional learning. Lotrecchiano et al. (2013) also highlighted that the inability of the students to manage their time successfully and their varied backgrounds contributed to the difficulty in meeting the expectations of blended learning, which in turn could affect the performance of students across grade levels. The fact that classes were held online poses challenges for other students to succeed in their academic endeavors and for teachers to measure students' learning.

To sum up, the inadequacy of gadgets available, insufficient load, intermittent mobile or internet access, existing health conditions, difficulty in self-regulated learning, conflict with other activities, high electrical utilization, and interruptions are among the challenges students faced during the pandemic. Several students also prefer attending the limited in-person classes during the pandemic, whereas others do not due to their fear of contracting the coronavirus. However, the students display very satisfactory to outstanding scholastic performance amidst COVID-19, as described by their mean grades. Unlike other grade levels, the present study finds no significant performance difference between male and female students in grades 8 and 12. The student's interest in online and modular learning, family background, parental involvement, or other activities the students engaged in while learning at home during the pandemic may have contributed to the resulting difference in the performance between male and female students in other grade levels.

#### 4. CONCLUSION

The COVID-19 pandemic prompted calls for the country's educational system to depend on modular and online learning. Consequently, this study sought to ascertain the students' profile and scholastic performance concerning the COVID-19 pandemic. On the students' profile variables, most students indicated that they received instructional support from their parents, guardians, and siblings during the pandemic, making it less complicated for them to accomplish their academic activities. Further, due to COVID-19's restrictions on students visiting computer stores and other locations, mobile data and broadband are the preferred alternatives. Pure online learning and blended learning were identified as the students' preferred forms of distance learning modalities; their choice may have been prompted by their concern about getting a virus or the distance between their homes and school. Creating flexible and responsive teaching practices in the current and post-pandemic educational environment is recommended. The school community may also create strategic plans and evidence-based guidelines that students, teachers, and other stakeholders could adopt for the new normal education post-COVID-19. Students' motivation to perform in the virtual learning environment could be increased by enhancing internet connectivity and ensuring access to high-quality learning resources. Future relevant investigations could include other public schools to provide a more comprehensive understanding of the learning challenges that students faced in the context of the COVID-19 pandemic. Other relevant factors like the student's interest in online and modular learning post-COVID-19, family background, parental involvement, and quality of the teaching and learning process in the virtual classroom, could also be investigated by employing a mixed-method approach to provide a more precise and holistic understanding of the student's academic journey amidst the pandemic.

#### 5. ACKNOWLEDGEMENT

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