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Study Habits, Mathematics Performance And Gender Differences Of Agriculture Students Amidst The New Normal

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Abstract

This study investigates the interplay between study habits, mathematics performance, and gender differences among agriculture students during the COVID-19 pandemic. A growing body of research indicates a significant positive correlation between effective study habits and academic performance; however, there is a notable gap in understanding these dynamics in the context of disruptive learning environments—the new normal. Utilizing a sample of 193 Agriculture students enrolled in a mathematics class during the first semester of SY 2021-2022, this research assesses their study habits using an adapted questionnaire, evaluates their mathematics performance through final examination scores, examines relationship between study habits and mathematics performance, and explores gender difference in both study habits and mathematics performance. Mean, standard deviation, correlation analysis, and t-test for independent means were utilized in treating the data. The findings reveal that while effective study habits are strongly correlated with improved mathematics performance ($p<0.00001$), no significant gender differences in study habits were observed ($p=0.66$). However, female students outperformed their male counterparts in mathematics ($p=0.0006$). This study contributes to the existing literature by providing insights into the adaptive strategies employed by agriculture students during the pandemic, highlighting the critical role of structured study habits in enhancing academic success. The results underscore the need for educational interventions that promote effective study habits, aiming to support equitable learning outcomes in post-pandemic educational settings.

Keywords: Agriculture Students, Mathematics Education, New Normal

Abstrak

Studi ini menyelidiki hubungan antara kebiasaan belajar, prestasi matematika, dan perbedaan gender di kalangan mahasiswa pertanian selama pandemi COVID-19. Semakin banyak penelitian yang menunjukkan adanya korelasi positif yang signifikan antara kebiasaan belajar yang efektif dan kinerja akademik; Namun, terdapat kesenjangan yang signifikan dalam memahami dinamika ini dalam konteks lingkungan pembelajaran yang disruptif, yaitu kondisi normal yang baru. Dengan menggunakan sampel sebanyak 193 mahasiswa Pertanian yang terdaftar pada mata kuliah matematika semester I SY 2021-2022, penelitian ini menilai kebiasaan belajar mereka menggunakan kuesioner yang disesuaikan, mengevaluasi kinerja matematika mereka melalui nilai ujian akhir, menguji hubungan antara kebiasaan belajar dan kinerja matematika, dan mengeksplorasi perbedaan gender dalam kebiasaan belajar dan kinerja matematika. Mean, standar deviasi, analisis korelasi, dan uji-t untuk mean independen digunakan dalam mengolah data. Temuannya mengungkapkan bahwa meskipun kebiasaan belajar yang efektif berkorelasi kuat dengan peningkatan kinerja matematika ($p<0,00001$), tidak ada perbedaan gender yang signifikan dalam kebiasaan belajar yang diamati ($p=0,66$). Namun, siswa perempuan mengungguli siswa laki-laki dalam matematika ($p=0,0006$). Studi ini berkontribusi pada literatur yang ada dengan memberikan wawasan tentang strategi adaptif yang digunakan oleh mahasiswa pertanian selama pandemi, menyoroti peran penting kebiasaan belajar terstruktur dalam meningkatkan keberhasilan akademik. Hasil penelitian ini menggarisbawahi perlunya intervensi pendidikan yang mendorong kebiasaan belajar yang efektif, yang bertujuan untuk mendukung hasil pembelajaran yang adil di lingkungan pendidikan pascapandemi.

Kata Kunci: Mahasiswa Pertanian, Pendidikan Matematika, New Normal

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INTRODUCTION

Mathematics performance, a critical indicator of academic success, has garnered significant attention in educational research due to its role in developing logical reasoning, problem-solving skills, and adaptability to complex tasks. For agriculture students, mathematics is integral, given its applications in economics, statistics, and technological advancements in the field. Despite its importance, mathematics performance often varies widely among students, influenced by numerous factors, including study habits and contextual challenges such as the recent pandemic.

The paradigm shift in education brought about by the COVID-19 pandemic has posed unprecedented challenges to global higher education (Nagal *et al*, 2024) specially to students' learning processes. Struggles on the new normal learning set-up were experienced by schools and Universities in the Philippines (Travero, 2023). Agriculture students, already grappling with the rigorous demands of their field, have had to navigate disruptions in their study routines and adapt to new learning environments. While existing literature underscores the importance of study habits in academic success, little is known about how these habits have evolved during the pandemic—the new normal, and their specific impact on mathematics performance. Additionally, the question of whether gender differences influence study habits and academic outcomes in this unique context remains underexplored.

Study habits, defined as uninterrupted and scheduled time to execute learning tasks (Rabia *et al.*, 2017), are crucial determinants of academic achievement. Study habits play a significant role in students' academic performance, especially in Mathematics (Travero & Japos, 2024). These habits include time management, classroom attendance and participation, general strategies, exam preparation, and note-taking (Angkarini, 2021), all of which contribute to a structured approach to learning. Previous studies have demonstrated that effective study habits positively correlate with academic performance across various disciplines (Ebele & Olofu, 2017; Magulod, 2019). However, with the transition to online and hybrid learning environments during the COVID-19 pandemic, traditional study routines have been disrupted, leading to adaptations that may impact academic outcomes.

A growing body of research has explored the relationship between study habits and academic performance. For instance, studies conducted in Nigeria (Ebele & Olofu, 2017), Pakistan (Rabia et al., 2017), and the Philippines (Magulod, 2019) have consistently highlighted a significant positive association between these variables. However, most of these studies focus on general academic performance or pre-pandemic contexts, leaving a critical research gap concerning how these dynamics unfold during disruptive periods like the COVID-19 pandemic. Moreover, limited attention has been paid to specific disciplines, such as agriculture, where mathematics plays a pivotal role in practical applications.

Another dimension often examined in academic research is gender differences in mathematics performance and study habits. Some studies suggest that female students excel in time management and note-taking, potentially leading to higher academic performance, while males may perform better in certain mathematical domains due to varied problem-solving strategies (Alcantara & Abanador, 2018; Angkarini, 2021). Yet, these findings remain inconsistent, highlighting the need for more nuanced investigations within specific student populations.

This study seeks to address these gaps by investigating the interplay between study habits, mathematics performance, and gender differences among agriculture students during the new normal. Specifically, it aims to: (i) assess the study habits of agriculture students in the context of the new normal; (ii) evaluate their mathematics performance through final examination scores; (iii) examine the relationship

between study habits and mathematics performance; (iv) explore potential gender differences in both study habits and mathematics performance. This study contributes to the existing literature by providing insights into the adaptive strategies employed by agriculture students during the pandemic and their implications for mathematics education. The findings aim to inform educators and policymakers in designing interventions that support effective study habits and equitable learning outcomes in post-pandemic educational landscapes.

METHOD

This study employed a Cross-Sectional Survey Study design, an approach deemed appropriate for investigating the relationship between study habits, mathematics performance, and gender differences at a specific point in time. This design enables the collection of data from a large sample, allowing for the examination of patterns and relationships among variables within the context of the new normal. The cross-sectional nature is particularly suited to capturing the immediate impacts of the pandemic on students' behaviors and academic outcomes, providing a snapshot of their adaptation to online and hybrid learning environments. Specifically, correlational and comparative designs were applied. The correlational component involves the relationship between these variables; while the comparative component involves students' gender differences in their study habits and academic performance.

The research participants comprised 193 randomly selected agriculture students enrolled in Mathematics in the Modern World during the first semester of the 2021-2022 academic year at a state university in Misamis Oriental, Philippines. Among these, 106 were female and 87 were male.The data collection tools included an adapted study habits questionnaire and students' final examination scores as a measure of mathematics performance.

The utilized study habits questionnaire was from Naeemullah Bajwa *et al*. (2011) as used by Angkarini (2021). This questionnaire had a reliability of .869 and employed a binary scale (1 = Yes, 0 = No) to capture the extent and presence of specific behaviors. While binary scaling is often critiqued for its simplicity, it was chosen for its appropriateness in this study as it ensures clarity and ease of response for participants, particularly in the new normal learning setup where prolonged engagement might lead to survey fatigue. Furthermore, the binary scale effectively captures the occurrence of behaviors critical to understanding study habits, such as time management and exam preparation. The dichotomous nature allows for a clear delineation of whether specific habits are practiced, facilitating straightforward analysis of their relationship to mathematics performance.

Statistical analyses included descriptive statistics to summarize study habits and mathematics performance, correlation analysis to examine relationships between variables, and t-tests to investigate gender differences. It was assured that the data were normally distributed prior to the conduct of the inferential statistics.

RESULTS AND DISCUSSION

Table 1. Gender Differences in Students' Study Habits in Terms of Time Management

	Indicators	Mean		Standard Deviation		p-value
		Male	Female	Male	Female	
1	I have a study schedule with times set aside to study each subject.	0.77	0.70	0.42	0.46	0.2755
2	I use my free time between classes for reading or reviewing.	0.72	0.69	0.45	0.47	0.6534
3	I balance my study time with recreation and leisure time.	0.84	0.80	0.37	0.40	0.4756
4	I have a calendar of the semester and it is marked with exam dates, project due dates and assignments.	0.55	0.70	0.50	0.46	**0.03145***
5	I keep a weekly schedule of my classes and activities.	0.75	0.84	0.44	0.37	0.1243
6	I use daily "to do" lists.	0.59	0.68	0.50	0.47	0.2
7	I study on the weekends.	0.57	0.58	0.50	0.50	0.8902
Time Management		**4.79**	**4.98**	**1.83**	**1.89**	**0.4817**

*p < 0.05

Table 1 shows the study habits of participants in terms of time management. Of all the items under this indicator, only item 4 shows a significant difference between the performance of male and female participants with p=0.031. Item 4 refers to students having a calendar with marked dates on the submission of projects, activities, and major examinations. Female participants significantly performed better in this item with a mean of .70 and a standard deviation of 0.46. With an overall p-value of 0.4817, it can be implied that in terms of time management, there is no significant difference between males and females.

Time management is closely associated with academic performance. Studies have shown that students with effective time management skills exhibit better organization in completing academic tasks (Magulod, 2019). These skills are positively linked to academic achievement, as demonstrated by Alsalem *et al.* (2017) and Nasrullah and Khan (2015), who found that students practicing time management tend to achieve better academic outcomes. Interestingly, some research suggests nuanced gender-specific effects of time management. For instance, Wilson *et al.* (2021) found that time management skills significantly improved male students' academic outcomes but had no similar effect on female students when controlling for prior academic ability. However, Karakose (2015) reported a positive correlation between time management skills and academic achievement among medical students, with female students outperforming their male peers. Additionally, Khan *et al.* (2020) and Khan (2015) emphasized that good time management skills are essential for university students to excel academically, highlighting their vital role in fostering higher academic achievement.

These results suggest that educators should promote structured time management strategies for all students, regardless of gender. This is particularly crucial in the new normal educational landscape, where the boundaries between academic and personal life are increasingly blurred. Instructors might consider integrating digital tools, such as shared calendars and reminders, into their teaching practices to foster these habits. Additionally, workshops on time management could benefit students by providing them with practical strategies to balance academic demands with personal responsibilities.

In the broader context of the new normal, where online and hybrid learning modalities predominate, effective time management is a cornerstone of student success. The shift to remote learning has intensified the need for self-discipline and proactive planning. As educational institutions continue to navigate this landscape, supporting students in developing these skills will be essential for sustaining engagement and improving academic outcomes.

Table 2. Gender Differences on Students' Study Habit in terms of Class Attendance and Participation

	Indicators	Mean		Standard Deviation		p-value
		Male	Female	Male	Female	
8	I attend class regularly.	0.80	0.83	0.40	0.38	0.5947
9	I get to class early or on time	0.71	0.74	0.46	0.44	0.6448
10	I come to class prepared, having completed the reading.	0.57	0.52	0.50	0.50	0.4902
11	I always find a comfortable place for me when I'm listening to the lecture or watching lecture's video	0.91	0.90	0.29	0.31	0.8187
Class Attendance and Participation		**3.00**	**2.98**	**1.15**	**1.01**	**0.8978**

*p < 0.05

Table 2 examines gender differences in class attendance and participation, revealing no significant disparities between male and female students in these aspects. This finding suggests that both genders demonstrate a comparable level of engagement in attending classes and participating in learning activities. This parity is particularly noteworthy in the context of the "new normal," where online and hybrid learning environments require heightened self-motivation and adaptability.

(Angkarini, 2021) attributes the active online participation of both male and female students to their curiosity about the knowledge they gain from class lectures. Engaging media, such as videos and interactive games, also contribute to increased participation. However, students' reliance on the instructor's explanations may lead to attending classes without prior preparation or reading of materials. Yu (2011) emphasizes that reading assigned materials in advance and completing homework can enhance students' class participation. Additionally, (Berico and Travero, 2023) highlight that students generally exhibit a positive attitude toward online learning, with ease of use significantly linked to their problem-solving abilities. Their findings further reveal that ease of using online learning platforms predicts problem-solving skills. (Alhefnawi, 2021) notes that online handouts are more effective than active lectures in teaching sustainability concepts to undergraduate students, indicating the potential of digital tools to enhance learning outcomes.

This finding underscores the importance of designing inclusive learning environments that cater to diverse student needs. Educators should focus on strategies that foster engagement across all students, such as interactive discussions, collaborative projects, and the use of engaging digital platforms. Ensuring equitable access to technological resources and addressing barriers to participation, such as internet connectivity issues, is also vital. In the context of the new normal, promoting class attendance and participation is essential for maintaining academic continuity. The shift to remote learning has highlighted the need for flexible and innovative approaches to keep students engaged. For instance, incorporating gamified elements and real-time feedback mechanisms can enhance the interactive nature of virtual classes. Furthermore, providing opportunities for peer-to-peer interaction can help replicate the collaborative atmosphere of traditional classrooms, thereby fostering a sense of community among students.

Table 3. Gender Differences on Students' Study Habit in terms of General Study and Strategy

	Indicators	Mean		Standard Deviation		p-value
		Male	Female	Male	Female	
12	I plan sufficient time to get assignments done.	0.86	0.87	0.35	0.34	0.8412
13	I turn in all assignments on time.	0.46	0.53	0.50	0.50	0.3344
14	I use index cards to write down important information and then review that information when I am "waiting" around.	0.48	0.41	0.50	0.49	0.3291
15	I work on more difficult task first.	0.76	0.72	0.43	0.45	0.5315
16	I set specific goals for each subject.	0.84	0.86	0.37	0.35	0.7007
17	I have a regular study area that is free of distractions.	0.62	0.60	0.49	0.49	0.7781
18	I take breaks when I study.	0.91	0.91	0.29	0.29	1
19	I am always looking for additional references about the material being studied from the internet.	0.84	0.87	0.37	0.34	0.5585
20	I always ask the lecturer if there is material that I don't understand	0.71	0.52	0.46	0.50	**0.0071***
General Study Strategy		**6.48**	**6.27**	**1.89**	**2.00**	**0.4578**

*p < 0.05

In general study strategy, gender difference can only be posited in item 20 with a p-value of 0.007. This item refers to asking questions to the lecturer whenever the students have a hard time understanding the material. Male participants have a higher mean in this item. The rest of the items showed no significant difference between the sexes.

During online learning, students tend to adapt to the modality and explore strategies to enhance their learning experience (Angkarini, 2021). The use of effective study strategies has been positively correlated with academic performance, with high-performing students employing more study strategies compared to their low-performing peers (De Zoysa *et al.,* 2014).

Gender differences in learning and study strategies are documented in the literature, but these differences do not necessarily translate to disparities in academic achievement (Beena Daliya & Bhogle, 2013). Ruffing *et al.* (2015) identified gender-specific variations in the application of various learning strategies, with effort contributing significantly (10%) to academic achievement beyond the influence of general cognitive ability.

This finding suggests that educators should encourage all students to seek clarification when needed. In the new normal learning context, where virtual interactions might limit spontaneous question-asking, it is vital to create structured opportunities for inquiries. Strategies such as dedicated question-and-answer sessions, anonymous query submission platforms, and frequent check-ins can promote an inclusive learning environment.

Table 4. Gender Differences on Students' Study Habit in terms of Exam Preparation

	Indicators	Mean		Standard Deviation		p-value
		Male	Female	Male	Female	
21	I review older material first when studying for exams.	0.79	0.84	0.41	0.37	0.3748
22	When studying for exams, I review over several chapter.	0.80	0.74	0.40	0.44	0.3275
23	I study for exams at least five days in advance.	0.48	0.42	0.50	0.50	0.4079
24	I make up exam questions and answer them as I study.	0.57	0.54	0.50	0.50	0.6788
25	I make up exam questions using the same format that the actual exam will use.	0.52	0.47	0.50	0.50	0.4902
26	I review for exams with a peer or a small study group.	0.44	0.33	0.50	0.47	0.1176
27	I review for exams by explaining concepts to others.	0.52	0.32	0.50	0.47	**0.0047***
Exam Preparation		**4.13**	**3.65**	**2.11**	**2.02**	**0.1091**

*p < 0.05

Table 4 posits the exam preparation of the students. The statement "I review for exams by explaining concepts to others" is the only item that has a significant difference between males and females with p=0.0047. With a mean of 0.52 and a standard deviation of 0.50, male participants performed higher in this item.

(Yu, 2011) found that high-performing students tend to cram more than their low-performing peers, reflecting a period of intense preparation a week before examinations. This aligns with (Magulod's, 2019) findings, which highlight that students who graduate with honors typically engage in longer and more structured test preparation, coupled with effective management of test anxiety. In contrast, low-performing students often overestimate their abilities, with their lower second-order judgments revealing limited metacognitive awareness (Fritzsche *et al.*, 2018). This underscores the importance of metacognitive strategies in achieving academic success, as well as the value of active and collaborative learning techniques, such as explaining concepts to others, which may be particularly beneficial for male students as seen in this study.

The results suggest that educators could incorporate peer-teaching activities into their instructional strategies, benefiting all students. Structured opportunities for collaborative learning, such as study groups or peer tutoring sessions, can encourage students to articulate their understanding and learn from others. This approach is particularly valuable in the new normal, where online platforms can facilitate virtual study groups and collaborative exercises. In the broader educational landscape, the findings highlight the importance of diversifying exam preparation techniques to cater to various learning preferences. While explaining concepts benefits comprehension, it is equally crucial to support students who may prefer solitary study methods. Providing resources such as recorded lectures, self-assessment tools, and interactive study modules ensures that all students have access to effective preparation strategies.

Table 5. Gender Differences on Students' Study Habit in terms of Note taking

	Indicators	Mean		Standard Deviation		p-value
		Male	Female	Male	Female	
28	I take organized and legible notes during class.	0.76	0.84	0.43	0.37	0.1665
29	I review and revise my notes soon after class.	0.76	0.70	0.43	0.46	0.3544
30	I take notes as I read my assignments.	0.82	0.92	0.39	0.28	**0.03986***
Note Taking		**2.33**	**2.45**	**1.00**	**0.82**	**0.3608**

*p < 0.05

Table 5 illustrates the gender differences in students' study habits related to note-taking. Among the indicators, only item 30, which pertains to taking notes while reading assignments, shows a significant difference between male and female students (p = 0.03986). Female participants demonstrated stronger performance in this area, with a mean of 0.92 compared to 0.82 for males.

This result aligns with existing research indicating that females tend to adopt more organized and frequent note-taking strategies. (Angkarini, 2021) noted that females' attentiveness to details and structured note-taking habits enhance their learning outcomes. Similarly, (Reddington et al, 2015) highlighted that female students often excel in handwriting speed, working memory, and conscientiousness, which are critical for effective note-taking.

These findings highlight the need to promote effective note-taking strategies among all students, regardless of gender. Structured approaches, such as training on the Cornell or mapping methods, could help bridge the gap observed in this study and support male students in enhancing their note-taking skills. In the context of the new normal, effective note-taking has become a crucial skill. As students increasingly rely on asynchronous materials like recorded lectures and digital resources, the ability to organize and synthesize information through notes is vital for academic success. Female students' stronger performance in this domain reflects their adaptability to these demands, but ensuring equitable access to note-taking techniques can enhance learning outcomes for all students, fostering resilience and success in evolving educational settings.

Table 6. Gender Differences on Students' Overall Study Habits

Variable	Mean		Standard Deviation		p-value
	Male	Female	Male	Female	
Students' Study Habits	20.74	20.34	6.45	6.13	**0.66**

*p < 0.05

Table 6 presents the overall study habits of male and female participants, revealing no significant difference between the two groups (p = 0.66). Male students recorded a mean score of 20.74, while female students had a slightly lower mean score of 20.34. These findings align with previous studies, such as those by Charles-Ogan and Alamina (2014), which reported no significant gender differences in study habits when learning mathematical concepts. This result suggests that male and female students employ study habits of similar quality and frequency, reflecting comparable levels of engagement in their academic routines.

However, in the context of the new normal, these results contrast with (Angkarini's, 2021) findings. (Angkarini, 2021) observed that females demonstrated better study habits than males in areas such as time management and note-taking, while males outperformed females in exam preparation strategies. These variations suggest that gender differences in study habits may be influenced by contextual factors, such as learning modalities and instructional approaches, underscoring the need for further exploration.

The findings of the present study underscore the need for educational interventions that promote universally effective study habits. Institutions could provide workshops or seminars on time management, goal setting, and self-regulated learning strategies that benefit all students, regardless of gender. In the broader context of the new normal, characterized by disruptions in traditional learning routines, the development of structured and adaptive study habits is essential for academic resilience. Both male and female students' ability to maintain "good" study habits despite challenges underscores the importance of creating supportive learning environments that foster these skills.

Table 7. Students' Overall Study Habits

Variable	Mean	Standard Deviation	Descriptive Rating
Students' Study Habits	20.52	6.27	**Good Study Habits**

Legend:

Mean Score			Verbal Description
0.00	-	10.00	Poor Study Habits
10.01	-	20.00	Fair Study Habits
20.01	-	30.00	Good Study Habits

Table 7 illustrates the overall study habits of the participants, with a mean score of 20.52 and a standard deviation of 6.27, categorized as "Good" according to the study's criteria. This finding suggests that, despite the challenges posed by the "new normal," students have managed to cultivate study habits that support their learning. These findings align with studies emphasizing the importance of resilience and adaptability in students' academic routines (Angkarini, 2021; Magulod, 2019). Developing strong study habits can be seen as a proactive response to changing educational environments, reinforcing students' commitment to learning despite external challenges.

In new normal, effective study habits have become increasingly critical. With the proliferation of asynchronous and online learning, students must take greater responsibility for their learning processes, requiring higher levels of self-discipline and organization. The maintenance of "good" study habits observed in this study is an encouraging sign of students' ability to adapt to these demands. However, sustaining these habits will require ongoing support, particularly as students transition back to face-to-face or hybrid learning environments, where expectations and routines may differ.

Table 8. Gender Differences on Students' Mathematics Performance

Variable	Mean		Standard Deviation		p-value
	Male	Female	Male	Female	
Students' Mathematics Performance	54.51	63.76	17.09	20.01	**0.0006***

*p < 0.05

Table 8 presents the gender differences in mathematics performance among the participants, revealing a significant difference favoring female students (p = 0.0006). Female participants achieved a mean score of 63.76 compared to 54.51 for males, both categorized as "Good" performance based on the study's criteria. This finding aligns with prior research by (Alcantara and Abanador, 2018), who reported that female students tend to excel in mathematics-related tasks, particularly in areas requiring consistent effort and detailed comprehension. The results highlight potential gender-specific strengths that contribute to academic performance, such as time management, organization, and conscientiousness, which are often more pronounced among female students.

In contrast, (Jaen and Baccay, 2016) found no significant gender differences in mathematics performance among Grade 10 students in Bulacan, Philippines. Their study, involving equal numbers of male and female respondents, indicated that academic performance might depend more on factors such as instructional methods, student interest, and study strategies rather than on gender. Further, (Angkarini, 2021) emphasized gender-specific tendencies in study habits, with females excelling in time management and note-taking, which could translate to better academic outcomes. Similarly, (Reddington *et al,* 2015) identified that females often demonstrate higher conscientiousness, working memory, and language comprehension, which may contribute to their stronger academic performance overall.

These findings underscore the importance of fostering equitable opportunities for mathematics learning. In the new normal, remote and hybrid education may exacerbate existing disparities if not addressed through intentional design. Providing students with access to digital tools, resources, and tailored instructional materials can help bridge the gap in performance. Moreover, emphasizing metacognitive strategies, such as planning, monitoring, and evaluating learning activities, can empower students of all genders to succeed in increasingly autonomous learning settings.

Table 9. Students' Overall Mathematics Performance

Variable	Mean	Standard Deviation	Descriptive Rating
Students' Mathematics Performance	59.59	19.26	**Good**

Legend:

Mean Score			Verbal Description
0.00	-	16.00	Poor
16.01	-	32.00	Fair
32.01	-	48.00	Average
48.01	-	64.00	Good
64.01	-	80.00	Excellent

Table 9 presents the overall mathematics performance of the participants during the new normal, with a mean score of 59.59 and a standard deviation of 19.26. This is categorized as "Good" according to the study's criteria. The findings suggest that students, despite the challenges posed by the shift to remote and hybrid learning modalities, were able to perform reasonably well in mathematics. According to (Nasrullah and Khan, 2015), students with good time management skills tend to achieve better academic outcomes, including in mathematics. This performance level reflects students' ability to adapt to new learning modalities, such as online education, where engagement and consistent study habits play a significant role in academic success.

(Magulod, 2019) highlighted that students who manage their test anxiety and engage in longer test preparation often achieve better results in mathematics. This aligns with the findings of (Khan *et al,* 2020), who emphasized that good time management skills significantly contribute to higher academic achievement in mathematics.

These results suggest that, despite the challenges presented by the new normal, students are striving to maintain a good level of performance in mathematics through effective study habits and engagement. The continuation of such practices is crucial in supporting academic success across various learning environments. The findings underscore the importance of providing continuous academic support to ensure sustained performance in mathematics. Educational institutions could implement targeted interventions, such as tutoring programs, supplementary instructional materials, and workshops on effective learning strategies, to help students strengthen their mathematical skills. Additionally, fostering collaboration among students through peer study groups and collaborative problem-solving activities could enhance learning outcomes.

Table 10. Relationship between Students' Mathematics Performance and Study Habits

Variables	Computed r	Interpretation	p-value
Students' Study Habits	0.7058	High positive correlation	**< .00001***
Mathematics Performance			

*p < 0.05

Table 10 examines the relationship between students' study habits and their mathematics performance, revealing a high positive correlation ($r = 0.7058$, $p < 0.00001$). This indicates that as students improve their study habits, their mathematics performance tends to increase significantly. These findings align with prior research by Charles-Ogan and Alamina (2014) which showed that study habits have a significant positive relationship with students' performance in mathematics. The study administered by (Ebele and Olofu, 2017) in Nigeria also showed a significant relationship between students' academic performance and their study habits. Moreover, the study of (Rabia *et al.,* 2017) in Pakistan showed a positive association between study habits and academic performance through the chi-square test.

In the Philippines, (Llavore *et al,* 2015) study conducted on students in a university in La Union exhibited study habits to be positively correlated to students' performance. (Magulod, Jr, 2019) examined the learning styles preferences, study habits, and academic performance of students in Cagayan State University at Lasam. The result displayed significant relationships between the variables. The result of the present study only portrays that, even during the new normal, still, study habits still provide a significant positive relationship to students' mathematics performance.

The findings emphasize the need for educational interventions to cultivate effective study habits among students. Schools and universities could organize workshops and seminars focusing on time management, goal setting, and other essential study skills. For mathematics specifically, integrating study strategies into the curriculum—such as problem-solving frameworks and structured review sessions—could help students better connect their study efforts with academic outcomes. Guidance counselors and academic advisors should also work closely with students to identify areas for improvement in their study habits and provide tailored support.

CONCLUSION

This study investigated the study habits, mathematics performance, and gender differences among Agriculture students during the new normal educational landscape. Results highlighted that students exhibited good study habits, which were strongly correlated with their mathematics performance. Female students significantly outperformed their male counterparts in mathematics, although no gender-based differences were observed in study habits. The findings underscore the critical role of structured study habits, such as time management and note-taking, in fostering academic success, particularly in mathematics. The study also reveals how students' adaptability to the demands of online and hybrid

learning environments has contributed to their overall academic resilience. These results offer valuable insights for educators and policymakers aiming to enhance learning outcomes in similar contexts.

RECOMMENDATION

Based on the findings of this study, several recommendations can be made to further improve students' academic performance, particularly in mathematics. First, instructors should encourage students to adopt effective study habits, especially in the context of online learning and the new normal. Since study habits are significantly related to academic success, promoting skills such as time management, active participation, and note-taking could help students perform better in mathematics. To further enhance students' study habits, the University's guidance and counseling office, in collaboration with the office of student affairs, should organize seminar-workshops. These workshops would help students develop strategies for managing their time, improving study techniques, and handling academic stress, all of which are essential for success in subjects like mathematics. Additionally, instructors should devise teaching strategies that cater to the learning needs of both male and female students. Given that female students performed better in mathematics, it is important to tailor teaching methods to address the diverse needs of students, ensuring that all have equal opportunities to succeed. Lastly, future research should explore the impact of external factors such as socioeconomic status (SES) on academic performance, particularly in online learning environments. SES may influence students' access to resources, which could affect their learning outcomes, and understanding this relationship could provide valuable insights for improving educational practices.

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