

The Satisfaction of the Students on Home-Based Distance Learning in the Philippines

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Abstract

Distance education has quickly been integrated into the education system anywhere, and the pandemic has intensified the need for it. The Philippines is just one of the countries that grappled with the effects of the unseen enemy; therefore, leaning mainly to home-based learning just cope to the need for learning and continuity. This study aimed to elicit the satisfaction level of Filipino college students both enrolled in private and public higher education in the country. To proceed with the study, the researchers adapted an 18-item questionnaire to find out the satisfaction level of the students in the home-based learning modality implemented in the entire country during the school year 2022 – 2023. Using the satisfaction scale adapted from Nabayra and Tambong (2023), results showed that Filipino students had an overall slight satisfaction with the implemented home-based learning modality. Moreover, the demographics, namely gender, year level, type of institution, and type of home-based learning modality, are not directly associated with students' level of satisfaction, which can only contribute less than 1% of the variance to their satisfaction.

Keywords: home-based learning, distance learning, student satisfaction, post covid, higher education

1. Introduction

The significant increase in the demand for remote learning has amplified educational institutions to integrate the modality into their regular educational operations. This allows them to offer a more flexible setup to learners and faculty and benefit from the promising features of remote learning. So much so that institutions have to consider their students' satisfaction in the setup because the success will heavily depend on this factor.

Over the years, educational institutions have tried to incorporate advanced technologies in delivering their lessons (Sosa Díaz, Guerra Antequera, & Cerezo Pizarro, 2021); this included delivering online learning while learners could study at home or mixed model of learning called the flipped classroom. However, the recent pandemic has brought the educational system to its knees, leaving schools, teachers, and students unprepared for the consequences. All schools from all levels in the Philippines had no choice but to put their studies to study from home, either online, modular, or mixed. This created an increased demand for schools, teachers, students, and infrastructure to accommodate the relatively new modality to the majority (Tay, Lee, & Ramachandran, 2021).

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Though online learning could have been reliable in the era of the pandemic, the Philippines was not able to catch up and cater to all learners using electronic learning. The socio-economic status of learners and digital infrastructure conditions are still factors for the success of the modality (Cuisia-Villanueva & Nuñez, 2021). As a result of the situation, the Department of Education (the basic education unit of the Philippine education system) spearheaded the implementation of blended learning or modular learning among those learners who may have difficulty accessing learning materials electronically.

The use of modular learning allowed teachers and learners to have access to lessons and progress on their studies using printed materials or modules. Learners collect these materials from the designated collection areas agreed upon by the universities and community leaders. Learners are required to accomplish each material according to the timeline provided by the professor and return them to the collection or drop-off areas. This lessened the person-to-person contact, hence the goal to stop the spread of the virus.

Blended distance learning was the most feasible pedagogical approach implemented by the branch of the government during the COVID-19 pandemic. This is known in the literature as home-based learning (HBL). Modular learning (Dangle & Sumaoang, 2020; Martin-Chang & Levesque, 2017) is believed to promote independent and self-directed learning as learners learn at their own pace and at their own time. However, Lim (2021) admitted that home-based learning may lead to learning loss if students do not have available home learning partners (HLP) around. She further added that despite having HLP around, the ability of the HLP to provide instruction poses a challenge. This poses an incredible challenge for teachers as they are expected to support both the students and HLPs during HBL.

In the context of this research, HBL refers to the most feasible pedagogical approach implemented to address the education must-continue initiative amidst the public health emergency. Hence, HBL covers online and modular (offline) distance learning.

2. Literature Review

Satisfaction of students in Asian countries

In the study conducted by She, Ma, Jan, Nia, & Rahmatpour (2021), they found that Chinese students have a significant positive relationship between their interaction and satisfaction with their online learning during the pandemic. It was confirmed in their study that self-efficacy is one of the key motivational constructs in online learning. On the other hand, research done by Ke and Kwak (2013) among 392 undergraduate and graduate students in the United States claims that students with higher education reported low levels of satisfaction with web-based learning regardless of their positive interaction. The same is true for the participants who are in the minority group, regardless of their positive instruction and instructor support.

Moreover, the satisfaction of online learning varied in gender as a result of two separate studies. According to Lu and Chiou (2010), males are more satisfied with online learning setup following all predictors during the study, while in a similar study done by Gonzalez-Gomez et al. (2011) among university students in Spain, females are more satisfied with e-learning. In the latest study conducted by Hassan, Aremu, Hussain, and Lohdi (2021) among Malaysian students, both males and females were satisfied with the E-learning system concerning quality and support from the system of their online platform.

In a study done among university students in Saudi Arabia, a quarter of the participants claimed that their productivity was low or poor, and the other quarter mentioned that it was below average. In terms of anxiety, Saudi students claimed that home learning is fine, while 23% of them said that the level of distraction while studying at home caused them anxiety. Overall, the

student, post-pandemic, the students still preferred online learning as it showed a positive correlation among the results of the said study (Alsomali et al., 2023).

The same research topic yielded the same results when conducted among college students in Vietnam. Results showed that teachers and students could adapt to the sudden change in the teaching-learning setup, thus implying potential capacity in the modality in the long term. However, the interaction among learners (student to student) did not meet satisfaction as one of the major drawbacks was the unfamiliarity of the learners with the use of technology (Dinh & Nguyen, 2020).

In Indonesia (Surahman & Sulthoni, 2020), more than half, or 60% of all university undergraduate students expressed "very satisfied" and "satisfied" or 60% of all university undergraduate students expressed "very satisfied" and "satisfied" with the home-based learning setup during the pandemic. Among the respondents, students who felt dissatisfied pointed out reasons such as technological (computer and internet connection) and pedagogical (lecturer's involvement on the learning process).

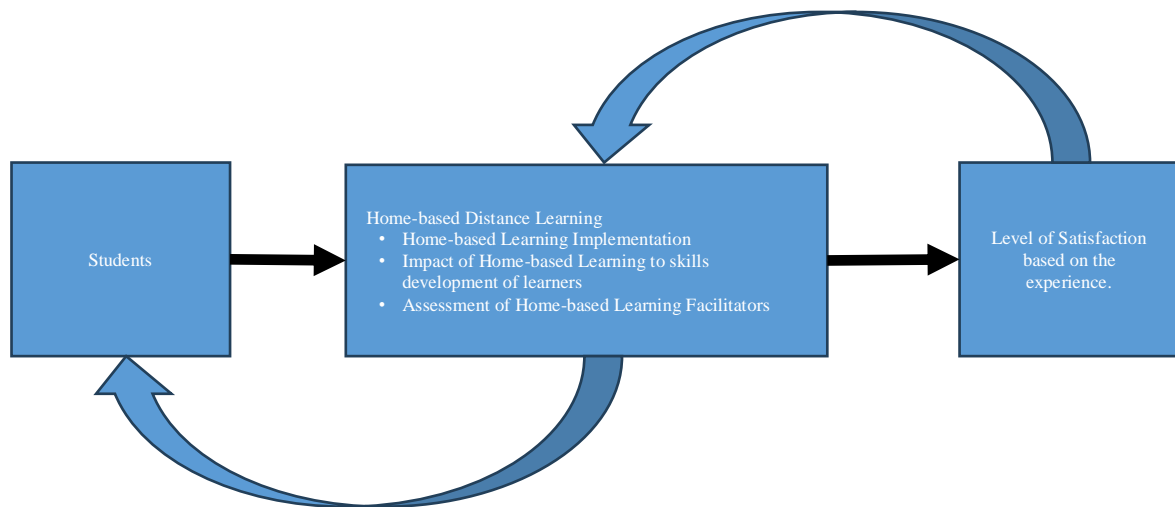
In a similar study conducted among graduate students (master's and doctorates) in the Philippines, results showed that respondents are eager to continue the remote learning setup since they are all professionals and have multiple commitments and responsibilities, such as taking care of families and businesses. The respondents pointed out that convenience is their top priority in graduate courses (Author et al., 2023).

Among the Thai students, on the other hand, participants from Community Public Health and Dental Public Health at Sirindhorn College of Public Health of Praboromarajchanok Institute had an overall satisfaction rating during the outbreak's home-based learning mode since most of the participants have their personal computers (79%) and the rest have desktops, iPads/tablets, along with their smartphones (Maleelai & Chaichuay, 2022).

Study Objectives

The research aimed to know the level of satisfaction of Filipino college students with the home-based distance learning implemented upon the onset of the pandemic until the restrictions were lifted using an online survey.

In addition, the research also targeted to raise awareness on the overall satisfaction of university students that would eventually help educational institutions to improve the conduct of distance learning, the government to amplify the campaign of improved digital infrastructure, and students achieve satisfactory experience while learning at home.

Figure 1. Conceptual Framework

3. Methodology

3.1. Research Design

The researchers utilized a quantitative study using descriptive correlation of the data collected. A descriptive correlational design describes the variables and the relationships that occur naturally within each other (Sousa et al, 2007).

The study employed a purposive sampling method as the respondents were identified as college students enrolled in the Philippines in both private and public high schools. These samples share the same characteristics and experiences as they have experienced at-home learning or currently experiencing the mode of study (Guarte & Barrios, 2006).

3.2. Participants

In total, there were 1742 Filipino college students from different parts of the archipelago participated in the study. There were no limits on the number of participants that could participate because the research wanted to find out the correlation between different variables of the research. Purposive sampling has recently become popular among researchers because of its low-cost nature with the use of the Internet. It also allowed larger samples of people to engage in a study with ease of access (Barratt et al., 2015), which is suitable in the archipelagic setup of the Philippines of more than seven thousand islands.

3.3. Data Collection

The instrument operated on Microsoft Forms, the researchers shared the link and QR code of the questionnaire to colleges and universities where permission to conduct research was sought and approved. The questionnaire was introduced to the participants during the whole month of February to October 2023 – post-pandemic. The instrument was also found reliable, with a reliability coefficient of 0.89 using Cronbach's alpha. In interpreting the reliability coefficient of the Likert-scale questionnaire, the following was used: “_ > .9 – Excellent; _ > .8 – Good; _ > .7 – Acceptable; _ > .6 – Questionable; _ > .5 – Poor; and _ < .5 – Unacceptable” (George & Mallery, 2003). Hence, the instrument used in this study is reliable.

Participants were asked about their level of satisfaction in three different areas of home-based learning: (1) home-based learning implementation, (2) impact of home-based learning in skills development, and (3) assessment of home-based learning facilitators. The authors measured the significant relationship of home-based learning with gender, year level, the type of learning used (pure online, modular, or mixed), and the type of higher (private or public) education they are enrolled in.

3.4. Data analysis

For data analysis, the researchers utilized means to describe and summarize the level of satisfaction of Filipino college students with home-based learning. Standard deviation was also used to check the heterogeneity and homogeneity of the responses of the students for every statement indicator. Frequency counts and percentages were used to describe the demographic profile of the student respondents. Moreover, Eta correlation was used to analyze the relationship of level of satisfaction to home-based learning modality to gender, year level, type of institution, and type of distance learning modality. Eta squared was used to determine the variance in the level of satisfaction that can be attributed to the independent variables respectively.

The level of satisfaction was based on the scale adapted and modified from Nabayra & Tambong (2023) as shown in the Table 1 below.

Table 1. Level of Satisfaction Scale

| Scale | Level of Satisfaction |
|-----------|-----------------------|
| 1.00-1.49 | Very Dissatisfied |
| 1.50-2.49 | Dissatisfied |
| 2.50-3.49 | Slightly Satisfied |
| 3.50-4.49 | Satisfied |
| 4.50-5.00 | Very Satisfied |

Interpretation of correlation results was based on the works of Dancey and Reidy (2004). This applies to both positive and negative relationships.

Table 2. Eta Correlation Value

| Eta Correlation Value | Strength of Correlation |
|-----------------------|-------------------------------|
| ≥ 0.70 | Very strong relationship |
| 0.40 – 0.69 | Strong relationship |
| 0.30 – 0.39 | Moderate relationship |
| 0.20 – 0.29 | Weak relationship |
| 0.01 – 0.19 | No or negligible relationship |

3.5. Ethical Consideration

Researchers guarantee that no sensitive information was asked from the respondents as per the Data Privacy Law in the Philippines or the RA 10173. All respondents consented to participate in the study. All information is treated with utmost confidence and security.

3.6. Results and discussions

After The data was gathered, and researchers gathered the following information: Using SPSS to accurately analyze and process the correlation of the researched data to gender, year level of study, and type of institution.

It can be gleaned in Table 1 that most of the 1,742 college-student respondents were male (1,194 or 68.5%), and the rest were female (548 or 31.5%). Furthermore, the majority of them are first-year college students (752 or 43.2%) followed by second-year college students (428 or 24.6%), but only four or 0.2% are fifth-year college students since there are selected courses in the country have at least five years of residency in college. To add, most of the respondents come from private higher education institutions (975 or 56%), and the remaining 767 or 44% come from public or state-sponsored universities and colleges in the country. Regarding home-based learning modality, 1,495 or 85.8% of the college respondents are using blended learning (a combination of online and modular learning), while only 130 or 7.5% and 117 or 6.7% are learning online and in a modular setup, respectively. This may be attributed to the available resources of their respective universities and colleges.

Table 3. Respondents' profile

| Gender | Frequency | Percentage (%) |
|---------------|------------------|-----------------------|
| Male | 1194 | 68.5 |
| Female | 548 | 31.5 |
| Total | 1742 | 100 |

| Year Level | Frequency | Percentage (%) |
|---------------------------------------|------------------|-----------------------|
| 1st year (both regular and irregular) | 752 | 43.2 |
| 2nd year (both regular and irregular) | 428 | 24.6 |
| 3rd year (both regular and irregular) | 315 | 18.1 |
| 4th year (both regular and irregular) | 243 | 13.9 |
| 5th year (or more in college) | 4 | .2 |
| Total | 1742 | 100 |

| Type of Institution | Frequency | Percentage (%) |
|----------------------------|------------------|-----------------------|
| Public | 767 | 44.0 |
| Private | 975 | 56.0 |
| Total | 1742 | 100 |

| Distance Learning Modality | Frequency | Percentage (%) |
|-----------------------------------|------------------|-----------------------|
| Blended (both online and modular) | 1495 | 85.8 |
| Modular | 117 | 6.7 |
| Online | 130 | 7.5 |
| Total | 1742 | 100 |

Table 3 presents that the overall level of satisfaction of Filipino college students with home-based learning modalities is slightly satisfied, as evidenced by the mean ($\mu= 3.39$) and $SD = 0.24$. The low standard deviation suggests that the student-respondents agree with their slight satisfaction with the learning modalities.

Moreover, the highest satisfaction level is attributed to the statement "The teacher/module provides assignments/activities that are useful for learning and understanding the subject" ($\mu=3.85$, $SD=0.76$); followed by "The school, adviser, or teacher provides clear and accurate information regarding the objectives and requirements" ($\mu=3.77$, $SD=0.81$). Hence, students are most satisfied

whenever the teachers give activities, clear explanations, and substantial information about the subject for them to better understand the topics.

On the contrary, the lowest satisfaction level is attributed to "I am more engaged in my online/modular learning than the traditional one" ($\mu=2.92$, $SD=0.98$), followed by "It is easier for me to monitor my academic progress in this home-based learning modality" ($\mu=3.11$, $SD=0.93$). This implies that students are still in the process of adjusting to the transition from the usual face-to-face instruction to blended, which makes monitoring learning and engaging in activities challenging.

Table 4. The overall level of satisfaction among all respondents

| Indicators | Mean | SD | Interpretation |
|--|------|------|--------------------|
| Home-based Learning Implementation | | | |
| This home-based learning modality improves my understanding of concepts and principles in every subject. | 3.30 | 0.94 | Slightly Satisfied |
| I am more engaged in my online / modular learning than the traditional one. | 2.92 | 0.98 | Slightly Satisfied |
| I have more opportunities to reflect on what I have learned in online / modular courses. | 3.28 | 0.91 | Slightly Satisfied |
| I learn a lot in this home-based learning modality. | 3.16 | 0.91 | Slightly Satisfied |
| My online/ modular learning experience increases my opportunity to access and use information. | 3.45 | 0.90 | Slightly Satisfied |
| I better manage my own learning through online / modular learning. | 3.31 | 0.92 | Slightly Satisfied |
| The assessment of my academic progress is accurate in this home-based learning modality. | 3.14 | 0.88 | Slightly Satisfied |
| It is easier for me to monitor my academic progress in this home-based learning modality. | 3.11 | 0.93 | Slightly Satisfied |
| The way online/module materials were presented help to maintain my interest. | 3.24 | 0.90 | Slightly Satisfied |
| Impact of Home-based Learning to skills development of learners | | | |
| The study workload on this online/module learning fits with my personal circumstances. | 3.30 | 0.87 | Slightly Satisfied |
| This home-based learning modality helps me improve my management skills. | 3.52 | 0.88 | Satisfied |
| This home-based learning helps me improve my multitasking skills. | 3.52 | 0.94 | Satisfied |
| The learning activities on the online/ module learning help me to learn relevant knowledge. | 3.53 | 0.78 | Satisfied |
| The online / module learning helps to develop my personal skills and qualities. | 3.50 | 0.85 | Satisfied |
| Assessment of Home-based Learning Facilitators | | | |
| The school, adviser, or teacher provides clear and accurate information regarding the objectives and requirements. | 3.77 | 0.81 | Satisfied |
| The teacher/module provides assignments/activities that are useful for learning and understanding the subject. | 3.85 | 0.76 | Satisfied |
| I am provided with timely and helpful information and guidance in this type of learning. | 3.64 | 0.79 | Satisfied |
| The online/ module learning is well organized. | 3.54 | 0.84 | Satisfied |

| | | | |
|---------------------|-------------|-------------|---------------------------|
| Overall Mean | 3.39 | 0.24 | Slightly Satisfied |
|---------------------|-------------|-------------|---------------------------|

The relationship between the Filipino college students' gender to their level of satisfaction to the home-based learning modality is shown in Table 4. It can be noticed that the gender of student-respondents has no or negligible relationship to their level of satisfaction with the implemented home-based learning modality in their universities and colleges ($\eta = 0.056$). In addition, the eta-squared (η^2) value of .0031 indicates that only .31% of the proportion of variance in the level of satisfaction can be explained by the student's gender. Hence, gender is immaterial to the student's level of satisfaction in the home-based learning modality.

Table 5. Student's level of satisfaction with home-based learning modality and gender

| | Eta-value (η) | Eta-squared (η^2) |
|-------------------------------------|----------------------|--------------------------|
| Satisfaction to Home-based Learning | .056 | .0031 |
| Gender | | |

Table 5 discloses the Filipino college students' year level to their level of satisfaction with the home-based learning modality. It can be noticed that the year level of student-respondents has no or negligible relationship to their level of satisfaction with the implemented home-based learning modality in their universities and colleges ($\eta = 0.098$). In addition, the eta-squared (η^2) value of .96% indicates the proportion of variance in the level of satisfaction that can be accounted to the student's year level. Hence, the year level of the students has no direct association with the student's level of satisfaction.

Table 6. Student's level of satisfaction with home-based learning modality and year level of study

| | Eta-value (η) | Eta-squared (η^2) |
|-------------------------------------|----------------------|--------------------------|
| Satisfaction to Home-based Learning | .098 | .0096 |
| Year Level | | |

Table 6 presents the Filipino college students' type of institution to their level of satisfaction with the home-based learning modality. It can be noticed that the type of institution of student-respondents has no or negligible relationship to their level of satisfaction with the implemented home-based learning modality in their universities and colleges ($\eta = 0.159$). In addition, the eta-squared (η^2) value of 2.53% implies the proportion of variance in the level of satisfaction that can be attributed to the type of institution. Hence, the type of institution of the students has no relationship to the student's level of satisfaction.

Table 7. Student's satisfaction and type of institution enrolled in

| | Eta-value (η) | Eta-squared (η^2) |
|-------------------------------------|----------------------|--------------------------|
| Satisfaction to Home-based Learning | .159 | .0253 |
| Type of Institution | | |

It can be seen in Table 7 that Filipino college students' type of home-based learning modality is related to their level of satisfaction. It can be noticed that the type of learning modality of student-respondents has no or negligible relationship to their level of satisfaction with the home-based learning modality in their universities and colleges ($\eta = 0.047$). In addition, the eta-squared (η^2) value of .22% implies the proportion of variance in the level of satisfaction that the type of distance learning modality can explain. Hence, the learning modality has nothing to do with the level of satisfaction of the student respondents with the home-based learning modalities implemented by different universities and colleges.

Table 8. Student's satisfaction and the type of distance learning modality

| | Eta-value (η) | Eta-squared (η^2) |
|-------------------------------------|----------------------|--------------------------|
| Satisfaction to Home-based Learning | .047 | .0022 |
| Distance Learning Modality | | |

The study showed that the overall satisfaction level of Filipino college students who participated in the study was slightly satisfied. However, the results did not specify reasons for the respondent's actions in some aspects of the questionnaire where learners claimed to be slightly satisfied coincides with the technological status of many Filipino students. Students who come from lower-income families tend to have more difficulty in coping with distance learning because the method heavily relies on a stable internet connection, uninterrupted electrical supply, and overall conduciveness of the living situation of a student (Barrot et al., 2021; Beltran, 2021). In a study conducted among higher education students in the Philippines, results showed that some families with multiple students enrolled have to share computers and smartphones just to catch up for their specific lessons (Palos-Simbire, 2021; Suguitan, 2023).

With the results showing slight satisfaction among the Filipino respondents, it can be noted that technological and infrastructural factors are not the sole reasons. Since the pandemic happened in the middle of the school year in the Philippines, teachers and educational institutions were not ready to adapt instantly to the modality they were called to do. The demand for a swift change of teaching methodology affected teachers' performance in delivering their lessons (Nolasco, 2022). The trial-and-error use of the systems allowed students and teachers to share their experiences in real-time time, which contributed to the learning experience of both parties involved, especially since younger learners, compared to the generation of instructors are much easier to adapt to technology (Hussain et al., 2020).

As distance education has disrupted traditional education, the focus of teacher institutions is to train teachers with appropriate skills in distance learning, and those who are in the service should actively engage in their local districts to attend training that helps them improve their online teaching skills. Creating opportunities for educators to learn and fully adapt to distance learning will affect how learners view distance learning (Yilmaz & Karadag, 2023). However, the instructors have tried to relay instructions as clearly as possible, gaining satisfaction marks among the respondents.

It is also important to note that during the said learning mode, participants were able to adapt and were satisfied with both their time management skills and multi-tasking skills, though the satisfaction does not specify whether their skills were applied to academic or non-academic activities (Lepp et al., 2019).

Other variables that were gathered, such as gender, year level, and type of distance learning modality experience, showed negligible results as they did not show a relationship to the researched topic. Though, further studies with more statistical treatment can be utilized should more research concerning the mentioned will be done in the future.

4. Conclusion

With the number of participants involved in the study, the researchers did not claim that the overall results fully represent of the entire country. However, with the study's results, it is important to note that students may still need to be guided in navigating this type of learning, especially when accomplishing tasks that would require immediate feedback, engagement, and monitoring of student progress. Distance learning requires the independence of learners and geographical distance from educators and institutions; hence, digital skills must be developed, and training for teachers must be intensified should we decide to fully adopt

this type of learning instead of an option or substitution when time calls for it. With all factors involved, this puts up a challenge to educators on how to transfer skills of independence from constant instruction and guidance in distance learning.

Conflict of Interest

There were no conflicts of interest recorded among the authors and participants of the study.

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References

- Alsomali, S., Mandourah, Z., Almashari, Y., Alayed, S., Alqozi, Y., & Alharthi, A. (2023). Factors Influencing Satisfaction with Online Learning During COVID-19 Crisis by Undergraduate Medical Students from King Saud bin Abdulaziz University for Health Sciences (KSAUHS), Riyadh. *Cureus*, *15*(7), 1-8. <https://doi.org/10.7759/cureus.41672>
- Barratt, M. J., Ferris, J. A., & Lenton, S. (2015). Hidden Populations, Online Purposive Sampling, and External Validity: Taking off the Blindfold. *Field Methods*, *27*(1), 3–21. <https://doi.org/10.1177/1525822X14526>
- Barrot, J. S., Llenares, I. I. & del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, *26*, 7321-7338. <https://doi.org/10.1007/s10639-021-10589-x>
- Beltran, M. (2021). Philippine children are left behind by poor distance learning. Nikkei Asia. Retrieved from <https://asia.nikkei.com/Life-Arts/Life/Philippine-children-are-left-behind-by-poor-distance-learning2>
- Cuisia-Villanueva, M. C., & Nuñez. (2021). A study on the impact of socioeconomic status on emergency electronic learning during the coronavirus lockdown. *FDLA Journal*, *6*(1), 1-17. <https://nsuworks.nova.edu/fdla-journal/vol6/iss1/6/>
- Dancey, C., & Reidy, J. (2004). *Statistics without Maths for Psychology: Using SPSS for Windows*. Prentice Hall, London.
- Dangle, Y. R. P., & Sumaoang, J. D. (2020). The implementation of modular distance learning in the Philippine secondary public schools. In 3rd International Conference on *Advanced Research in Teaching and Education*, *100*(1), 108. <https://www.doi.org/10.33422/3rd.icate.2020.11.132>
- Dinh, L. P., & Nguyen, T. T. (2020). Pandemic, social distancing, and social work education: students' satisfaction with online education in Vietnam. *Social Work Education*, *39*(8), 1074–1083. <https://doi.org/10.1080/02615479.2020.1823365>
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. 11.0 update (4th ed.). Boston: Allyn & Bacon
- González-Gómez, F., Guardiola, J., Martín Rodríguez, Ó., & Montero Alonso, M. Á. (2012). Gender differences in e-learning satisfaction. *Computers & Education*, *58*(1), 283-290. <https://doi.org/10.1016/j.compedu.2011.08.017>
- Guarte, J. M., & Barrios, E. B. (2006). Estimation Under Purposive Sampling. *Communications in Statistics - Simulation and Computation*, *35*(2), 277–284, <https://doi.org/10.1080/03610910600591610>
- Hussain, F. N., Al-Mannai, R., & Agouni, A. (2020). An Emergency Switch to Distance Learning in Response to the COVID-19 Pandemic: Experience from an Internationally Accredited Undergraduate Pharmacy Program at Qatar University. *Medical Science Educator*, *30*(4), 1393-1397. <https://doi.org/10.1007%2Fs40670-020-01079-9>

- Ke, F., & Kwak, D. (2013). Online learning across ethnicity and age: A study on learning interaction participation, perception, and learning satisfaction. *Computers & Education*, 61, 43–51. <https://doi.org/10.1016/j.compedu.2012.09.003>
- Lepp, A., Barkley, J. E., Karpinski, A. C., & Singh, S. (2019). College Students' Multitasking Behavior in Online Versus Face-to-Face Courses. *SAGE Open*, 9(1), 1-9. <https://doi.org/10.1177/2158244018824505>
- Lu, H. P., & Chiou, M. J. (2010). The impact of individual differences on e-learning system satisfaction: A contingency approach. *British Journal of Educational Technology*, 41(2), 307–323. <https://doi.org/10.1111/j.1467-8535.2009.00937.x>
- Maleelai, K., & Chaichuay, P. (2022). Factor Related to Satisfaction with Online Learning during COVID-19 Outbreak among Public Health Students, Thailand. *International Journal of Education and Humanities (IJEH)*, 1(1), 126-134. <https://doi.org/10.58557/ijeh.v2i3.101>
- Martin-Chang, S., & Levesque, K. (2017). Academic achievement: Making an informed choice about homeschooling. *The Wiley Handbook of Home Education*, 121-134. <https://doi.org/10.1002/9781118926895.ch5>
- Nabayra, J. N., & Tambong, C. R. (2023). Readiness Level, Satisfaction Indicators, and Overall Satisfaction towards Flexible Learning through the Lens of Public University Teacher Education Students. *International Journal of Information and Education Technology*, 13(8), 1230-1241. <https://doi.org/10.18178/ijiet.2023.13.8.1925>
- Nolasco, C. E. (2022). Online Distance Learning: The New Normal in Education. eLearning Industry. Retrieved from <https://elearningindustry.com/online-distance-learning-the-new-normal-in-education>
- Núñez, J., Gula, L., Alindan, E., Colcol, C. J., Sangco, A., Taracina, J., Dolba, S., Escobañez, A. J., Sumayang, K., Jamisal, M. A., & Tuscano, F. J. (2023). Continuing the Distance Learning Modality of Graduate Studies in Post-Covid Philippines: A Survey. *FDLA Journal*, 7(1), 1-15. <https://nsuworks.nova.edu/fdla-journal/vol7/iss1/3>
- Palos-Simbire, A. (2021). Exploring the Experiences of Filipino Parents on Distance Learning During COVID-19 Pandemic. *ASEAN Journal of Education*, 7(2), 25-35. https://aje.dusit.ac.th/upload/file/Flie_journal_pdf_11-04-2022_160442.pdf
- Shahzad, A., Hassan, R., Aremu, A. Y., Hussain, A., & Lodhi, R. N. (2021). Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female. *Quality & quantity*, 55, 805-826. <https://doi.org/10.1007/s11135-020-01028-z>
- Sharma, H. L., & Nasa, G. (2014). Academic Self-Efficacy: A Reliable Predictor of Educational Performance. *British Journal of Education*, 2(3), 57-64. <https://www.eajournals.org/wp-content/uploads/Academic-Self-Efficacy-A-Reliable-Predictor-of-Educational-Performances1.pdf>
- She, L., Ma, L., Jan, A., Nia, H. S., & Rahmatpour, P. (2021). Online learning satisfaction during COVID-19 pandemic among Chinese University Students: The Serial Mediation Model. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.743936>
- Sosa Díaz, M. J., Guerra Antequera, J., & Cerezo Pizarro, M. (2021). Flipped Classroom in the Context of Higher Education: Learning, Satisfaction and Interaction. *Education Sciences*, 11(8), 1–17. <https://doi.org/10.3390/educsci11080416>
- Sousa, V. D., Driessnack, M., & Mendes, I. M. C. (2007). An overview of research designs relevant to nursing: Part 1: quantitative research designs. *Rev Latino-am Enfermagem*, 15(3), 1-7. Available at <https://doi.org/10.1590/S0104-11692007000300022>
- Suguitan, I. E. (2023). Online Classes amid the Pandemic: A Challenge for Filipino Students and Digital Rights. Engage Media. Retrieved from <https://engagemedia.org/2023/youth-philippines-education/>
- Surahman, E., & Sulthoni. (2020). Student Satisfaction toward Quality of Online Learning in Indonesian Higher Education During the Covid-19 Pandemic. 2020 6th International Conference on Education and Technology (ICET), Malang, Indonesia, 120-125. <https://doi.org/10.1109/ICET51153.2020.9276630>



- Tay, L.Y., Lee, S.S., & Ramachandran, K. (2021). Implementation of Online Home-Based Learning and Students' Engagement During the COVID-19 Pandemic: A Case Study of Singapore Mathematics Teachers. *Asia-Pacific Edu Res*, 30(3), 299–310. <https://doi.org/10.1007/s40299-021-00572-y>
- Yilmaz, R. K., & Karadag, N. (2023). Effects of Emergency Distance Education on Teacher Training Process in Turkey: Instructors' Opinions. *Education Sciences* 13(9), 1-24. <https://doi.org/10.3390/educsci13090920>