Factors Affecting Students' Academic Performance Through Online Learning

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ABSTRACT
During the COVID-19 epidemic, the variety of online learning among math students has expanded tremendously at all academic college levels. Since online learning is still relatively new, there haven't been many analyses or research on how well math students perform when using this alternative medium of instruction. The purpose of this study is to identify the variables influencing respondents' academic achievement when Cagayan State University-Piat students were learning mathematics online. The study involved second- through fourth-year mathematics major students who are enrolled in the 2022–2023 academic year and who took part in online learning in the previous academic year, 2021–2022. Data included in the study came from a survey and the campus registrar, and it also included information on academic performance. Mathematics students' online performance was analyzed using the weighted mean, frequency distribution, T-test, one-way ANOVA, and frequency distribution to find statistically significant effects. Results from online learning showed that respondents' academic performance was rarely affected.

Keywords: Academic performance, mathematics students, online learning, CSU-Piat

INTRODUCTION

Online learning has recently emerged as one of the most cutting-edge pedagogical study strategies. The training approaches that have been used in recent years have undergone significant change. The country has made extensive use of online distance learning. However, not all students and educators are aware of the factors that influence students' academic achievement.

The COVID-19 outbreak has forced some students to do their schoolwork online against their will, and some of them are still struggling to accept and adjust to this abrupt change in the learning environment. Students do not appear to be as comfortable with online distance learning, and they appear to prefer face-to-face interactions with peers and teachers. Thanks to the internet and computers, students can now learn from the comfort of their own homes. Online learning has grown in popularity as a result of new technology, and it is now available in a variety of formats. The majority of colleges, high schools, and other educational institutions have adopted this style of instruction, and the number of students taking online courses has dramatically expanded.

Education no longer takes place in traditional classrooms, but rather in a new digital phenomena in which computers assist the teacher. The Internet today offers a vast array of courses, seminars, credentials, and other things. The proliferation of instructional content and online learning resources has called into question the efficacy of the traditional educational strategy now used at universities and other educational institutions. This makes rethinking and restructuring these institutions' information-transmission strategies difficult. Because of the changing demographics of today's student body, educational institutions are hurrying to provide online learning technologies that will facilitate computer-assisted instruction.

With the extensive usage of technology in the classroom today, the debate over whether technology-enhanced training or face-to-face instruction is preferable should be settled. In fact, a student's course experience should consider not only their final grade but also how much of the course's learning objectives they have actually achieved. The learning experience can be enhanced by utilizing the new options provided by online learning to communicate with students and promote student-centered learning. Our first worry should be whether or not students truly learn while using online learning tools.

Learning is a highly social endeavor. Instead of being a reaction to instruction, it is the product of a social context that supports learning. If we are to be successful in our quest to create technology and new media to promote learning, we must forsake the traditional paradigm of education as knowledge transmission. Despite its importance in learning, information is only one of several elements at work. It is deeply erroneous and pointless to separate information, theories, and principles from the actions and settings in which they are used. Knowledge is inextricably related to the physical and social environment in which it is gained and used (Azzi et al., 2021; Hwang et al., 2021)..

Online learning is the synchronous and asynchronous transfer of knowledge using internet technologies. These strategies enable learners to interact with their professors and coworkers while preserving their social distance (Rabo, 2022). Students can learn, network, share their ideas, be self-directed in their learning, and manage their time through online learning. It is essential for both students and teachers to be able to use technology to create and sustain fruitful social connections when learning online (Andel et al., 2020). Other factors, such as the availability of appropriate facilities, infrastructure, and the financial position of the students, are also vital to online learning in addition to the effective use of technology (Rusli et al., 2020; Laksana, 2021).

Any learning that occurs over time and outside of a typical classroom is considered distance learning, which includes online learning as only one type of it. One of the main reasons for this is that, in comparison to traditional teaching methods, online learning gives students better access to education because they may study whenever they want, from anywhere, and they can choose whether to do so full- or part-time (El-Saoud et al., 2014).

Online learning is referred to as "wholly online" learning, which is similar to distance learning but employs online platforms and involves students learning outside of the classroom. Online delivery methods can offer effective and practical ways for students taking online courses to achieve their learning objectives (Junco et al. 2013).

Online learning takes into account interactive activities such teacher-student interaction, student-student interaction, student-content interaction, and student-technology engagement. Students participated in an online learning course where formative evaluation was used to combine different learning activities using a learning management system to monitor student learning outcomes (Nguyen, 2017).

Online education is a practical instrument for overcoming obstacles in general and the pandemic issue in particular. Many people think that the current educational system is terrible for online learning. The majority of students are uninterested in online learning due to the few possibilities for involvement, the erratic sound and visual quality caused by the Internet's reliability, and the poor technological infrastructure. Institutions and society at large are concerned about the effects that online learning has on pupils. In reality, there has been a major increase in study on the variables that affect students' online learning outcomes in terms of academic performance.

Although there are many advantages for students using online resources, there are several aspects that can affect how successful and efficient online learning is (Pratiwi, 2020). These elements include motivation, learner readiness, university support, and faculty involvement. These factors could be interpreted differently by various students. The smooth delivery of educational services is hampered by a number of challenges that many students encounter (Laksana, 2021).

Online education is typically of inferior quality for students in locations with poor internet and frequent power outages than it is for students in other areas. The effectiveness of online learning can be influenced by a number of crucial factors, such as the role of the teacher, university support, the home study environment, and motivational factors.

Statement of the Problem

This study aimed to determine the different factors affecting respondents' academic performance through online learning specifically; it sought to answer the following questions;

1. What is the level of Respondents' Academic Performance through Online Learning?
2. What are the factors affecting the academic performance of the respondents in terms of?
    2.1 Lecturers Factors
    2.2 Study habit
    2.3 Self-Regulatory Factors
    2.4 Home Environment Related Factors
    2.5 Technological Literacy and competency challenges
3. Is there a significant difference on the perceived factors by the respondents affecting their academic performance when grouped according to their profile?
4. Is there a significant relationship between the level of respondent's academic performance in the Perceived factors affecting their academic performance?

Research Hypotheses

Based on the problems raised in this study, the following hypotheses were tested at a 0.05 level of significance:

1. There is no significant difference on the perceived factors affecting the academic performance when grouped according to their profile
2. There is no relationship between students' perceived factors affecting their academic performance and their profile

3. There is no significant relationship between the level of respondents' academic performance in the Perceive factors affecting their academic performance.

Research Methodology

The researchers employed the descriptive correlational method in identifying and finding the profile of the respondents, level of respondents' Academic performance, factors affecting respondents' academic performance through online learning, significant relationship between respondents' profile and the level of Academic performance, significant relationships between respondents' level of Academic performance and factors affecting respondents' academic performance through online learning. The study was conducted at the College of Teacher Education Cagayan State University Piat Campus located at Baung, Piat, Cagayan. The respondents of this study were all 2nd year, 3rd year and 4th year mathematics major students who are enrolled in this school year 2019-2021 and experienced the online learning in the year 2020 – 2021.

DISCUSSION OF FINDINGS AND RESULTS
LEVEL OF RESPONDENTS' ACADEMIC PERFORMANCE THROUGH ONLINE LEARNING

Table 1

Respondents Academic Performances	Frequency N=41	Percentage
Percentage Equivalent		
91-93	4	9.76
88-90	26	63.41
85-87	11	26.83
mean grade 88.49 Total	41	100

Table 1 shows the Frequency and Percentage Distribution of the Respondents' Level Academic Performance through Online Learning

Of the 41 respondents, 4 (9.76%) obtained a grade ranging from 91-93, 26 (63.41%) obtained a grade ranging from 88-90, 11 (26.83%) obtained a grade ranging 85-87. Majority of the respondents have grade ranging from 88-90 obtained a grade ranging and nobody got grades 82-84, 79-81, 76-78, 75 and below 75. Also, the table denotes that the level of respondents' academic performance through online learning mean grade of 88.49 which implies further that they have a very good performance.

FACTORS AFFECTING THE RESPONDENTS' ACADEMIC PERFORMANCE THROUGH ONLINE LEARNING

Table 2.1:Weighted Mean Distribution on the Factors Affecting Respondents' Academic Performance through Online Learning: Lecturer factors

Factors	Weighted Mean	Descriptive Scale
Lecturer factor		
1. Teachers discuss many topics in a short period of time.	2.68	Sometimes
2. Lecturers give too much memory work.	2.66	Sometimes
3. Lecturers always scold student	2	Rarely
4. Lecturers are always late to the class.	2.15	Rarely
5. Lecturers are frequently absent from class.	2.05	Rarely
Overall Weighted Mean	2.31	Rarely

Table 2.1 shows that the highest weighted mean in the lecturer factor is the statement number one which is "the teachers discuss many topics in short period of time" with a descriptive value of "sometimes" which means that sometimes lecturers discuss many topics in a short period of time and the lowest weighted mean is the statement number two which is "the lecturers always scold students" with a descriptive value of "rarely" which means that the lecturers rarely scold students. Also the table shows that the overall weighted mean on the lectures factors is 2.31 with a descriptive value of "Rarely" which implies that lecturer factors rarely affect the respondents' academic performance through online learning.

Table 2.2 Weighted Mean Distribution on the Factors Affecting Respondents' Academic Performance through Online Learning: Study habits

Factors	Weighted Mean	Descriptive Scale
Study habits		
1. Only when there is an exam do I study.	2.49	Rarely
2. I feel tired, bored and sleepy.	2.39	Rarely
3. I like pressing phones, chatting, and playing games.	2.89	Rarely
4. I study only when I like.	2.22	Rarely
5.I copy the assignments of my friend	2.22	Rarely
Overall Weighted Mean	2.44	Rarely

Table 2.2 shows that the highest weighted mean in the study habit factor is the statement number three which is "I like pressing phones, chatting, and playing games" with a descriptive value of " rarely" which implies that the students rarely pressing their phones, chatting and playing games when they study and the lowest weighted mean is "I study only when I like and I copy the assignment of my friends" with a descriptive value of "rarely" which means that the students study well and doing their assignments on their own and not copying to their friend. The overall weighted mean on the study habits is 2.44 with a descriptive value of "Rarely" which implies that study habits rarely affect the respondents' academic performance through online learning.

Table 2.3:Weighted Mean Distribution on the Factors Affecting Respondents' Academic Performance through Online Learning: Self – Regulatory Factors

Factors	Weighted mean	descriptive value
Self – Regulatory Factors		
1. I put off work relating to my education, which causes them to either be incomplete by the deadline or need to be rushed.	2.15	Rarely
2. I don't receive the right assistance while taking online programs.	2.37	Rarely
3. During online classes, I am unable to manage my own thoughts, feelings, and behavior.	2.46	Rarely
4. I haven't spent much time preparing for an online class.	2.56	Rarely
5. I have trouble managing my time when taking online programs.	2.44	Rarely
6. I am not effective at utilizing peer learning tactics that may be done online, such as peer tutoring, group discussions, and peer feedback.	2.32	Rarely
Overall Weighted Mean	2.38	Rarely

Table 2.3 shows that the highest weighted mean in the self – regulatory factor is the statement number four which is "I have limited preparation before online class" with a descriptive value of "rarely" which mean that they are prepared before the online class because student now a days is techy and the lowest weighted mean in the self – regulatory factor is the statement number one which is "I delay tasks related to my studies so that they are either not fully completed by their deadline or had to be rushed to be completed" with a descriptive value "rarely" which implies that the students didn't delay doing their activities so they will pass it one time. The overall weighted mean on the self – regulatory factors is 2.38 with a descriptive value of "Rarely" which implies that self – regulatory factors rarely affect the respondents' academic performance through online learning.

Table 2.4:Weighted Mean Distributions on the Factors Affecting Respondents' Academic Performance through Online Learning: Home Environment Related Factors

Factors	Weighted Mean	Descriptive Scale
Home Environment Related Factors		
1. A broken home can affect my academic performance.	2.66	Sometimes
2. My academic success may be impacted by the size of the home.	2.15	Rarely
3. My academic performance may suffer if my parents are at odds.	2.66	Sometimes
4. My academic achievement is influenced by my family's social condition.	2.32	Rarely
5. I have a bad relationship with my parents and	1.73	Never

guardians.		
Overall Weighted Mean	2.30	Rarely

Table 2.4 shows that the highest weighted mean in the home environmental related factor are statement number one and three which is "a broken home can affect my academic performance and the disagreement between my parents can affect my academic performance" with descriptive value of "sometimes" which implies that sometimes their broken home and the disagreement of their parents can affect their academic performance. The lowest weighted mean of home environmental related factor is "I have poor relationship with my parents/guardian". With a descriptive value of "never" this implies that they have a good relationship with their parents/ guardian. The overall weighted mean on the home environmental factors is 2.30 with a descriptive value of "Rarely" which implies that home environmental factors rarely affect the respondents' academic performance through online learning.

Table 2.5:Weighted Mean Distributions on the Factors Affecting Respondents' Academic Performance through Online Learning: Technological Literacy and competency challenges

Factors Technological Literacy and competency challenges	Weighted mean	descriptive scale
1. When it comes to using different interfaces or methods to manage a computer or another embedded device for studying, I am not competent or proficient.	2.15	Rarely
2. I'm not tech-savvy and haven't had any training.	2.22	Rarely
3. I'm not good at utilizing technology to speed up learning.	2.20	Rarely
4. I have trouble picking up new technology.	2.22	Rarely
5. Overly complicated technology is keeping me from my work.	2.34	Rarely
Overall Weighted Mean	2.23	Rarely

According to Table 2.5, the statement "I am distracted by an overly complex technology" with a descriptive value of "rarely" has the highest weighted mean among the technological literacy and competency challenges. This indicates that respondents are not distracted by an overly complex technology because they are born with it. The statement number one, "I lack competence and proficiency in using various interfaces or systems that allow me to control a computer or another embedded system for studying," has the lowest weighted mean in the technological literacy and competency challenges. With a descriptive value of "rarely," this means that they are good and knowledgeable in using various interfaces or systems that allow them to control a computer for studying. With a descriptive value of "Rarely," the total weighted mean for the respondents' technological literacy and competency challenges is 2.23, which suggests that these issues only occasionally have an impact on their academic performance while using online learning.

Table 2.6:Summary Weighted Mean Distribution on the Factors Affecting Respondents' Academic Performance through Online Learning

Factors	Overall Weighted Mean	Descriptive Value
Lecturers Factors	2.31	Rarely
Study Habits	2.44	Rarely
Personal Casual Factor	2.38	Rarely
Home Environment Related Factor	2.30	Rarely
Technological Literacy and competency challenges	2.23	Rarely
Overall weighted mean	2.33	Rarely

Table 2.6 shows that the highest weighted mean in all the factors is study habits with descriptive value of "rarely" which implies that among all factors that is presented study habits have greater impact to the academic performance of the respondents' and the lowest weighted mean of all the factors is "Technological Literacy and competency challenges " this means that the respondents are good in using technology in online learning because students now a days are born in technology. The overall weighted mean is 2.33 with a descriptive value of "Rarely" which implies that the Lecturer factors, Study Habits , Self – Regulatory factors, Technological

literacy and competency challenges, rarely affect the respondents' academic performance through online learning.

T – test and one way ANOVA Analysis on the Difference between the Perceived Factors Affecting the Respondents' Academic Performance and their Profile Variables.

Table 3.1: The Difference between the Perceived Factors Affecting the Respondents' Academic Performance when grouped by their age.

Factor	Computed t-test value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	-0.47			Not significant
Study Habits	-1.09			Not significant
Self- Regulatory Factors	-0.67	39	± 2.0227	Not Significant
Home Environment Related Factor	-0.35			Not significant
Technological Literacy and Competency Challenges	-1.47			Not significant

Table 3.1 shows the t-test analysis in the difference between the perceived factors affecting the respondents' academic performance when grouped by their age.

As shown in table 4.1, the computed t – test value of their age in different factors that are presented in the table are -0.47, -1.09, -0.67, -0.35, and -1.47 with degrees of freedom of 39 and a critical value of ± 2.022 at 0.05 level of significance. Since, the computed t – test value is less than the critical value, therefore we accept the null hypothesis, this mean that there is no significant relationship between the respondents age on the different factors that are mentioned in the table. This further implies that the respondents' age is not affected by the different factors that are mentioned in the table.

Table 3.2: The Difference between the perceived factors affecting the respondents' academic performance when grouped by their gender.

Factor	Computed t-test value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	1.65			Not significant
Study Habits	-0.05			Not significant
Self- Regulatory Factors	0.84	39	± 2.0227	Not significant
Home Environment Related Factor	0.93			Not significant
Technological Literacy and Competency Challenges	0.95			Not significant

Table 3.2 presents t-test analysis in the difference between the perceived factors affecting the respondents' academic performance when grouped by their gender.

As shown in table 4.2, the computed t – test value of their gender in different factors that are presented in the table are, 1.65, -0.05, 0.84, 0.93 and 0.95 with degrees of freedom of 39 and a critical value of ± 2.022 at 0.05 level of significance. Since, the computed t – test value is less than the critical value, therefore the null hypothesis gets accepted. This further implies that all the factors that is included in the table is not affected by their profile in terms of gender

Table 3.3:The Difference between the perceived factors affecting the respondents' academic performance when grouped by their Year Level.

Factor	Computed F Value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	0.8817			Not significant
Study Habits	0.4472			Not significant
Self- Regulatory Factors	0.7583	40	±3.2448	Not significant
Home Environment Related Factor	0.0561			Not significant
Technological Literacy and Competency Challenges	0.5364			Not significant

Table 3.3 shows the one way ANOVA analysis in the difference between the perceived factors affecting the respondents' academic performance when grouped by their Year Level.
As detailed in the table, the F critical value at 0.05 level of significance is ±3.2448 and the computed F value of the following variables lecturer factor, study habits, self-regulatory factor, home environmental related factor and technological literacy competency and challenges are 0.8817, 0.4472, 0.7583, 0.0561 and 0.5364. Since the computed F value is less than the F critical value this denotes that, when respondents are confidential by their year level, there are no tangible differences in their year level beyond the previously mentioned factors.

Table 3.4, The Difference between the perceived factors affecting the respondents' academic performance when grouped by their learning devices used.

Factor	Computed t-test value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	-6.77			Significant
Study Habits	4.34			Significant
Self- Regulatory Factors	-6.48	39	±2.0227	Significant
Home Environment Related Factor	-5.29			Significant
Technological Literacy and Competency Challenges	-7.59			Significant

When respondents are categorized by the learning gadgets they use, Table 3.4 displays the t-test analysis in the difference between the perceived factors affecting their academic achievement. The computed t-test values for the variables 6.77, 4.34, 6.48, -5.29, and -7.59 are displayed in the table, and the crucial value at 0.05 level of significance is 2.0227. The null hypothesis was rejected because the computed t-test value was higher than the crucial value. This further suggests that their learning devices utilized varied significantly from one another in addition to the previously indicated characteristics, indicating that the factors listed in the preceding table have an impact on the respondents' learning devices.

Table 3.5:The difference between the perceived factors affecting the respondents' academic performance when grouped by their network access status.

Factor	Computed F value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	1.8955			Not significant
Study Habits	0.5354			Not significant
Self- Regulatory Factors	0.4105			Not significant
Home Environment Related Factor	0.7022			Not significant
Technological Literacy and Competency Challenges	2.5268	40	3.2448	Not significant

According to the respondents' assessed factors affecting their academic achievement when categorized by their network connection status, Table 3.5 shows the results of an ANOVA study.
The computed F values of the following factors, as shown in the table, are 1.8955, 0.5354, 0.4105, 0.7022, and 2.5268; the F critical value is 3.2448. Since the calculated F value is less than the F critical value, it can be concluded that when respondents' network access status is kept private, there are no discernible differences in it beyond the previously mentioned factors. It also follows that the respondents' network access status is unaffected by the various factors listed in the table.

Table 3.6:The Difference between the perceived factors affecting the respondents' academic performance when grouped by their Internet Connectivity.

Factor	Computed F value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	1.4770			Not significant
Study Habits	0.7640			Not significant
Self- Regulatory Factors	1.8843			Not significant
Home Environment Related Factor	2.8526			Not significant
Technological Literacy and Competency Challenges	0.7259	40	3.2448	Not significant

When the respondents are categorized by their Internet Connectivity, Table 3.6 shows the ANOVA analysis of the differences between the perceived factors affecting their academic achievement.The table shows that the lecturer factor, study habits, self-regulatory factor, home environmental related factor, technology literacy competency and challenges all have F critical values that are higher than the computed F values. This means that when respondents are identified by their internet connectivity, there aren't any obvious distinctions in their internet connectivity outside of the aforementioned characteristics.

Table 3.7.1: Difference between the perceived factors affecting the respondents' academic performance when grouped by their Father's Occupation.

Factor	Computed F Value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	2.6124			Significant
Study Habits	1.2661			Not significant
Self- Regulatory Factors	1.2954			Not significant
Home Environment Related Factor	0.5703	40	2.244396	Not significant
Technological Literacy and Competency Challenges	1.6458			Not significant

Table 3.7,1 shows the ANOVA analysis in the difference between the perceived factors affecting the respondents' academic performance when grouped by Father's Occupation.

As shown in the table, it indicates that the F critical value is greater than the computed F value of the following variables, study habits, self-regulatory factor, home environmental related factor and technological literacy competency and challenges. This denotes that, when respondents are confidential by their father's occupation, there is no tangible difference in their father's occupation beyond the previously mentioned factors.

Meanwhile, lecturer factor's F critical value is 1.4770. At 5% level of significance, this is considerable. This further implies that when respondents are classified by their fathers' occupation, there is a sizable difference in the lecturer factor. Post-hoc analysis, as shown below the table, also reveals that Father's occupation with lecturer factor differ significantly from those of deceased and driver with a p-value of 0.06 and 0.02 respectively This further implies that deceased and driver expressed greater affect with lecturer factor than the fathers' occupation as reflected by their mean difference of 1.70 and 1.63 respectively.

Post Hoc Analysis

Multiple Comparisons			
Dependent Variable: Lecturer Factor			
LSD			

(I) FO	(J) FO	Mean Difference (I-J)	Significance at level 0.05
Farmer	Sec Guard	.98000	.029
Driver	Sec Guard	1.70000	.006
Deceased	Farmer	.65333	.019
	Driver	1.23333	.014

Sec Guard	1.63333	.002

The mean difference is significant at the 0.05 level.

Table 3.7.2 difference between the perceived factors affecting the respondents' academic performance when grouped by their Mother's Occupation.

Factor	Computed F Value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	0.822103			Not significant
Study Habits	1.071669			Not significant
Self- Regulatory Factors	0.512072			Not significant
Home Environment Related Factor	0.506394			Not significant
Technological Literacy and Competency Challenges	0.49096	40	2.302982	Not significant

Table 3.7,2 shows the ANOVA analysis in the difference between the perceived factors affecting the respondents' academic performance when grouped by their Mother's Occupation
As detailed in the table, it indicates that the F critical value is greater than computed F value of the following variables, lecturer factor, study habits, self-regulatory factor, home environmental related factor and technological literacy competency and challenges. This denotes that, when respondents are confidential by their mothers' occupation, there are no tangible differences in their mother's occupation beyond the previously mentioned factors.

Table 3.8: Difference between the perceived factors affecting the respondents' academ performance when grouped by their Parents monthly income (in pesos)

Factor	Computed F Value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	0.590342			Not significant
Study Habits	0.01306			Not significant
Self- Regulatory Factors	1.213323			Not significant
Home Environment Related Factor	4.250823			significant
Technological Literacy and Competency Challenges	0.047402	40	3.2448	Not significant

Table 3.8 shows the ANOVA analysis in the difference between the perceived factors affecting the respondents' academic performance when grouped by Parents monthly income (in pesos).
As detailed in the table, it indicates that the F critical value is greater than the computed F value of the following variables, lecturer factors, study habits, self-regulatory factor and technological literacy competency and challenges. This denotes that when respondents are confidential by their parent's monthly income, there are no tangible differences in their parent's monthly income beyond the previously mentioned factors.
Meanwhile, the mean difference is considerable at 5% level of significance. It means that the mean difference is significant. Post-hoc analysis further implies that those students whose parent's monthly income is 10,000-19,999 perceived environmental related factors more as affecting their performance than those students whose parent's monthly income is below 10,000 with a mean difference of 1.25. This indicates that parents with higher monthly income provides all the needs of their children in online learning such as gadgets, wifi, and other materials that needed in online learning compare to the parents with a monthly income is below 10,000.

Post Hoc Analysis Multiple Comparisons

4.   Analysis on the Relationship between the Level of the Respondent's Academic Performance through online Learning and their Perceive Factors Variables.

Factor	Computed chi – square value	Degrees of freedom	Critical value at 0.05 level	Decision
Lecturer Factor	8.945			Not significant
Study Habits	7.378			Not significant
Self- Regulatory Factors	13.900			Not significant
Home Environment Related Factor	18.922			significant
Technological Literacy and Competency Challenges	9.387	8	15.507	Not significant

Table 4 shows that chi – square analysis on the relationship between the level of respondent's academic performance and their Perceived factors affecting their academic performance.

As shown in the table the critical value at 0.05 level of significance is 15.507 greater than the computed chi - square value 8.945, 7.378, 13.900, 18.922, and 9.387 in lecturer factors, study habits, self- regulatory and technological literacy and competency challenges. This connotes that there is no significance relationship in lecturer factors, study habits, self- regulatory and technological literacy and competency challenges.

Result implies that lecturer factors, study habits, self- regulatory and technological literacy and competency challenges are not affected by their academic performance.

Moreover, home environmental related factor has a critical value of 15.507 in 0.05 level of significance is less than the computed chi – square value of 18.922. Therefore, there is a significant relationship with the home environmental related factor and their academic performance.

Result shows that the respondents' academic performance is affected by the home environmental related factor and this means that a broken home, the household size, the disagreement of parents, the socioeconomic status and the relationship of parents to their children really have a big impact to the academic performance of the students. In corroboration of the study of Egunsola (2014) conducted a study on how students' home environments affect their academic performance at university.

Researcher have found a number of factors that affect a student's academic success, including family, home, demographics, school, and environment. A family's responsibility is to support, uplift, and safeguard its offspring. As a result, each of these deeds or tasks is performed at home, which is a crucial part of schooling. Particularly throughout the adolescent years, the family environment has a considerable impact on the kid or student. Children are first supervised and trained within the family. Children are able to identify with their social class, religion, society, and culture thanks to the behaviors they acquire at home.

DISCUSSION

The level of academic success of responders through online learning can vary depending on a variety of circumstances. Online learning has grown in popularity, particularly in light of the COVID-19 epidemic. While it provides flexibility and convenience, it also introduces new obstacles. The availability and quality of technology resources is one element impacting academic success. Students who have stable internet connections, proper devices, and relevant software are more likely to succeed in online learning. Furthermore, students' digital literacy and familiarity with online platforms might have an impact on their capacity to engage with learning materials and participate in virtual classrooms. Another important factor is the level of self-motivation and discipline demonstrated by students. Online learning necessitates more self-direction and time management skills than traditional classroom settings. Students who can create objectives, manage their time well, and stay motivated are more likely to succeed in school. Those who battle with self-discipline, on the other hand, may find it difficult to retain concentrate and meet deadlines, consequently hurting their performance.

Several factors can have a major impact on respondents' academic achievement when using online learning. For starters, the availability and dependability of technology, as well as internet connectivity, are critical. Students with limited device access or inconsistent internet connections may struggle to attend online classes, access course materials, or participate in virtual conversations, negatively influencing their performance. Furthermore, the learning environment at home can have a substantial impact on academic success. Distractions, noise, and a lack of a comfortable study environment can all interrupt attention and impede learning. Students who live in congested or chaotic situations may have a more difficult time establishing a suitable atmosphere for concentrated learning.

Another thing to think about is the level of social connection and participation. Because online learning lacks the face-to-face connection of traditional classes, it can feel isolated at times. Students who thrive on peer cooperation and classroom discussions may struggle to adjust to the online learning model, affecting their interest and, as a result, their performance. The quality of instructional design and course delivery can affect academic performance. Well-structured courses with clear objectives, organized content, and engaging learning activities can enhance student understanding and retention of material. Conversely, poorly designed courses lacking clarity or interactive elements may hinder comprehension and hinder academic achievement.

CONCLUSIONS
Based on this study conducted, it can be concluded that the perceived factors; lecturer factors, study habits, self-regulatory and technological literacy and competency challenges are not affected by their academic performance. Moreover, the academic performance of the respondents' is affected by one perceived factors; home environmental related factor. This implies that the respondents' academic performance is affected by the home environmental related factor and this means that a broken home, the household size, the disagreement of parents, the socioeconomic status and the relationship of parents to their children really have a big impact to the academic performance of the students.

RECOMMENDATIONS
In the light of the foregoing findings and conclusions, the following recommendations are suggested:
1. Students should know how to balance their time between studies and other matters.
2. Parents must provide the necessary things of their children especially gadgets.
3. Parents should also provide moral support and give motivation to their children as things get worse.
4. Future researchers may conduct similar study to verify the result of this investigation especially in the college students in the teacher education institution.

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