

STUDENTS' LEARNING ATTITUDES TOWARD HOME-BASED EDUCATION AMIDST THE COVID-19 PANDEMIC

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Abstract - Students' Learning Attitudes which are attributed to students' feelings and behaviors in learning during Home-Based Education (HBE) is an important factor in students' goal setting, beliefs toward learning, school adjustment, academic self-efficacy, intrinsic valuation of schoolwork, problem-solving skills, and motivations. This study that examined the Students' Learning Attitudes towards Home-Based Education employed a descriptive - survey approach to answer the research problems posited in the study including determining the level of Students' Learning Attitudes towards Home-Based Education measured in terms of Nature, Anxiety, Expectations, & Openness to Learning; and determine if there is a significant difference on Students' Learning Attitudes measured in the four dimensions when the variable is measured across gender and grade level. Descriptive Statistics (Mean and Std. Dev.) and MANOVA were used to analyze the data gathered and based on the results obtained, the overall learning attitudes of high school students towards Home-Based Education are High, and Students' Learning Attitudes do not differ significantly across gender but differ significantly across the grade level.

Keywords: students' learning attitudes; academic performance; students' motivation

INTRODUCTION

The unprecedented predicament brought about by the Covid-19 outbreak in the year 2020 had led to the sudden closure of schools worldwide both in basic and higher education institutions. School closures have affected “over 90% of students or roughly 1.5 billion students worldwide (Lee, 2020), 94% of the world's student population, and up to 99% in low and lower-middle-income countries (UN, 2020).

With the sudden closure, education including in the Philippines, shifted from classroom to home-based education to ensure unhampered delivery of education services to its learners and the community (Tan, 2020). This, however, has led to many changes in how teachers work, how parents are involved in schooling, and how students learn (Fahey & Joseph, 2020).

“The Covid-19 pandemic most likely has long-term effects on education, thus, the need to rethink the existing curriculum, and teaching-learning processes, as well as to strengthen students' learning skills and motivation toward HBE must be considered. Moreover, the after-crisis period must be already previewed for the curriculum and learning continuity to be preserved” (Daniel, 2020; UNESCO, 2020 in Apperibai, Cortabarría, Aguirre, Verche, & Borges, 2020).

According to Adams & Purdy (1996), “providing empirically-based information to school administrators about the benefits of Home-Based Education and their children's academic and social experiences may eliminate some of these negative perceptions about HBE. Accurate information, gained through empirical studies, may therefore provide positive views about HBE which may lead to creating a positive relationship between public schools and parents.” It also allows educators to look into the educational system and focus on the learning processes (Zhao, 2020), including the established relationship between teachers and parents during the implementation of Home-Based Education (Wrigley, 2020) as cited by Bubb and Jones (2020). “It is a time for the countries to learn from and help each other to see what was achieved during home-based learning and listen to pupils and parents/guardians to improve school achievement” (Bubb & Jones, 2020). Murphy (2014) as cited by Kerns (2016) “noted that there has been a marked lack of consistent and reliable data studying HBE setup since the outbreak of this pandemic”.



HIGH SCHOOL STUDENTS' LEARNING IN HOME-BASED EDUCATION

According to Ray (2017), “Home-Based Education otherwise known as homeschooling is a form of private education that is home-based. It is designed to provide an alternative delivery system for educating children who for some reason or other circumstances cannot avail of the formal system of instruction in a regular school (DepEd as cited in Llego 2021). The program aims to develop the child’s potential in all areas of growth and development outside the formal system; recognize parents’ complementary/supplementary role in the education of children; provide literacy, numeracy, and life-long skills through an alternative system of teaching and learning, and promote the talents, interests, and skills of the child that he/she may become a self-propelling, fulfilled, and contributing member of a community.”

“HBE or Homeschooling is a viable alternative to traditional education taking place in schools. Parents who homeschool their children feel that they can provide their children with the best foundation for their future”(Saghir, 2008). Moreover, Kerns (2016) in his study entitled “Learning at Home: A Phenomenology Examining the Perceptions of Homeschooling Parents Regarding the Social, Emotional, and Cognitive Development of their Children”, found out that the respondents of the study affirmed that homeschooling is a valuable, effective educational method when conducted to meet the individual needs of the student.

According to Calvery (n.d.) in Rudner (1999), as cited by Baig (2019), “Grades 4,7, and 10 students from Arkansas who were homeschooled had higher achievement than those who were public-schooled. The results show that students who were homeschooled scored better than the students from the public school for Grade 10 in **Science, Social Science, Mathematics, and Reading**”. The study by Rudner (1999) in Baig (2019), showed that “the parents of homeschool students have more formal education than the parents in the general population. The achievement test score among homeschool is exceptionally higher than the scores of students from public schools. In homeschooling, students’ abilities in study skills, critical thinking, self-reliance, and love for learning can develop (Baig, 2019). According to Ray (2004), as cited in Watson (2019) in Baig (2019), in homeschooling, there is flexibility in events and studies like assisting in community work, internships, tours, excursions, household work, traveling, gardening, and competitive exams”. Further, the study observed that home school education usually focuses on developing skills in **reading, writing, mathematics, and science**. As Moreau (2012) noted, “when the scores of students from homeschooled, and traditional schools in the Stanford Achievement Test were compared, the students who are homeschooled scored above the median in the test areas of **Math, Science, and Verbal Skills**”. Moreover, Moreau (2012) cited that “students who were homeschooled achieved 30-37 percent higher scores than their public-school peers in subjects such as Reading, Writing, Language, Fine Arts, Math, Science, and Social Sciences. According to him, homeschooled students were performing higher than the traditionally schooled children in every grade due to the flexibility in the content, methods, and place for education, In homeschool learning, students can access anytime and anywhere without any formality or rules and regulations. The success of homeschooling mostly depends on the factor that parents have a better emotional attachment and a good understanding of their children. Hill (2000) in Leon (2013) revealed that students who have been homeschooled their entire academic life before tertiary education have higher scholastic achievement test scores compared with those who have also attended other educational programs in regular academic institutions”.

STUDENTS' LEARNING ATTITUDES TOWARDS LEARNING

According to Sen (2013), “attitudes toward learning are important factors in the learners’ levels of goal setting, problem-solving abilities, their beliefs about learning, their inner and external motivations in the process of learning, and all the academic performances they perform”. Simsek (2007) in Sen (2013) stated that “the effort that students made for learning is the most important way for them to reach knowledge because there is desire, openness, expectation, curiosity towards knowledge, and meeting of learners’ needs”. According to Fink (2003) in Sen (2013), “the learning needs and expectations of the learners can vary”. Thus, the learners need to know what is necessary to learn and how they will make this process easier. In this context, it is one of the important roles of teachers as well as parents to support the learners in developing positive attitudes towards learning (Sen, 2013).

Kara's (2009) study on "The Effect of a Learning Theories Unit on Students' Learning Attitudes toward Learning revealed that individuals with a better understanding of the learning process are better at perceiving the nature of learning, more open to learning, have higher expectations, and exhibit less anxiety about learning. Moreover, Hamurcu (2018), found out that students had a positive attitude to learning in terms of the nature of learning, expectations from learning, openness to learning, and anxiety".

Burke & Williams (2008) in Sen (2013), "found out that the students who are much better motivated for learning both get more successful and tend towards thinking skills. Further, Kara (2010) as cited by Sen (2013) added that it is also known that positive beliefs of students towards obtaining knowledge support their efforts to learn a subject. Learning is an individual performance. For that reason, positive attitudes towards learning are valuable for the success of learning (Sen, 2013)".

STUDENTS' LEARNING ATTITUDES ACROSS GENDER AND GRADE LEVEL

Hamurcu's (2018) study on "Examination of Attitudes to Learning indicated that attitudes to learning and expectations from learning were in favor of the female students and that the female students got higher scores for pressure from study, self-expectation, and educational stress in general. Moreover, no significant difference was found between the third-year and the fourth-year students in terms of their attitudes to learning, but the fourth-year students had a higher self-expectation". Further, according to Houtte (2004), Candejas & Rebelo (2010), & Kpolovie, Joe, & Okoto (2014) as cited by Mirahmadizadeh, Ranjbar, Shariarirad, Erfani, Ghaem, Jafari, & Rahimi (2020), "sex differences exist in attitude towards school. Studies have reported that female students demonstrated a higher positive attitude toward school and were more eager to acquire education, contrary to male students who were less interested in school and had more negative emotions toward it". Tayfur and Ulupinar (2014), found a significant difference across gender.

RESEARCH QUESTIONS

The study aimed to answer the following specific questions:

1. What is the level of learning attitudes of high school students toward Home-Based Education when measured across Nature, Anxiety, Expectations, and Openness to Learning?
2. Is there a significant difference in the level of learning attitudes of high school students toward HBE when measured based on Nature, Anxiety, Expectations, and Openness to Learning across (2.1) gender and (2.2) grade level?

THE HYPOTHESIS OF THE STUDY

Ho - There is no significant difference between the level of learning attitudes of high school students toward Home-Based Education when measured based on Nature, Anxiety, Expectations, and Openness to Learning across (1) gender, and (2) grade level.

METHODOLOGY

DESIGN

This study employed a descriptive survey since it sought to elicit evidence about actions, characteristics, or opinions from a large group of people (Glasow, 2005). The study took place in 42 public secondary schools located in Zamboanga City, Philippines with a total population N = 75,542 high school students. It was carried out during an imposed Covid-19 lockdown by the local government unit that restricted the conduct of on-site classes (Executive Order No. BC 572-2020, 2020).

PROCEDURE

An ethics clearance and permission to conduct the study across 42 secondary schools were sought from the Ethics Review Committee and Office of the Superintendent respectively. Upon approval, the researcher set a schedule to visit each of the 42 secondary schools.

The study covered all high school students from grades 7 to 10 enrolled in 42 schools for SY 2021-2022 with a total population of 75,542. A proportional stratified random sampling was employed across gender and grade level. In selecting samples, Slovin's formula was used, and a 398 sample size was obtained. Only students who met the criteria set by the researcher and consented by their parents were included in the sampling frame. Samples were randomly drawn from the sampling frame consisting of consenting students. This less stringent criterion was employed to ensure the safety of students from the threat of Covid-19. According to Kelly, Clark, Brown, Sitzia (2003) in AlQotba, Al Nuaimi, Al Mujalli, Zaine, Khudadad, Marji, Veetil, & Syed (2021), the Covid-19 pandemic may "serve as an excuse for using less stringent criteria in choosing samples without assessing the extent of bias introduced during the survey process".

Since the study was conducted amidst lockdown due to the increasing cases of Covid-19, data collection was done in two ways: online and offline utilizing an Attitude Survey Scale adopted from Kara (2009). According to Dillman, Smyth, and Christian (2014) and Singleton and Straits (2009) as cited by Ponto (2015), "using a combination of methods of survey administration can help ensure better sample coverage by providing all individuals an equal chance of inclusion in the sample, therefore, can reduce coverage error". The instrument was prepared similarly in printed and digital form. Settings were set in Google form to enable one response only from the respondent and to avoid duplicates in responses. To test the appropriateness and reliability of the instrument for the current study, the adopted instrument was pilot tested among 16 high school students. According to Fink (1995), as cited by Sang, Mail, Abd Karim, Ulum, Mufli, and Lajuni (2017), "the minimum number required for pilot testing in most student questionnaires is 10". This claim is supported by Hill (1998) in Tappin (2014) who suggested that 10 to 30 participants are needed for pilot tests in survey research. Based on the result obtained, a high degree of consistency between the given items was observed with Cronbach's alpha 0.832 obtained for the Students' Learning Attitudes Scale. This result is supported by Hair, Bush, and Ortinau (2003) in Sang, Mail, Karim, Ulum, Mufli, and Lajuni (2017) who state that the widely accepted cutoff for an instrument is Cronbach's alpha higher than 0.70. Thus, no further changes were needed, and the adopted Students' Learning Attitudes scale was used in the actual study.

A total of 283 respondents participated in an online survey and 115 students in the offline survey which summed up to 398. All these 398 respondents received the Google link and printed questionnaire respectively. Out of 398 samples, 15 students failed to complete the survey which made the response rate at 96.23%. According to Fincham (2008), "this response rate approximating 60% is what any research should achieve, and a response rate of $\geq 80\%$ must be achieved as the standard for evaluation for the journal".

The data collected from the 383 high-school respondents were inputted into Statistical Social Science Packages (SPSS) for data analysis. Before treating the data and to protect its integrity, data assumptions were carried out to determine the appropriateness of the inferential statistical tool to be used (Tabachnick and Fidell, 2007 as cited by Brookshier and Boyd, n.d.). Data assumptions testing results indicated that data were normally distributed with skewness and kurtosis values less than 2 and 7 respectively (Kim, 2013; Kline, 2010 in Welch & Areepattamannil, 2016). Moreover, according to Hartmann, Krois, Waske, (2018), Barr, Christopher, & Çetinkaya-Rundel (2021), Altman & Bland (1995) as cited by Ghasemi & Zahediasl (2012), "for a sample size greater than 30, data are considered to assume normality irrespective of the shape of the population distribution". Further, since no outliers were beyond $p < 0.001$ (Greene, 2019), thus the parametric procedure was applied.

STATISTICAL TOOL

To determine the level of Students' Learning Attitudes in terms of the four dimensions: Nature, Anxiety, Expectations, and Openness to Learning, Descriptive Statistics such as Mean and Standard Deviation were used. On the other hand, to determine whether there is a significant difference in the Students' Learning Attitudes measured in terms of the four dimensions, as well as to determine whether there exists a significant difference in the Students' Learning Attitudes of high school students

across the four dimensions when data are grouped according to gender and grade level, MANOVA was used.

DATA ANALYSIS

Out of 398 students who participated in the study, only 383 were included in the data analysis due to nonresponses coming from the other 15 respondents. Data were analyzed using Mean and Multivariate Analysis of Variance (MANOVA). Data assumptions were conducted to determine the appropriateness of MANOVA to treat data. Mean scores obtained were interpreted using the scale “1.0-1.79 Very Low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 High, and 4.20-5.00 Very High.

RESULTS AND DISCUSSION

STUDENTS’ LEARNING ATTITUDES TOWARDS HOME-BASED EDUCATION

To determine the level of learning attitudes of high school students toward Home-Based Education, Mean and Standard Deviation were used to analyze the data. Table 2 provides the analysis and interpretation. Students’ Learning Attitudes.

Table 1

Students’ Learning Attitudes towards Home-Based Education (n=383)

	Mean	SD	Learning Attitude
Nature	3.08	0.53	Moderate
Anxiety	3.31	0.69	Moderate
Expectations	3.98	0.63	High
Openness	3.84	0.74	High
Learning Attitudes	3.56	0.49	High

Looking at Table 1, data show that the Overall Students’ Learning Attitudes (SA) is High with a mean score of $X=3.56$. In terms of the four dimensions of SA, it can be observed that the Expectations and Openness to Learning toward HBE obtained the Highest mean score among high school students $X=3.98$ and $X=3.84$ respectively. On the other hand, in terms of Nature, and Anxiety of Learning, it can be gleaned from Table 1, that the mean scores are equal to $X=3.08$ and $X=3.31$ respectively which is described as Moderate. The above findings imply that high school students have an overall high positive learning attitude toward HBE and regard HBE as a viable learning modality in the new normal despite the challenges they encountered during its first implementation amidst the Covid-19 pandemic.

STUDENTS’ LEARNING ATTITUDES MEASURED IN TERMS OF NATURE, ANXIETY, EXPECTATION, AND OPENNESS TO LEARNING ACROSS GENDER AND GRADE LEVEL

To determine whether there exists a significant difference in the attitude of high school students towards HBE measured in terms of Nature, Anxiety, Expectation, and Openness to Learning when the variable is measured across gender and grade level, MANOVA was used to analyze the data. Table 2 below presents the result of the analysis and the interpretation.

Table 2

Test-of-Between Subjects: Students’ Learning Attitudes across Gender and Grade Level

IVs	DVs	Groups	n	Mean	SD	df	F	p
Gender	Nature	Male	187	3.115	0.598	1	1.765	.185
		Female	196	3.039	0.532			
	Anxiety	Male	187	3.278	0.683	1	.868	.352
		Female	196	3.339	0.588			
	Expectations	Male	187	3.908	0.757	1	3.709	.055
		Female	196	4.048	0.661			
	Openness	Male	187	3.784	0.734	1	2.682	.102
		Female	196	3.899	0.641			

		Grade - 7	102	2.924	0.532			
Grade Level	Nature	Grade - 8	101	3.082	0.559	3	3.822	.010
		Grade - 9	99	3.165	0.601			
		Grade - 10	81	3.152	0.541			
		Grade - 7	102	3.135	0.609			
	Anxiety	Grade - 8	101	3.270	0.710	3	5.454	.001
		Grade - 9	99	3.384	0.638			
		Grade - 10	81	3.488	0.506			
	Expectations	Grade - 7	102	3.924	0.728	3	.989	.398
		Grade - 8	101	3.920	0.765			
		Grade - 9	99	4.027	0.659			
		Grade - 10	81	4.066	0.687			
	Openness	Grade - 7	102	3.871	0.709	3	.371	.774
Grade - 8		101	3.781	0.767				
Grade - 9		99	3.866	0.667				
Grade - 10		81	3.857	0.591				

Based on **Table 2**, it can be seen that Students' Learning Attitudes in terms of Nature, Anxiety, and Openness to Learning indicate no significant difference across gender, thus the null Hypothesis is accepted. This result indicates that Students' Learning Attitudes towards Home-Based Education measured in terms of the four dimensions namely Nature, Anxiety, Expectations, and Openness to Learning, do not significantly differ across gender, implying that high school students have the same learning needs regardless of gender. Therefore, teachers and parents need to ensure that students are well-provided with equal and equitable opportunities to sustain or enhance their attitude towards learning during HBE. The provision of equitable opportunities is suggested so that high school students who need more support or assistance in their learning should be provided with more, and those who need less support or assistance are provided less. Moreover, when it comes to lesson preparations, teachers must design lessons appropriate for students to boost their interest in HBE, and all students especially those with additional needs must be provided with further training on HBE.

This aforementioned finding disagrees with Hamurcu (2018) who stated that female students obtained significantly higher scores for expectations from learning but also concluded that female students experienced a higher level of educational stress due to their expectations from learning, pressure from study, and self-expectations. Moreover, it is also in contrast with the finding of Tasgin & Coskun (2018) which affirmed that Students' Learning Attitudes for learning differ in favor of females.

On the other hand, students' level of learning attitudes differs across grade levels particularly in terms of the Nature of Learning and Anxiety of Learning, therefore, rejecting the null hypothesis. However, in terms of Expectations of Learning, and Openness to Learning, no significant difference is found across grade levels, thus, accepting the null hypothesis in this case.

The above results imply that since the Nature and Anxiety of Learning vary across grade levels, it should be noted that teachers and parents must provide high school students with appropriate learning interventions for students to sustain or boost their interest and learning engagement toward HBE. On the part of teachers, they must design lessons that are developmentally appropriate for each grade level and should provide interventions that are according to the needs of students. This finding is in accordance with Hamurcu (2018) that no significant difference in attitudes to learning between the third-year students and the fourth-year students but the fourth-year students has a higher self-expectation for learning based on their mean score.


CONCLUSION

This investigation on the learning attitudes of high school students measured in terms of Nature, Anxiety, Expectations, and Openness to Learning towards Home-Based Education, provides reasonable conclusions: One, Students' Learning Attitudes of high school students towards HBE are found to be Moderate in terms of Nature of Learning and Anxiety of Learning, while High in terms of Expectations of Learning and Openness to Learning. This result indicates that despite the difficulty experienced by high school students during HBE, they still demonstrate high regard towards HBE as a viable teaching-

learning modality in the new normal. Second, the study confirms that **Students' Learning Attitudes** measured based on Nature, Anxiety, Expectations, and Openness to Learning does not differ across gender, but is found to be significantly different across grade level indicating that Grade 10 has the highest anxiety level in learning during HBE but at the same time has the highest positive attitude towards Home-Based Education. This means that since the Nature and Anxiety of Learning vary across grade levels, it should be noted that teachers and parents must provide high school students with appropriate learning interventions for students to sustain or boost their interest and learning engagement toward HBE. On the part of teachers, they must design lessons that are developmentally appropriate for each grade level and should provide interventions that are according to the needs of the students.

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