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STUDY HABITS AND CHALLENGES OF THE MEDICAL LABORATORY SCIENCE STUDENTS OF THE MEDICAL COLLEGES OF NORTHERN PHILIPPINES IN THE NEW NORMAL: RELATIONSHIP TO THEIR ACADEMIC PERFORMANCE

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ABSTRACT

This study endeavored to determine Study Habits and Challenges of the Medical Laboratory Science Students of the Medical Colleges of Northern Philippines. Coronavirus affects the education system in the world. Schools, colleges, and universities are closed to control the spread of the coronavirus. School closure brings difficulties for students, teachers, and parents. Schools and Universities have had to rethink and reassess how they deliver effective learning with the use of digital technologies following physical restrictions on student travel. Due to the pandemic, students in the new normal has to adjust their study, work, and social lives.

The study used a descriptive-correlational research design. The descriptive-correlational research design will be used to determine the Study Habits and Challenges of Medical Laboratory Science Students of Medical Colleges of Northern Philippines in the new normal and its Relationship to their Academic Performance. The study used Stratified Random Sampling in determining the samples of the study because we select random Medical Laboratory Science students in each year level.

Data gathered, majority of the Medical Laboratory Science students learn better through experiencing or doing things. Which basically falls into a learning style called *Kinesthetic learning style* wherein, in order to learn more effectively, the learner has to experience it on his/her own.

Generally, every learner has their own way of studying or learning depending on how effective it is for them. However according to our gathered data, most of the Medical Laboratory Science students has a study habit of highlighting important words and phrases in their book.

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The challenges of the Medical Laboratory Science students in the delivery of education are divided into three; the environmental, study materials, and the platform used. In terms of environmental challenges, most of the Medical Laboratory Science students are easily distracted when their environment is noisy and/or messy while studying. In terms of their study material, majority of them are easily distracted by their social media and/or online games when they are using their gadgets to study. And lastly, the challenges in online platform they used in delivering education is that, majority of them has a difficulty on taking online exams/quizzes properly due to the crashing of their Learning Management System (LMS). The result of the study shows that there is a significant difference on the type of learning, study habits and challenges of the respondents to their profile variables.

Key words: *LMS, Coronavirus, Antibiotic*

INTRODUCTION

In early January 2020, the scientists identified a new infectious disease caused by a novel coronavirus. Schools and universities have been severely disrupted by the Covid-19 pandemic. Over 188 countries had closed their schools and universities countrywide as of April 10, 2020, impacting more than 91% of all students worldwide. (UNESCO n.d.). Schools and Universities have had to rethink and reassess how they deliver effective learning with the use of digital technologies following physical restrictions on student travel. Due to the pandemic, students in the new normal has to adjust their study, work, and social lives.

Thus, The Commission on Higher Education (CHED) of the Philippines has been mandated to take the necessary actions to guarantee that education is available to everyone. The commission issued Memorandum Order No. 4 Series of 2020 - Guidelines on the Implementation of Flexible Learning, which instructed Higher Education Institutions (HEI) to use flexible learning platforms for academic track in order to better facilitate learning schemes during times when classes were interrupted due to health emergencies and community lockdowns. Teachers are forced to adapt their methods of instruction as well, such as developing lesson plans, establishing workspaces in their homes, and switching from a whiteboard and marker to a laptop or smartphone. While the educators are adapting the “new normal”, the students are also having an adjustment on how they will learn in online classes.

Academic performance refers to the knowledge that a teacher assigns or the learning objectives that students and teachers set for themselves to accomplish over a predetermined amount of time. (Narad and Abdullah 2016)

"The student's way of studying whether systematic, efficient or inefficient, etc." is a term used to describe study habits. Academic performance is thought to be influenced by good study habit s. For this reason, attempts are made to help students establish and enhance good study habits. (Good 1973)

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The past few years of COVID-19 pandemic, there are no known studies concerning the study habits and challenges of Medical Laboratory Science students that is conducted in the Medical Colleges of Northern Philippines in the new normal.

The conduct of this study shall provide information and knowledge for more understanding on the study habits and challenges of the college students and to be able to determine whether their study habits is effective and how they face the challenges in new normal education. The researcher seeks to find solution for this study for helping the learners who are facing challenges in the new normal education, experiencing depression, stress and anxiety and find out what are the best study habits. Furthermore, to find what are the differences between the academic performances in the new normal.

METHODOLOGY

This chapter provides a detailed description of the research approach and design employed in this study. The following sections discuss the research design, research participants, data gathering materials, data gathering procedure, and the method of analysis that will be done in the conduct of this research.

Research Design

The study used a descriptive-correlational research design. The descriptive-correlational research design will be used to determine the Study Habits and Challenges of Medical Laboratory Science Students of Medical Colleges of Northern Philippines in the new normal and its Relationship to their Academic Performance.

Locale and Respondents of the Study

This study conducted in Medical Colleges of Northern Philippines on school year 2021-2022. The finalization of the manuscript will be done in the Medical Colleges of Northern Philippines – Alimannao Hills Peñablanca, Cagayan. The respondents are the Medical Laboratory Science Students of Medical Colleges of Northern Philippines. The researchers select ninety-four (94) first year, forty-eight (48) second year, forty-nine (49) third year and forty-six (46) fourth year with a total of two hundred thirty-seven (237) Medical Laboratory Science students**.**

Sampling Design

The study used Stratified Random Sampling in determining the samples of the study because we select random Medical Laboratory Science students in each year level. Among all year level of Medical Laboratory Science students in the Medical Colleges of Northern Philippines, the researcher only selects a total of 237 respondents. The respondents are divided into four-year levels, where in, out of 228 we selected 94 random first year MLS students. In second year, out of 131 we select 48 random MLS students. In third year, out of 118 we select 49 random MLS students, and in fourth year, out of

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122 we select 46 random MLS students. Thus, in order for our data to be valid, we need at least forty percent (40%) of the Medical Laboratory Science (MLS) students to be our respondents.

Instrumentation (Data Gathering Tools)

In order to ascertain the Study Habits and Challenges of Medical Laboratory Science Students of Medical Colleges of Northern Philippines in the New Normal: Relationship to their Academic Performance, the researchers employed a customized questionnaire to collect data.

The first part of the questionnaire consists of Personal Data Information for the profile variables. Under profile variables, we have 1.1 which is consists of questions regarding the socioeconomic profile of the respondents. Part 2 of the questionnaire consists of questions regarding the respondents' Academic Performance during the new normal education. The third part of the questionnaire letter A consists of questions that determines the type of learning method used by the respondents. Letter B is consisted of questions regarding the study habits of the respondents during the new normal education. The fourth part of the questionnaire consists of the respondents' challenges during the new normal education, such as, their environment, study materials, and online platform used**.**

Data Gathering Procedure

This study used the researcher-made questionnaire. Then the researchers seek permission from the Medical Colleges of Northern Philippines through the Vice President for Academic Affairs and Dean of Medical Laboratory Science from the locale of our study for the conduct of the study. After the approval, the researchers administered the questionnaires to the respondents of the study.

This research used an Online Survey platform and printed questionnaire to collect data. The google form that contains the questionnaire was sent to the respondents through their messenger account. Those who did not have access on the online survey platform have the printed questionnaire**.**

Statistical Tool and Analysis

Frequency count and Percent Distribution. When the data is displayed, the proportion of observations for each point or group of points is displayed. This was use to analyze the profile variable of the respondents in statement of the problem number one in terms of demographic profiles (age, sex, and year level) and socio-economic profile (religion, ethnicity, type of family and monthly income of family).

Frequency count, Percentage distribution, Rank. This was used to examine the respondents' academic performance in terms of abilities and General Weighted Average (GWA) in the second problem statement

RESULTS AND DISCUSSION

Table 1.1.1. **Frequency count and percentage distribution of the demographic profile of the respondents in terms of age**

VARIABLES	FREQUENCY	PERCENTAGE
18 – 19	**71**	**30.00**
20 – 21	**96**	**40.50**

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22 – 23	**70**	**29.50**
TOTAL	**237**	**100**

This implies that the majority of our respondents are in aged twenty (20) to twenty-one (21), which are the Gen Z.

Table 1.1.2. **Frequency count and percentage distribution of the demographic profile of the respondents in terms of sex**

VARIABLES	FREQUENCY	PERCENTAGE
Male	**70**	**29.50**
Female	**167**	**70.50**
TOTAL	**237**	**100**

This implies that most of our respondents are female, which they dominate the number of Medical Laboratory Science students.

Table 2.1. **Frequency count and percentage distribution of the academic performance of the respondents in terms of General Weighted Average (GWA)**

VARIABLES	FREQUENCY	PERCENTAGE
Good	10	4.20
Very good	115	48.50
Excellent	108	45.60
Distinguished	4	1.70
TOTAL	**237**	**100**

Majority of our respondents has a General Weighted Average range from 85-89, which means that the Medical Laboratory Science students are Excellent in their academic performance based of their General Weighted Average (GWA).

Table 3. **Mean assessment on the type of learning of the respondents in the new normal education**

STATEMENTS	MEAN	DESCRIPTION
1. I prefer learning visually.	3.13	AGREE
2. I learn better when the subject matter is reinforced by sound.	3.35	STRONGLY AGREE
3. I learn better through experiencing or doing things.	3.69	STRONGLY AGREE
4. I prefer learning through reading and writing.	3.51	STRONGLY AGREE
CATEGORICAL MEAN	**3.42**	**STRONGLY AGREE**

Generally, most of the respondents *Strongly Agree* to the statements above where students learn in many different ways. The process by which information is generated into the transformation of experience is called learning. Individuals utilize education to adjust to and succeed in daily situations, which has led to an increase in the variety of learning styles. The notion of learning styles has garnered significant attention in pragmatic texts, and a number of models have been proposed to improve understanding of the active teaching approach (Arthurs, 2007).

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Table 4. **Mean assessment on study habits of the respondents during the new normal education**

STATEMENTS	MEAN	DESCRIPTION
1. My study room is more spacious with good ventilation.	3.08	AGREE
2. I do have a chair and a desk in my study room.	3.27	STRONGLY AGREE
3. I enjoy studying with music	2.95	AGREE
4. I take down important notes during virtual discussion	3.41	STRONGLY AGREE
5. I highlight important words or phrases in my book when studying.	3.55	STRONGLY AGREE
6. I am able to study up to three hours or more in a day.	2.98	AGREE
7. I do have a personal study time table.	3.01	AGREE
8. I use my own words when taking down notes	3.10	AGREE
9. I study with my friends but with less verbal conversation.	2.78	AGREE
10. I read my notes before and after the virtual discussion.	3.06	AGREE
CATEGORICAL MEAN	**3.12**	**AGREE**

Generally, most of the respondents *Agree* on the following study habits stated above. Every student has their own way of learning. Some students like to study in a calm atmosphere alone, with no one around, while others like to study with friends, going over ideas together. This means that learning is all about personal habits. Charles Ogan and Alamina (2014) did a study on age and gender differences in learning habits, and they found that female students were better at things like scheduling their tires, concentrating, listing, taking notes, and reading.

Table 5.1. **Mean assessment on the challenges of the respondents during the new normal education in terms of environment**

STATEMENTS	MEAN	DESCRIPTION
1. I am easily distracted while studying when my environment is noisy and/or messy.	3.58	STRONGLY AGREE
2. It's hard for me to study because I am struggling to adapt in the new normal education.	3.23	AGREE
3. Does internet connectivity affect your studying during online class?	3.48	STRONGLY AGREE
4. Do your responsibilities at home affect your studying? (e.g., Household chores)	3.35	STRONGLY AGREE
5. I am not able to concentrate in my studies due to stress, anxiety and/or depression.	3.35	STRONGLY AGREE
CATEGORICAL MEAN	**3.40**	**STRONGLY AGREE**

Generally, most of the respondents *Strongly Agree* to the challenges of the new normal education in terms of environment because, environmental factors are elements that impede students from achieving optimal academic outcomes.

Table 5.2 Mean assessment on the challenges of the respondents during the new normal education in terms of study materials

	MEAN	DESCRIPTION

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STATEMENTS		
1. I do not have enough gadgets used during online learning.	2.52	AGREE
2. I can't exceed effort to my output/projects because I don't have enough art materials.	2.39	DISAGREE
3. During online learning, my phone lags because it's too old.	2.72	AGREE
4. During online learning, my phone does not have enough storage for files and application needed for online learning.	2.85	AGREE
5. I am easily distracted by my social media and/or online games when I'm using my gadget (e.g., phone, tablet, laptop) while studying.	3.33	STRONGLY AGREE
CATEGORICAL MEAN	**2.76**	**AGREE**

Generally, most of our respondents *Agree* with the challenges of the new normal education in terms of study materials because of the lack of resources. It means they're not getting the education they need. They're getting bits and pieces of what's going on, but not getting the whole picture.

Table 6.1 **Test of difference on the academic performance of the respondents to their profile variables**

VARIABLES		ACADEMIC PERFORMANCE
AGE	**f-value**	1.992
	p-value	0.139
SEX	**f-value**	0.604
	p-value	0.438
YEAR LEVEL	**f-value**	1.429
	p-value	0.235
RELIGION	**f-value**	0.650
	p-value	0.785
ETHNICITY	**f-value**	1.231
	p-value	0.287
TYPE OF FAMILY	**f-value**	1.727
	p-value	0.162
AVERAGE MONTHLY INCOME	**f-value**	0.220
	p-value	0.882

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The test differences between the respondents' academic performance and their profile characteristics are displayed in this table. There is no significant difference on the academic performance of the respondents to their profile variable.

Table 7.1 **Test of relationship on the academic performance of the respondents to their type of learning, study habits and challenges**

VARIABLES		TYPE OF LEARNING	STUDY HABITS	CHALLENGES		
				ENVIRONMENT	STUDY MATERIALS	ONLINE PLATFORM
ACADEMIC PERFORMANCE	r-value	.098	.134	-.007	.004	.009
	p-value	.134	.040*	.920	.954	.892

This implies that academic performance and study habits have a negligible correlation.
According to Mendezabal M.J.N. (2013), a number of studies have shown how important study habits and attitudes are to academic performance. Thus, it is necessary and advantageous to look at the connection between students' attitudes and study habits and how well they perform on licensure exams.

Table 8.1 **Test of relationship on the type of learning of the respondents to their study habits**

	STUDY HABITS	
TYPE OF LEARNING	r-value	0.377
	p-value	0.000*

This table shows test of relationship on the type of learning of the respondents to their type of learning to their study habits. There is a significant relationship between type of learning and study habits with the p-value of 0.000.

Table 8.2 **Test of relationship on the type of learning of the respondents to challenges in the delivery in the new normal**

		CHALLENGES		
		ENVIRONMENT	STUDY MATERIALS	ONLINE PLATFORM
TYPE OF LEARNING	r-value	-.050	-.178	-.268

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	p-value	.444	.006*	.000*

The table presented indicates a significant relationship between the type of learning and challenges faced in the new normal educational delivery. Specifically, there's a significant association between the type of learning and challenges related to study materials (p = .006) and online platforms (p = .000). This suggests that while there is a negligible correlation between the type of learning and challenges regarding study materials, there is a low correlation concerning challenges with online platforms. Moreover, it highlights the increasing use of online learning in educational programs, particularly in preparing pre-service teachers for virtual teaching environments. However, students' attitudes, involvement, and self-regulated learning abilities play crucial roles in mediating the effectiveness of online learning in pre-service teacher education, as indicated by previous research (Archambault et al., 2014; Sutherland et al., 2010; Kara et al., 2021).

Table 9 **Test relationship on the study habits of the respondents to challenges in the delivery of education in the new normal**

		CHALLENGES		
		ENVIRONMENT	**STUDY MATERIALS**	**ONLINE PLATFORM**
STUDY HABITS	**r-value**	-.090	-.153	-.139
	p-value	.169	.018*	.033*

The table presents a test of relationship between the study habits of respondents and the challenges they face in the new normal educational delivery. It reveals a significant relationship between study habits and challenges related to study materials (p = .018) and online platforms (p = .033). However, despite the significance, the correlation between study habits and challenges regarding study materials and online platforms is negligible. Additionally, the text highlights the increased demands placed on students in online learning environments compared to in-person learning. It suggests that pre-service teachers need to adapt their self-regulated learning (SRL) approach for online learning, particularly in emergency distance education contexts. This adaptation is crucial for effective pedagogical reflection and transitioning between different learning settings. Moreover, improved learning outcomes and the development of complex ideas in online learning are associated with an adaptive SRL approach, which contributes to proficiency in creating online learning environments.

CONCLUSION

The analysis of the findings simply means that, the study habits and challenges of the students in the Medical Colleges of the Northern Philippines of the Medical Laboratory Science Department in the new normal and its relationship to the academic performance, a significant effect took place.

Thus, the result of the study shows that there is a significant difference on the type of learning, study habits and challenges of the respondents to their profile variables. There is a significant relationship between academic performance and study habits of the respondents. There is a significant relationship between the type of learning of the respondents in the study habits and challenges in terms

of study materials and online platforms. And there is a significant relationship between the study habits and challenges of the respondents in terms of study materials and online platform.

To sum up, the study habits and challenges of the Medical Laboratory Science students of the Medical Colleges of Northern Philippines in the new normal has a relationship to the academic performance.

RECOMMENDATIONS

Following a careful analysis and considering the study's findings and conclusions, the following suggestions are made:

1. The learners should know what type of learner they in order are to determine the effective study habits for them. An effective study habit will help them to improve their academic performance.
2. The educators should be aware about the strength and weaknesses of the learners.
3. The administrator may consider creating a program or suggest strategies and techniques in enhancing the development of study habits of learners, determining their type of learning and help them motivate.

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