

## **LEARNING PREFERENCES AND VACCINATION STATUS OF STUDENTS IN A TERTIARY INSTITUTION: BASIS FOR FLEXIBLE LEARNING IMPLEMENTATION 2.0**

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**Abstract:** The objective of this study is to determine the learning preferences and vaccination status of students from a local college in Olongapo City, Philippines. The investigators employed a descriptive-survey research among 5,021 students who were currently enrolled in the academic year of 2021-2022. Results show that 94.7% prefer online mode of learning; 79.7% show intention to enroll for the next semester of the new academic year; however only 51.7% of the students wanted a face-to-face class and 61.4% of the students' parents/guardian approve their son/daughter to attend face-to-face classes. In terms of vaccination status, 95.3% of the students have their vaccinations shots already (fully vaccinated) and Pfizer was the brand of choice of the 38% students. The study concluded that students are still prefer online mode of learning. Also, majority of the students were fully vaccinated. The study recommends continue and enhance the implementation of flexible learning of the institution.

**Keywords:** Learning preference, Face-to-face classes, Flexible learning, Online mode, Vaccination status.

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**Citation:** Gadia, E.D., Asio, J.M.R., Abarintos, E.C., Paguio, D.P., Ceralde, L.P., & Soriano, I.DP. (2022). Learning preferences and vaccination status of students from a local higher education institution: Basis for flexible learning implementation 2.0. *Social Sciences, Humanities and Education Journal (SHE Journal)*, 3(3), 348 – 356. DOI: 10.25273/she.v3i3.13923.



## INTRODUCTION

Now that the world has controlled the spread of the COVID-19 pandemic and somehow was able to find some promising vaccine to protect the population, most countries worldwide are beginning to return to their everyday lives. This issue also applies to the education system that came to a temporary stop due to the effects of the pandemic. Batubara (2021) revealed that the unpreparedness of students in the online teaching and learning process was an obstacle mentioned by some studies. For almost two years, students suffered and, up to now, are still on the brink of shock and disbelief at what the pandemic brought upon them. As academic institutions across the globe continue to deal with the pandemic, there is necessary to examine the different instructional approaches available to students (Singh et al., (2021). The question now does students still want to return to school. In an article, students considered blended learning limited regarding interactions with the lecturer, group work, peer engagement, class involvement, and the ability to ask questions about technical information (Mali & Lim, 2021). The institution administered the massive exposure for web-based learning with the previous competency; however, some institutions still find it challenging to operate remotely (Louis-Jean & Cenat, 2020). It was a difficult time when schools suddenly closed and had to revert to online learning. The teachers also shared the same experiences. One paper described the adaptations and challenges a tutor faces to the new mode of delivery, thus leading to further preparation (Moorhouse, 2020). In addition, institutions tried to improve their digital infrastructures to address the overwhelming demands of online learning. Nevertheless, a student's performance associates positively with good wifi access, which is relative to using mobile internet data (Chisadza et al., 2021). In addition, during the time of shifting from face-to-face to distance learning, research shows a significant impact on students' learning performance (Almanar, 2020).

For an institution to adapt to the different effects of the COVID-19 pandemic, different educational institutions must develop anticipation, coping, and adaptation capabilities and act on lessons taught (Bartuseviciene et al., 2021). For instance, one research paper tested all online interactive teaching products. After their evaluation, the paper recommended that universities and colleges quickly change face-to-face to online with minimal expenditure (Basilaia et al., 2020). During closures, educational institutions designed curricula and prepared teaching-learning strategies for post-coronavirus (Tadesse & Muluye, 2020). These educational institutions designed strategies to recover lost learning and return students to school when schools reopen.

The students' learning preferences also play a significant role in the institution to consider which is the best approach or mode the school will enforce during face-to-face learning. The imposition of eLearning sets boundaries for older students; those residing in rural areas with work and family responsibilities and limited electronic resources (Ramos-Morcillo et al., 2020). In this coming post-pandemic era, eLearning and virtual education may become a fundamental part of the education system at all levels. The higher education institutions and universities need to plan for the post-pandemic to ensure student learning outcomes and standards of educational quality (Rashid & Yadav, 2020). In the Philippines, one university intends to provide high-quality, curriculum-based learning materials that students have access to despite their levels of internet connectivity (Rodrigo & Ladrado, 2022). From previous research about which type of learning is more effective, synchronous learning is more efficient for teaching than asynchronous and modular learning ((Solomon & Alforja, 2021). In terms of proficiency with technology and online

learning expectations of students, a study revealed that students who were proficient simultaneously had very high expectations for online instructors (Panoy et al., 2022).

In the case of vaccination status for students, it is essential to educate the community regarding the vaccine's benefits. In the US, from March-May, 2021, at least 34% of 18-39 years old received the vaccine for COVID-19 (Baack et al., 2021). This idea is a precautionary measure to help students and other individuals get back to their outside activities and immerse themselves in the surroundings. However, some students hesitate to get vaccinated (Saied et al., 2021). In a review article about COVID-19 vaccine hesitancy, one of the common factors for higher vaccine hesitancy is the young age (Aw et al., (2021). In addition, a group of investigators shared some factors like knowledge of the vaccine, being a health science student, and being in a family practicing COVID-19 prevention associated with vaccine acceptance (Taye et al., 2021). Another study from another country also exposed that only 50.1% of the surveyed students opted for vaccination (Fazel et al., 2021). In the Philippines, different studies also showed varying contexts regarding vaccines and their acceptance by the students. One particular study points out hesitancy based on the brand of vaccine (Amit et al., 2022; Zagefka et al., 2022), and the best is the one available (Lacsa, 2022). To bridge the gap of hesitancy, digital technologies (del Castillo, 2021) and religious leaders (Gopez, 2021) can affirm the efficacy of COVID-19 vaccines.

This idea prompted the investigators to initiate this study from the reviewed literature and the gap in knowledge that they found. This notion is to initiate and lay down the foundation of the institution's knowledge on the status of learning preferences of the students as well as their vaccination status in preparation for

the upcoming implementation of the face-to-face mode. Thus, the primary objective of this study is to determine the learning preference of the students and their vaccination status before the school implements the face-to-face encounter with the students, faculty, and personnel.

## **METHODS**

This study used a descriptive-survey research design with the online survey as the prime data-gathering tool. Descriptive research is the one that tries to assess or analyze a particular sample of a population and describe it using different means, for instance, a simple survey method. On the other hand, a survey is a simple measuring tool to gather data for a particular research endeavor. Since the study intends to analyze the learning preferences and vaccination status of the student, the said research design complements. The result of this study is the basis of the institution's flexible learning implementation for the upcoming academic year of 2022-2023.

### **Respondents of the Study**

In order to attain the objectives of the study, the researchers employed the total population of the institution, that is, 5192 enrolled students. This number is necessary to grasp the general perspectives of the Gordon College students' community. However, after more than 2 months of data gathering, only 5021 participated, comprising 96.71 percent of the total student population. The respondent should be a bona fide student of the tertiary institution involved in the study, enrolled in the academic year of 2021-2022, have a stable internet connection, and be willing to participate in the said online survey.

### **Instrument of the Study**

The investigators created an instrument based on the objectives of the study. The research instrument contains the following parts: a) the respondents' profile; b) assessment of the general guidelines for the upcoming face-to-face classes as per Joint Memorandum Circular No. 2021-04 and

CHED Memorandum Order (CMO) No. 01, Series of 2022. The instrument was face validated by a panel of experts, including a researcher, a data analyst, a faculty member (with a research background), a vice president for academic affairs, and a school administrator. From their expert comments and suggestions, the researchers revised the instrument accordingly before the actual data gathering schedule. For ease of data gathering and the observance of safety protocols, the researchers encoded and employed the Google Form for the online survey.

### Data Analysis

The researchers used descriptive and inferential statistics to analyze the gathered data to achieve its objectives. With the help of IBM SPSS v. 23, Frequency and percentage for the descriptive analysis and Pearson Chi-Square for the inferential statistics were utilized

### RESULT

This study intends to analyze the demographic profile, the learning preferences, and the vaccination status of the students of a tertiary institution in preparation for the upcoming implementation of the face-to-face mode of the institution. Based on the gathered data, the study presented the results from the computation of descriptive and inferential statistics in the succeeding tables below.

**TABLE 1.** Demographic profile of the student-respondents

Profile	<i>f</i>	%
<b>Sex</b>		
Female	3313	66.0
Male	1708	34.0
<b>Civil Status</b>		
Single	4960	98.8
Married	44	0.9
Others (widowed Common Law Partner)	17	0.3
<b>College</b>		
CAHS	556	11.1
CBA	1958	39.0
CCS	569	11.3

CEAS	1137	22.6
CHTM	801	16.0
<b>Year Level</b>		
First Year	1112	22.1
Second Year	1418	28.2
Third Year	1472	29.3
Fourth Year	1019	20.3
<b>Scholarship</b>		
DOH Scholars	50	1.0
FHE Scholars	4652	92.7
Paying	115	2.3
Others	204	4.1
<b>Location</b>		
Olongapo	3062	60.98
Zambales	1337	26.63
Bataan	548	10.91
Pampanga	21	0.42
Other Places	53	1.06
<b>Source Income</b>		
Salary	3240	64.5
Own Business	546	10.9
Remittance	294	5.9
Pension	123	2.4
Others	818	16.3
<b>Household Members</b>		
1-5 members	2992	59.5
6-10 members	1904	37.9
11-15 members	117	2.4
16-20 members	8	0.2
<b>Total</b>	<b>5021</b>	<b>100</b>

Table 1 shows the study's frequency and percentage distribution of the student respondents. Regarding gender, more than two-thirds of the respondents were females compared to males. In terms of civil status, the majority of the student-respondents were still single. Almost two-fifths of the entire student-respondents came from the institution's College of Business and Accountancy. On the other hand, almost one-third of the respondents were in the third-year level of the institution. It is also noteworthy that the majority of the respondents of the school are beneficiaries of the free higher education program of the Commission on Higher Education (CHED). Almost two-thirds of the student-respondents were from Olongapo City and the neighboring provinces. Regarding the family's source of income, almost two-thirds of the respondents also rely on their salary. Lastly, almost 60 percent of the respondents have at least 1-5 household family members.

**TABLE 2.** *Learning preferences of the student-respondents*

	<i>f</i>	%
<b>Flexible Learning</b>		
Offline Materials/Non-digital Instructional Materials (IM) + Online	474	5.3
Online	4547	94.7
<b>Intention to Enroll Next Semester</b>		
Yes, I will enroll next semester	4003	79.7
No, I am a graduating student	937	18.7
No, I will stop next semester	47	0.9
No, I will transfer to another school	34	0.7
<b>Willingness to attend face-to-face classes.</b>		
Yes, because I am fully vaccinated and will follow all the protocols.	2497	49.4
Yes, because I intend to be fully vaccinated and follow all the protocols.	117	2.3
No, I am not confident and will not be safe even if I am fully vaccinated.	401	8.0
No, I am not vaccinated, so I will not be safe.	27	0.5
No, I prefer the online learning mode, and I am adapted to it.	331	6.6
Undecided	648	12.9
Not applicable	1018	20.3
<b>Parent/Guardian approval to attend face-to-face classes</b>		
Yes	3084	61.4
No	919	18.3
Not applicable	1018	20.3
<b>Total</b>	<b>5021</b>	<b>100</b>

Table 2 exhibits the frequency and percentage distribution of the student-respondents in terms of their learning preferences. As seen from the table, most respondents still prefer the online (synchronous + asynchronous) mode. When the survey asked the students about their intention to return to school, almost four-fifths responded affirmatively. In terms of willingness to attend face-to-face classes, almost half of the student-respondents that they will attend. Finally,

regarding the parent/guardian approval for face-to-face class attendance, almost two-thirds responded on the affirmative side. This result only shows that the student-respondents in the institution are still into the online learning modality; however, they are still optimistic about participating.

Table 3 presents the frequency and percentage distribution of the vaccination status of the student-respondents. As observed from the presentation, in terms of the students' vaccination status, the majority of the respondents already have their vaccination and booster shots. In the case of the vaccine brand, most of them were vaccines made by Pfizer, followed by Sinovac and Moderna brands. This vaccination status of students is part of the school's information drive and the city government's Olongapo City initiative for its constituents during the mass vaccination campaign. Lastly, in the case of the health conditions of the students, a majority of them were in good health and regular as well.

**TABLE 3.** *Vaccination status of the student-respondents*

<b>Status</b>	<i>f</i>	%
Fully Vaccinated (with booster)	4112	81.9
Fully Vaccinated	677	13.4
Partially Vaccinated		
Scheduled for Vaccination	23	0.5
Unvaccinated but willing	23	0.5
Undecided	54	1.1
Unwilling to get vaccinated	77	1.5
	55	1.1
<b>Vaccine Brand</b>		
Pfizer	1907	38.0
Sinovac	1269	25.3
Moderna	1138	22.7
AstraZeneca	359	7.1
J&J	225	4.5
Sinopharm	117	2.3
Sputnik V / Bharat Biotech	6	0.1
<b>Health Condition</b>		
Normal	4757	94.7
With Comorbidity	264	5.3
<b>Total</b>	<b>5021</b>	<b>100</b>

**TABLE 4.** *Result of Pearson Chi-Square*

		Enroll Next Sem.	Vaccine Status
Learning Preference	$X^2$	<b>72.150</b>	9.460
	df	3	6
	Sig.	<b>.000*</b>	.149

*Note: \*The Chi-square statistic is significant at the .05 level*

In order to understand if there is an existing relationship between the learning preference, the intention to enroll for the next semester, and the student's vaccination status, the study used a Pearson Chi-Square. Based on Table 4, the student's learning preferences and the intention to enroll next semester yielded substantial evidence of a relationship. Since the study obtained  $X^2(3, N=5021) = 72.150, p = .000$ , there is enough proof to show the relationship between the learning preference and the intention to enroll next semester of the student-respondents. On the other hand, the student's learning preferences and vaccination status did not produce enough results to yield a significant relationship since the study obtained  $X^2(6, N=5021) = 9.460, p = .149$ . This result means that there is no significant relationship between the learning preference and the students' vaccination status.

## DISCUSSION

The primary objective of this research is to determine the learning preferences and the vaccination status of students studying in a tertiary institution in Olongapo City, Philippines. Based on the result of this study, the institution can determine the best course of action for preparing the face-to-face learning mode for the upcoming academic year of 2022-2023. In a study, students perceived the face-to-face learning mode as superior to blended learning due to the face-to-face environment's social elements (Mali & Lim, 2021). Concerning the previous statement, another article demonstrated a sharp drop in students who

are weak in face-to-face learning (El Refae et al., 2021).

The study's results presented the basic demographic profile of the student respondents. The demographic characteristics impact students' performance in face-to-face and distance learning (El Refae et al., 2021). Since the institution is a local college funded by the city's local government, it is safe to say that most students studying here belong to the lower class. Due to the subsidized tuition fees and the beneficiary of the free higher education program of the national government, more students enrolled in the school.

In the students' learning preferences, the study found that a substantial majority still prefer the online mode. A related study disclosed that students are more comfortable and satisfied with online learning (Murad et al., 2020). However, another study revealed that face-to-face educated students performed less than screen-to-screen educated learners (Kurtulmus-Yilmaz & Onoral, 2021). They have already adapted to this learning type, and some have already exploited its potential. Nevertheless, there were still some issues like a strong internet connection. A study showed that a good internet connection positively affects a student's performance (Chisadza et al., 2021). In addition, an excellent working gadget like appropriate smartphones, laptops, or personal computers at home is yet another issue at hand for students.

As for the vaccination status, ever since the first viable vaccine was out on the market and approved by different organizations and agencies, mass vaccination was inevitable. A study revealed that 90.5% of the participating students perceived the importance of the COVID-19 vaccine (Saied et al., 2021). This strategy ensures herd immunity and protects other people, especially the morbid ones. It is a good choice for the younger population, especially the students who have their shots

of the vaccine to get immune and build resistance against the COVID-19 virus. However, an article revealed that at a young age, being female, colored skin, and having a low educational background are associated with high vaccine hesitancy (Aw et al., 2021). Now that majority of the schools all over the world are going back to their normal mode; no one should be left behind. From the current study, most of the respondents already have their shots (including their booster dose), constituting more than 90 percent of the student-respondents. This result somehow is the same as Hoening et al., 2022, wherein 80% of their college campus students have been vaccinated. Nevertheless, a study also showed that out of 27,910 students from 180 schools in England, only 50.1% would opt to take a vaccination (Fazel et al., 2021). Furthermore, from a cross-sectional study in Ethiopia, only 69.3% of university students accept the idea of being vaccinated.

The study showed that students have adapted to the new form of learning due to the COVID-19 pandemic. Although some still prefer the face-to-face mode of learning, the decision is up to the school management to implement the best learning for the students. At the same time, the health and safety of the students are also at hand once the school opens its door to the students. The vaccination is only one factor; there are still other variables in play to prevent or minimize the spread of the infection once the school is at its entire operation this upcoming semester and academic year. Nevertheless, the result of this study somehow will provide vital information for the school management to make sound decision-making.

## CONCLUSION

From the previous results and discussion of the study, the researchers at this moment concluded that the demographic profile of the respondents constitutes of the following characteristics: female, single; came from the College of Business and Accountancy; a third-year; a beneficiary of the free higher

education program; lives in Olongapo City; family income is from salary; and have at least 1-5 family household members. Regarding learning preferences, student-respondents still prefer the online mode, willing to enroll for the next semester of the academic year. They are willing to have face-to-face classes with the approval of their parent/ guardian in attending a face-to-face class. In terms of the vaccination status, most of the student-respondents have a fully vaccinated status (including booster shots). The most common vaccine brand that they injected was Pfizer. Lastly, the majority of the student-respondents were in excellent and good health. Lastly, this study found a statistical relationship between the students' learning preferences and their intention to enroll for the next semester of the academic year. However, there was no significant relationship between the learning preferences and the vaccination status of the student-respondents.

## RECOMMENDATIONS

Based on the results and conclusions of the study, the researchers now recommend the following:

- 1) Promote and encourage unvaccinated students by providing them the opportunity to be vaccinated free and educating them about the benefits of vaccination.
- 2) Prepare the institution for the upcoming implementation of blended learning and adhere to the guidelines and protocols endorsed by the government and other related agencies and task forces to observe the safety and wellness of the incoming students.
- 3) Plan appropriate measures and schedules for the students, faculty, personnel and stakeholders for the incoming academic year in implementing the blended learning mode of instruction.
- 4) Reinforce the implementation and institutionalization of the blended learning model of the institution and carry out extra precautionary measures for those who opt to have the face-to-face mode of learning.

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