



PERCEPTIONS ON THE USE OF GOOGLE CLASSROOM IN TEACHING AND LEARNING AT PHINMA-CAGAYAN DE ORO COLLEGE

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ABSTRACT

Educators and students are anticipated to increasingly embrace technological advancements. Many educational institutions have been devising strategic plans to integrate online education in response to these evolving trends. One advanced approach is the utilization of Google Classroom. This research aimed to assess perceptions regarding the use of Google Classroom in teaching and learning at PHINMA-Cagayan de Oro College during the academic year 2022-2023. It aimed to address the following objectives: 1) to profile teachers based on Age, Gender, Position, Teaching Experience, and Access to Technological Devices, and learners based on Age, Gender, Grade Level, Family Monthly Income, and Access to Technological Devices; 2) to gauge perceptions regarding Google Classroom in terms of accessibility, utility, communication and interaction, instructional delivery, and satisfaction; and 3) to determine if there are significant differences in perceptions regarding Google Classroom among respondents when categorized according to their profiles. This study employed a descriptive survey methodology. The participants included one hundred six (106) teachers and three hundred eighty-three (383) learners, selected through random sampling and Slovin's formula. To address the research questions, various statistical analyses such as frequency counts, percentages, means, standard deviations, and inferential statistics like one-way ANOVA were utilized. Additionally, the researcher adapted and modified a questionnaire from Shahrane et al. (2016).

The survey findings indicated that the majority of both teachers and learners agreed and expressed satisfaction with Google Classroom as an interactive educational tool, acknowledging its potential to enhance distance learning effectiveness in the teaching and learning process. Furthermore, significant relationships were found between teachers' age profiles across all indicators, and for learners' family monthly income, significant relationships were observed in communication and interaction, as well as instructional delivery. In conclusion, this study suggests that Google Classroom contributes to effective

distance learning. It is recommended that teachers and learners exhibit enthusiasm, proficiency, approachability, confidence, and accessibility to foster effective communication and interaction when utilizing Google Classroom in teaching and learning contexts.

Keywords: *Google classroom, accessibility, usefulness, communication, interaction, satisfaction*

INTRODUCTION

In contemporary educational settings, there is a growing expectation for both educators and students to embrace technological advancements. Many educational institutions have been devising strategic plans to incorporate online education in response to these evolving trends. One notable method for facilitating distance learning is Google Classroom, a learning management system integrated into the Google Apps for Education suite, aimed at fostering collaboration and organization among teachers and students in flexible learning environments.

Google Classroom, a cost-free application, serves as a platform for students and teachers to connect, collaborate, organize, and create assignments, thereby facilitating a paperless learning environment. However, despite its benefits, challenges have been observed during its implementation in the teaching and learning process. Issues such as poor internet connectivity and a lack of familiarity with the platform have led some students to refrain from utilizing Google Classroom fully. Additionally, the requirement for students to possess specific devices supporting Google Classroom functionality has dampened motivation for online learning, particularly among those lacking access to such resources.

It is imperative for educators to consider alternative teaching methods, recognizing that not all students may have access to laptops or Android devices. While Google Classroom offers advanced features for managing assignments and disseminating information, challenges persist for educators, including connectivity issues and a steep learning curve associated with the platform. Despite these obstacles, Google Classroom remains a valuable tool for facilitating communication and learning, particularly in the context of the ongoing pandemic.

Given the complexities involved, understanding both teachers' and students' perceptions is crucial. These perceptions offer insights into how the platform is utilized and perceived, enabling educators to tailor their approaches accordingly. Consequently, the researcher undertook a study to explore perceptions surrounding the use of Google Classroom in teaching and learning, focusing on indicators such as accessibility, usefulness, communication and interaction, instructional delivery, and satisfaction. Through this investigation, educators can adapt their practices to better meet the needs and preferences of their students, ultimately enhancing the online learning experience.

LITERATURE REVIEW

This research was grounded in the Social Constructivism Theory as espoused by John Dewey and Lev Vygotsky (1968), positing that individuals learn most effectively through their interactions with their environment and experiences. Dewey and Vygotsky suggested that learning and life experiences are intertwined, mutually reinforcing each other. Thus, when students engage with Google Classroom services, they benefit from their interactions with the instructor and their experiences with the learning management system.

According to Mafa et al. (2017), students have the opportunity to learn autonomously without direct involvement or encouragement from others. Learning can occur at any time provided the learner has internet access. Skills and knowledge are not solely acquired through traditional classroom hours but also through e-learning platforms in collaboration with peers. Technological advancements play a crucial role in disseminating educational content. However, there has been no investigation in Botswana focusing on the effectiveness of Google Classroom in teaching and learning methodologies. Technological innovation allows for various activities both inside and outside the classroom, fostering collaborative learning and enabling learners to stay informed about their surroundings and make future predictions.

Moreover, Beal (2017) concluded that Google Classroom facilitates collaboration between students and teachers by offering a platform for creating and distributing assignments online, free of charge. It simplifies the process of creating groups to share assignments and announcements, thereby encouraging active participation among learners. Nagele (2017) noted that teachers can create engaging lessons focused on student-centered, collaborative learning experiences using Google Classroom's user-friendly features, enabling students of all abilities to collaborate effectively, forming the basis of this study.

Additionally, Iftakhar (2016) classified Google Classroom as one of the most beneficial platforms for enhancing teachers' workflow. It offers a range of features that streamline teaching processes and improve communication between teachers and students. Google Classroom is accessible to anyone with Google Apps for Education, a free suite of productivity tools comprising Gmail, Drive, and Docs.

RESEARCH QUESTIONS

The objective of this research was to assess the attitudes towards the utilization of Google

Classroom for teaching and learning during the academic year 2022-2023 at PHINMA-Cagayan de Oro College.

Specifically, it sought to answer the following;

1. What is the profile of the respondents in terms of?

1.1 Teacher

1.1.1 Age

1.1.2 Sex

1.1.3 Position

1.1.4 Teaching Experience

1.1.5 Availability of Gadgets

1.2. Learner

1.2.1 Age

1.2.2 Sex

1.2.3 Grade Level

1.2.4 Family Income

1.2.5 Availability of Gadgets

2. How do the respondents perceive the use of Google Classroom in teaching and learning considering the following?

2.1 Ease of Access

2.2 Usefulness

2.3 Communication and Interaction

2.4 Instruction Delivery

2.5 Satisfaction

3. Is there a significant difference in the respondents' perception on the use of Google Classroom when grouped according to?

3.1 Teacher

3.1.1 Age

3.1.2 Sex

3.1.3 Position

3.1.4 Teaching Experience

3. 1. 5 Availability of Gadgets

3.2 Learner

3.2.1 Age

3.2.2 Sex

3.2.3 Grade Level

3.2.4 Family Monthly Income

3. 2.5 Availability of Gadgets

RESEARCH METHODOLOGY

This study employed the descriptive survey research method, which was deemed suitable for collecting data from straightforward observational situations, whether observed directly or through questionnaire or polling techniques (Zulueta et al., 2006). This method allowed for the observation of occurrences of the phenomenon through measures such as frequency counts, averages, and other statistical computations. The research was conducted at PHINMA-Cagayan de Oro College, a private, nonpartisan, and nonsectarian educational institution situated on Max Suniel Street, Carmen, Cagayan de Oro City, Misamis Oriental, Philippines. The participants included Senior High School and College teachers and students from PHINMA-Cagayan de Oro College during the academic year 2022-2023.

The researcher employed random sampling and Slovin's formula with a five percent margin of error to determine the sample size. The research instrument was adapted and modified from Shaharanee et al. (2016). Prior to data collection, permission was obtained from the Dean of the Graduate School to conduct the study and administer the research instruments. Appointments for questionnaire administration were arranged through the school principal. Questionnaires were administered and collected by the researcher in person, ensuring proper care. Subsequently, the researcher meticulously tabulated, analyzed, and interpreted the responses. Descriptive statistics including frequency, percentage, mean, standard deviation, and one-way ANOVA (f-value, p-value) were employed to describe the study variables. Problem 1 utilized frequency and percentage to ascertain the distribution of respondents' profiles. Problem 2 employed mean and standard deviation to assess the distribution of respondents' perceptions across indicators such as Ease of Access, Usefulness, Communication and Interaction, Delivery of Instruction, and Satisfaction. Problem 3 utilized one-way ANOVA (f-value, p-value) to determine any significant differences in the respondents' perceptions regarding the use of Google Classroom based on their respective profiles.

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

Table 1 illustrates the distribution of teachers' age, sex, position, teaching experience, and availability of gadgets in terms of frequency and percentage. The table indicates that the highest frequency, comprising 92 individuals (86.80%), falls within the age bracket of 21-30 years old. Among these respondents, 61 are from the Senior High School and 45 are from the college, totaling 106 participants. This suggests that a significant proportion of the respondents are youthful, likely newly recruited, and potentially consistent with the trends associated with their age group. Young teachers are often

characterized by traits such as creativity, innovation, self-confidence, high educational attainment, and a strong focus on education. They are frequently regarded as inspirational figures and bring diverse experiences to the teaching environment. Additionally, young teachers tend to demonstrate enthusiasm and creativity in school activities, fostering team unity and providing support to older colleagues when needed. They leverage their creativity to enhance their work, acknowledging their influence by societal trends and striving for personal and institutional improvement. Conversely, the lowest frequency, comprising 14 individuals (13.20%), falls within the 31 to 40 years old age group. This indicates a smaller percentage of adult or early middle-aged teachers in both the college and Senior High School. At this stage, these teachers may choose to reduce their involvement in school activities, instead focusing on mentoring younger colleagues in organizing such activities based on their accumulated experience. Adult teachers often excel in imparting transferable skills and values to their younger counterparts.

The data also reveals that the highest frequency of teachers' gender is female, accounting for 55 individuals (51.90%), while the lowest frequency is male, totaling 51 individuals (48.10%), indicating a nearly equal distribution of respondents by gender. Female teachers are often viewed as role models, demonstrating qualities such as nurturing, patience, fairness, motivation, engagement, and sensitivity to students' needs.

Furthermore, the highest frequency of respondents, totaling 91 individuals (86.60%), comprises subject teachers, indicating that the majority of participants hold this position. Subject teachers are typically highly skilled educators in their respective fields, with broad responsibilities aimed at shaping students into well-rounded individuals. Conversely, the program heads exhibit the lowest frequency, with only 6 individuals (5.50%) holding this position. Program heads bear overall responsibility for managing the school's teaching and research programs and ensuring the implementation of academic policies to maintain high-quality teaching standards.

Regarding teaching experience, the highest frequency of 53 individuals (50%) comprises those with four years and above of teaching experience, indicating that half of the respondents have served in the institution for an extended period, potentially as regular employees. Conversely, contractual employees with six months to one year of teaching experience exhibit the lowest frequency, totaling 18 individuals (17%). Both regular and contractual teachers play crucial roles in delivering classroom instruction, preparing effective lessons, grading student work, and navigating the curriculum.

In terms of technological preferences, the majority of teachers, accounting for 53% (53 individuals), favor using laptops for conducting lessons due to their portability and facilitation of substantive, collaborative, and project-based work, as well as streamlined planning and communication. In contrast, the lowest frequency, comprising 8 individuals (7.60%), indicates the use of tablets, suggesting that fewer teachers utilize this technology, perhaps due to its relative rarity, higher cost, and limitations in conducting virtual lessons.

Table 1: Category, Frequency, and Percentage Distribution of the Teacher-Respondents

Profile	Category	Frequency	Percent
Age	21-30 years old	92	86.80
	31- 40 years old	14	13.20
	41-50 years old	0	0.00
	51-60 years old	0	0.00
Total		106	100.00
Sex	Male	51	48.10
	Female	55	51.90
Total		106	100.00
Position	Program Head	6	5.50
	Subject Point Person	9	7.90
	Subject Teacher	91	86.60
Total		106	100.00
Teaching Experience	6 months – 1 year	18	17.00
	2-3 years	35	33.00
	4 years and above	53	50.00
Total		106	100.00
Availability of Gadgets	Personal Computer	13	12.60
	Laptop	57	53.00
	Tablet	8	7.60
	Mobile Phone	28	26.80
Total		106	100.00

Table 2 depicts the frequency and percentage distribution of learners' age groups, sex, grade level, family monthly income, and availability of gadgets. The table indicates that the highest frequency, comprising 336 individuals (87.70%), falls within the age range of 16 to 20 years old. Among these, 202 are Senior High School students and 181 are college students, totaling 383 respondents. This suggests that the majority of the learner respondents are adolescents, a stage where peer groups assume significant social roles, fostering intense friendships and seeking validation from adults. Teachers may need to offer substantial guidance and positive reinforcement, particularly in academics, rather than merely enforcing strict rules. Conversely, the age group of 21 to 25 years old registers a frequency of 47 individuals (12.30%), predominantly at the college level. College students typically exhibit maturity and responsibility in their academic pursuits, emphasizing quality and excellence in completing tasks with organizational commitment and proactive approaches.

Regarding gender distribution, the table shows the highest frequency, totaling 232 individuals (60.60%), among females, suggesting a higher enrollment of females for the semester. Females are often perceived as more responsible and mature in academic endeavors, displaying conscientiousness and obedience in class. Conversely, males account for a frequency of 151 individuals (39.40%), indicating a smaller response rate from this demographic. Research suggests that boys may exhibit higher levels of

physical activity and restlessness, potentially making the classroom experience more challenging for them.

Furthermore, the majority of respondents, totaling 305 individuals (79.60%), hail from the Senior High School, where students may begin to test boundaries, conforming to peer norms while seeking validation from adults. Teachers play a crucial role in providing guidance and positive reinforcement, especially amidst the stresses of asserting independence and fitting in with peers. In terms of socioeconomic status, the highest frequency of 325 individuals (84.90%) corresponds to families earning PHP19,000 and below, indicative of a predominantly low socioeconomic status among learners. Despite economic challenges, opportunities for education abound, with scholarships offered by schools and governments. Social class influences self-concept and behavior, shaping culture-specific patterns of thinking and acting. Lastly, the highest frequency of 243 individuals (63.90%) indicates mobile phone usage among learners for attending classes and submitting activities. Mobile phones offer convenience and portability, facilitating ease of access to educational resources and communication channels.

Table 2: Category, Frequency, and Percentage Distribution of the Learner-Respondents

Profile	Category	Frequency	Percent
Age	16-20 years old	336	87.70
	21- 25 years old	47	12.30
	26-30 years old	0	0.00
	31-40 years old	0	0.00
Total		383	100.00
Sex	Male	151	39.40
	Female	232	60.60
Total		383	100.00
Grade Level	College	78	20.40
	Senior High	305	79.60
Total		383	100.00
Family Monthly Income	Php. 50,000 and above	10	2.60
	Php. 49, 000-20,000	48	12.50
	Php. 19,000 and below	325	84.90
Total		383	100.00
Availability of Gadgets	Personal Computer	46	11.70
	Laptop	79	20.60
	Tablet	15	3.80
	Mobile Phone	243	63.90
Total		383	100.00

Distribution of Respondents' Perception on the Use of Google Classroom

Table 3 illustrates the distribution of respondents' perceptions regarding the Ease of Access to Google Classroom for teaching and learning, with an overall mean of 3.60 (SD=0.623) for teachers and 3.36 (SD=0.762) for learners, both described as Very High. This indicates that teachers can navigate the

digital platform effortlessly, signing in, posting course materials, and exploring features without difficulty. The findings align with Mafa et al.'s (2017) study, highlighting the app's accessibility, which can be freely downloaded and installed on mobile devices, enabling convenient learning on-the-go. Essentially, Google Classroom offers a platform for setting up online classrooms where students can interact with teachers and peers freely.

Regarding Accessibility, most teachers positively affirmed the ease of access to Google Classroom. The indicator "I can easily sign in/log in to Google Classroom" yielded the highest mean of 3.76 (SD=0.578), indicating seamless access. Similarly, other indicators received positive responses, such as posting course materials, sending and receiving assignments, exploring platform features, and understanding system usage.

However, the indicator "I can easily explore the features of Google Classroom" garnered the lowest mean of 3.50 (SD=0.651), suggesting that some teachers may require assistance in navigating the platform, possibly older teachers seeking guidance from younger colleagues. Conversely, the majority of learners demonstrated a comprehensive understanding of Google Classroom's system and features, easily logging in, posting materials, sending and receiving assignments, and exploring platform features.

Regarding Accessibility, most learners expressed positive perceptions of Google Classroom's accessibility. The indicator "I completely understand how to use the system of Google Classroom" obtained the highest mean of 3.53 (SD=0.717), indicating widespread comprehension of system navigation. Conversely, the indicator "I can easily post course materials to Google Classroom" received the lowest mean of 3.24 (SD=0.786), suggesting occasional challenges due to connectivity issues. Nevertheless, other indicators received positive responses, indicating that the majority of learners can access Google Classroom swiftly and efficiently.

Table 3: Distribution of Respondents' Perception on Ease of Access

Indicators	Teacher			Learner		
	Mean	SD	Description	Mean	SD	Description
<i>I can easily sign in/ log in to the google classroom.</i>	3.73	0.578	At all Times	3.42	0.737	At all Times
<i>I can easily post the course material to the google classroom.</i>	3.60	0.657	At all Times	3.24	0.786	Most of the Time
<i>I can quickly send and receive assignments from the students to/from the google classroom.</i>	3.62	0.639	At all Times	3.31	0.787	At all Times
<i>I can easily explore the features of the google classroom.</i>	3.50	0.651	At all Times	3.27	0.783	At all Times
<i>I completely understand how to use the system of the google classroom.</i>	3.55	0.588	At all Times	3.53	0.717	At all Times
Overall	3.60	0.623	VERY HIGH	3.36	0.762	VERY HIGH

Legend: 3.26 - 4.00	At all Times/Very High	1.76 - 2.50	Sometimes/ Low
2.51 - 3.25	Most of the Time/ High	1.00 - 1.75	Never/Very Low

Table 4 displays the distribution of respondents' perceptions regarding the Usefulness of Google Classroom, with an overall mean of 3.46 (SD=0.671) for teachers and 3.47 (SD=0.720) for learners, both categorized as Very High. This indicates that Google Classroom serves as a valuable and effective medium for distance learning for both educators and students, fostering social interaction and facilitating various educational activities. The platform allows teachers to easily post course materials, enabling students to engage with content, analyze issues, explore new ideas, and apply their learning, while also providing tools for monitoring student performance, in agreement with findings by Rosella (2021). The consistent alignment of subject objectives, assessments, and content further enhances the platform's utility for teachers. Additionally, Google Classroom has been recognized as an indispensable tool by various individuals and institutions, underscoring its importance in online education.

The indicators "The grading system in Google Classroom helps me in monitoring the performance of students and understanding the current topic discussed" and "The subject objectives, assessments, and content were consistent with the aid of Google Classroom" received the highest mean scores of 3.50 (SD=0.665, 0.636), indicating that the grading system facilitates effective monitoring of student progress and the platform supports consistency in lesson planning. Other indicators also received positive responses, affirming the platform's role in facilitating high-quality learning activities, promoting social interaction between teachers and students, and enhancing student engagement and participation. Notably, a study by Shaharanee et al. (2016) highlighted Google Classroom's effectiveness in promoting active learning among university students, contributing to improved classroom dynamics and student satisfaction.

Conversely, the indicator "Google Classroom is an excellent medium for social interaction (teacher vs. student and student vs. student) as demonstrated by this activity" received the lowest mean score of 3.38 (SD=0.710), indicating that some users may experience challenges or limitations in leveraging the platform for social interaction. However, overall, Google Classroom emerges as a highly beneficial tool for facilitating learning and communication in educational settings, ensuring continuity in the academic journey for learners.

Table 4: Distribution of Respondents' Perception on Usefulness

Indicators	Teacher			Learner		
	Mean	SD	Description	Mean	SD	Description

<i>The quality of learning activity was excellent.</i>	3.45	0.678	At all Times	3.31	0.747	At all Times
<i>Google classroom is an excellent medium for social interaction (teacher vs student and student vs student) as demonstrated by this activity.</i>	3.38	0.710	At all Times	3.33	0.784	At all Times
<i>The course activities that I posted helped my students to examine issues, to evaluate new ideas, and to apply what they have learned.</i>	3.49	0.665	At all Times	3.57	0.700	At all Times
<i>The grading system in google classroom helps me in monitoring the performance of the students and understanding the current topic discussed.</i>	3.50	0.665	At all Times	3.59	0.650	At all Times
<i>The subject objective, assessment and content were consistent with the aid of google classroom.</i>	3.50	0.636	At all Times	3.54	0.720	At all Times
Overall	3.46	0.671	VERY HIGH	3.47	0.720	VERY HIGH

Legend: 3.26 - 4.00

At all Times/Very High 1.76 - 2.50

Sometimes/ Low

2.51 - 3.25

Most of the Time/ High 1.00 - 1.75

Never/Very Low

Table 5 presents the distribution of respondents' perceptions regarding Communication and Interaction in the use of Google Classroom for teaching and learning, with an overall mean of 3.33 (SD=0.712) for teachers and 3.32 (SD=0.750) for learners, both categorized as Very High. This indicates that communication and interaction between teachers and students were successful, with teachers seamlessly engaging students in productive discussions using Google Classroom. This finding aligns with Iftakhar's (2016) assertion that the use of Google Classroom enhances interactivity and collaboration among faculty and students, facilitating effective class management and performance evaluation.

Regarding Communication and Interaction, the majority of teachers expressed positive views on Google Classroom's effectiveness. The indicator "I felt comfortable conversing and interacting with my students through Google Classroom for a certain activity" received the highest mean of 3.40 (SD=0.739), indicating teachers' comfort with communication and interaction through the platform. However, the indicator "I could easily contact my students using Google Classroom" received the lowest mean of 3.24 (SD=0.763), suggesting occasional challenges in contacting students. Nevertheless, other indicators received positive responses, including teachers' engagement with students, acknowledgment of students' viewpoints, and enthusiasm in teaching and explaining topics.

Similarly, learners felt comfortable interacting with teachers and classmates and engaging in productive discussions through Google Classroom. They perceived teachers as friendly, approachable, and effective in explaining lessons. However, some learners may feel slightly hesitant in conversing with

teachers and classmates, as indicated by lower mean scores for certain indicators. Nonetheless, learners appreciated teachers' efforts to keep them engaged and acknowledged their viewpoints during activities.

Overall, the majority of learners perceived Google Classroom as an effective tool for facilitating communication and interaction between teachers and learners in distance learning settings, fostering collaborative learning experiences and ensuring effective communication channels.

Table 5: Distribution of Respondents' Perception on Communication and Interaction

Indicators	Teacher			Learner		
	Mean	SD	Description	Mean	SD	Description
<i>I felt comfortable conversing and interacting with my students through this google classroom for a certain activity.</i>	3.40	0.739	At all Times	3.25	0.776	Most of the Time
<i>Helped me to keep engaged with my students and participating in productive discussion using this google classroom.</i>	3.36	0.665	At all Times	3.36	0.735	At all Times
<i>My point of view was acknowledged by my students in a certain activity using this google classroom.</i>	3.39	0.684	At all Times	3.22	0.756	Most of the Time
<i>I felt enthusiastic in teaching and explaining the topic via the google classroom.</i>	3.27	0.711	At all Times	3.34	0.757	At all Times
<i>I could easily contact my students using this google classroom.</i>	3.24	0.763	Most of the Time	3.44	0.725	At all Times
Overall	3.33	0.712	VERY HIGH	3.32	0.750	VERY HIGH

Legend: 3.26 - 4.00

At all Times/Very High 1.76 - 2.50

Sometimes/ Low

2.51 - 3.25

Most of the Time/ High 1.00 - 1.75

Never/Very Low

Table 6 displays the distribution of respondents' perceptions regarding the Delivery of Instruction using Google Classroom for teaching and learning, with an overall mean of 3.53 (SD=0.692) for teachers and 3.53 (SD=0.662) for learners, both categorized as Very High. This indicates that teachers effectively provided clear instructions and feedback to students, facilitating communication and ensuring comprehension of course materials. The platform enabled teachers to communicate important information such as due dates and course topics, track student questions, and provide real-time feedback, consistent with findings by Aurora (2020) highlighting the platform's role in enhancing communication between teachers and students beyond the traditional classroom.

Regarding the Delivery of Instruction, the majority of teachers expressed positive views on Google Classroom's effectiveness. The indicator "I can clearly communicate important due dates/time frames for learning activities using Google Classroom" received the highest mean of 3.57 (SD=0.690), indicating

effective communication of essential information. Other indicators also received positive responses, including providing clear instructions for participation in learning activities, keeping students on task, and offering meaningful feedback. However, the indicator "I can provide feedback to my students that allows them to better understand the content of the course" received a slightly lower mean of 3.50 (SD=0.734), suggesting some challenges in providing feedback, potentially due to connectivity issues or language barriers. Similarly, learners perceived Google Classroom as effective in receiving instructions and feedback from teachers. The indicator "Teachers clearly communicated important course topics to students" received the highest mean of 3.57 (SD=0.659), indicating strong communication and clear instruction delivery. While the indicator "Teachers provided feedback that allowed me to better understand the content of the course" received a slightly lower mean of 3.50 (SD=0.644), it still reflects a positive outcome. Some students may have faced challenges in receiving feedback, possibly due to internet connectivity issues or language barriers, suggesting the need for further clarification. Nonetheless, the majority of outcomes were positive, indicating that Google Classroom effectively facilitated instruction delivery and feedback exchange between teachers and learners, offering a valuable alternative for digital instruction.

Table 6: Distribution of Respondents' Perception on Delivery of Instruction

Indicators	Teacher			Learner		
	Mean	SD	Description	Mean	SD	Description
<i>I can provide clear instructions on how to participate in course learning activities using the google classroom.</i>	3.54	0.664	At all Times	3.52	0.624	At all Times
<i>I can clearly communicate to the students the important due dates/time frames for learning activities using the google classroom.</i>	3.57	0.690	At all Times	3.55	0.676	At all Times
<i>I can clearly communicate to the students the important course topics.</i>	3.54	0.692	At all Times	3.57	0.659	At all Times
<i>I can help keep the students on task using this google classroom.</i>	3.52	0.679	At all Times	3.51	0.707	At all Times
<i>I can provide feedback to my students that allows them to better understand the content of the course.</i>	3.50	0.734	At all Times	3.50	0.644	At all Times
Overall	3.53	0.692	VERY HIGH	3.53	0.662	VERY HIGH

Legend: 3.26 - 4.00

At all Times/Very High 1.76 - 2.50

Sometimes/ Low

2.51 - 3.25

Most of the Time/ High 1.00 - 1.75

Never/Very Low

Table 7 presents the distribution of respondents' perceptions of Satisfaction regarding the use of Google Classroom in the teaching and learning process, with an overall mean of 3.47 (SD=0.700) for teachers and 3.34 (SD=0.797) for learners, both categorized as Very High. This indicates that teachers

were satisfied with the platform and endorsed its application in other suitable subjects, achieving their personal class goals effectively. Findings by Mafa (2018) highlighted students' fascination with Google Classroom for learning activities, echoing Salavati's (2016) findings of students' satisfaction with its use as an online teaching tool, affirming its suitability as a learning medium.

Regarding Satisfaction, the majority of teachers expressed positive views on Google Classroom's effectiveness. Indicators such as "I like Google Classroom as a learning initiative and motivation booster" and "I am satisfied and motivated to perform tasks such as giving assignments, performance tasks, etc., using Google Classroom" received the highest mean of 3.51 (SD=0.693, 0.680), indicating teachers' satisfaction and motivation in utilizing the platform for various tasks. Other indicators also received positive responses, including meeting personal goals, recommending the method for other subjects, and preferring Google Classroom for distance learning over other methods. However, the indicator "Google Classroom is my first choice in active learning compared to other methods like messenger" received a slightly lower mean of 3.43 (SD=0.743), suggesting some teachers may not prefer it as their primary teaching tool.

Similarly, the majority of learners expressed satisfaction with using Google Classroom for their academic continuity, meeting their personal goals effectively. They perceived Google Classroom as their preferred choice for active learning, serving as a motivation booster. Positive responses were observed across indicators, with "I like Google Classroom as a learning initiative and motivation booster" receiving the highest mean of 3.37 (SD=0.773), indicating learners' enhanced motivation and initiative based on the platform's lessons. Overall, learners were satisfied, motivated, and recommended Google Classroom for active learning, implying their complete satisfaction with this digital instructional tool for distance learning.

Table 7: Distribution of Respondents' Perception on Satisfaction

Indicators	Teacher			Learner		
	Mean	SD	Description	Mean	SD	Description
<i>The subject met my personal goal through this google classroom introduced.</i>	3.44	0.691	At all Times	3.33	0.736	At all Times
<i>I would recommend this method of learning/google classroom to be applied to another appropriate subject.</i>	3.46	0.692	At all Times	3.35	0.795	At all Times

<i>Google classroom is my first choice in active learning compared to other methods like messenger.</i>	3.43	0.743	At all Times	3.31	0.842	At all Times
<i>I like the google classroom as a learning initiative and motivation booster.</i>	3.51	0.693	At all Times	3.37	0.773	At all Times
<i>I am satisfied and motivated to do my tasks such as a giving assignment, performance tasks, etc. using this google classroom.</i>	3.51	0.680	At all Times	3.36	0.840	At all Times
Overall	3.47	0.700	VERY HIGH	3.34	0.797	VERY HIGH

Legend: 3.26 - 4.00

At all Times/Very High 1.76 - 2.50

Sometimes/ Low

2.51 - 3.25

Most of the Time/ High 1.00 - 1.75

Never/Very Low

Table 8 presents a comparison of respondents' perceptions regarding the use of Google Classroom in teaching and learning, categorized by respondents' profiles. The majority of the findings do not show significance, indicated by the non-significant F-value and P-value. This suggests that there is no statistically significant variance in respondents' perceptions of Google Classroom usage when segmented by their profiles. Respondents' profiles are delineated into two categories: teachers and learners. For teachers, profiles include age, sex, position, teaching experience, and gadget availability, while for learners, profiles consist of age, sex, grade level, family monthly income, and gadget availability. The indicators assessed include perceived ease of access, usefulness, communication and interaction, delivery of instruction, and satisfaction.

Regarding teachers' age profiles, all F-values and P-values are significant across all indicators, with P-values less than the 0.05 alpha level, indicating a noteworthy disparity in perceptions based on teachers' age in terms of ease of access, usefulness, communication and interaction, delivery of instruction, and satisfaction. However, other profiles of teachers do not exhibit significance across all indicators, suggesting no notable difference in teachers' perceptions of Google Classroom usage in teaching and learning concerning respondents' profiles. Conversely, learners' family monthly income demonstrates significance in communication interaction and delivery of instruction, indicating a notable variance among these indicators based on learners' family monthly income. Nonetheless, most findings related to learners' profiles lack significance.

Table 8: Comparison of Respondents' Perception on the Use of Google Classroom when grouped according to their profile

Profile	Ease of Access (p-value)	Usefulness (p-value)	Communication and Interaction (p-value)	Instruction Delivery (p-value)	Satisfaction (p-value)	Decision	Remark
Teacher							

Age	0.003	0.024	0.007	0.030	0.012	Reject Ho	Significant
Sex	0.179	0.514	0.129	0.479	0.992	Accept Ho	Not Significant
Position	0.633	0.238	0.225	0.744	0.516	Accept Ho	Not Significant
Teaching Experience	0.276	0.802	0.225	0.772	0.386	Accept Ho	Not Significant
Availability of Gadgets	0.051	0.735	0.158	0.599	0.456	Accept Ho	Not Significant
Learner							
Age	0.081	0.287	0.029	0.232	0.119	Accept Ho	Not Significant
Sex	0.708	0.524	0.607	0.134	0.942	Accept Ho	Not Significant
Grade Level	0.717	0.591	0.177	0.081	0.924	Accept Ho	Not Significant
Family Monthly Income	0.370	0.118	0.017	0.005	0.263	Accept Ho	Not Significant
Availability of Gadgets	0.134	0.477	0.078	0.084	0.445	Accept Ho	Not Significant

Legend: *significant at $p < 0.05$ alpha level S – significant NS – not significant

CONCLUSION AND RECOMMENDATION

Predominantly, the teacher respondents were female, aged between 21 and 30 years old, mostly subject teachers with over four years of service, and primarily utilized laptops for teaching via Google Classroom. Similarly, the majority of learner respondents were also female, aged 16 to 20 years old, enrolled in the Senior High School department, with a family monthly income of 19,000 pesos, and predominantly used mobile phones to access classes through Google Classroom. The majority of respondents expressed satisfaction and motivation in using Google Classroom, finding it easy to access, explore, and understand its features. Teachers were able to monitor learner performance, while both teachers and learners engaged actively in teaching and learning activities.

Significant differences were observed in teachers' perceptions based on age regarding ease of access, usefulness, communication and interaction, delivery of instruction, and satisfaction. However, other aspects of teachers' profiles did not yield significant differences across all indicators. Similarly, there was a notable variance in communication and interaction, and delivery of instruction based on learners' family monthly income. However, the majority of results concerning learners' profiles did not show significance.

The study findings underscored the effectiveness of Google Classroom in facilitating teaching and

learning. Teachers could easily monitor learners' academic performance, while learners could track their progress through online assessments at their convenience. Most learners agreed on the efficacy of Google Classroom in their online learning endeavors. Moreover, both teachers and learners benefited from its usage, including cost reduction due to its free and accessible nature.

Based on these findings, the following recommendations are proposed: Teachers should maintain enthusiasm, approachability, and ease of contact to enhance communication and interaction with learners via Google Classroom. Learners should feel confident in engaging with teachers and classmates to foster productive virtual discussions. Given the efficacy of Google Classroom, its continued use in the current teaching and learning environment is recommended, coupled with seminars and workshops to enhance ICT skills among teachers.

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