

RE-ESTABLISHING FACE-TO-FACE CLASSES: THE POSITIVE AND NEGATIVE OUTCOMES OF CLASSROOM ROUTINES AND PERFORMANCE OF STUDENTS IN MATHEMATICS

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ABSTRACT: *The study thoroughly examined the predictors of students' positive and negative outcomes of classroom routines experienced in re-establishing face-to-face classes in terms of technology, learning environment, self-regulation, learning resources, and assessment and if these predictors also impact the students' academic performance classified into written major exam rating and final grade in Mathematics in the Modern World. The study is a quantitative approach that employed survey, descriptive, and correlational research designs. The study was conducted to 540 student participants from the universities and colleges in Negros Oriental. A researcher-made survey questionnaire that underwent reliability and validity test was designed in this study for a comprehensive collection of data. The findings of the study revealed that the demographic profile of the students has a significant influence on the positive outcomes of classroom routines they experienced in re-establishing face-to-face classes and on their academic performance. The students' extent of family support and employment status had a significant association with the positive outcomes of classroom routines they experienced in re-establishing face-to-face classes while the students' marital status and type of school had a significant association with their performance in mathematics.*

Keywords: classroom routines, positive outcomes, negative outcomes, student performance, face-to-face classes.

1. INTRODUCTION

The return to face-to-face classes marked a significant transition for higher education students after an extended period of remote and blended learning brought about by the COVID-19 pandemic. Following the issuance of the Commission on Higher Education (CHED) Memorandum Order No. 09, s. 2022, and CHED Memorandum Order No. 16, s. 2022, higher education institutions in the Philippines gradually resumed physical classroom instruction through full face-to-face or hybrid learning modalities. This transition required students to readjust to classroom routines, interpersonal interactions, academic expectations, and learning environments that had substantially changed during the pandemic period. In a similar context, Stoian *et al.* [1] reported that although students benefited from returning to in-person instruction after experiencing online education, they also encountered several limitations and adjustment challenges during the transition.

For many Filipino students, re-establishing face-to-face learning involved adapting to new classroom routines while overcoming academic, social, and personal challenges. Vazquez *et al.* [2] noted that students experienced various difficulties during the implementation of face-to-face classes, including adjusting to classroom expectations, learning environments, and academic demands. These challenges often influenced students' motivation, engagement, and overall learning experiences. Tagare [3] further identified concerns associated with the transition, such as reduced student motivation to attend classes, behavioral issues, the need to adapt learning activities, and the continuing anxiety over the possible resurgence of COVID-19. Despite these concerns, face-to-face instruction also provided opportunities for students to reconnect with their peers, participate actively in classroom discussions, and engage in collaborative learning experiences that enhance understanding of course concepts. Lewohl [4] likewise observed that students perceived in-person classes as beneficial to their learning and

academic performance because of increased interaction, immediate feedback, and collaborative classroom activities.

As students resumed classroom-based learning, they experienced both positive and negative outcomes associated with classroom routines. Positive outcomes may include improved technological adaptation, more conducive learning environments, stronger self-regulation, greater access to learning resources, and more meaningful assessment experiences. Conversely, students may also encounter technological limitations, difficulties in adjusting to classroom environments, challenges in self-regulation, inadequate learning resources, and assessment-related concerns. Understanding these experiences is important because they may directly or indirectly influence students' academic performance, particularly in Mathematics in the Modern World, a general education course required across all undergraduate programs under the CHED curriculum.

Given these circumstances, this study examined the positive and negative outcomes of classroom routines experienced by students during the re-establishment of face-to-face classes and determined whether these experiences were associated with their academic performance in Mathematics in the Modern World. Specifically, the study investigated students' demographic characteristics, assessed their experiences across technological, learning environment, self-regulation, learning resources, and assessment dimensions, and analyzed the relationships among these variables and students' academic achievement. Through these findings, the study seeks to contribute to a better understanding of how students navigate the transition back to face-to-face education and provide evidence that may guide higher education institutions in strengthening learning environments that promote student success.

Specifically, it purports to shed light to the following questions:

1. What is the students' demographic profile in terms of:
 - 1.1 sex;

- 1.2 marital status;
- 1.3 student employment status;
- 1.4 type of school; and
- 1.5 extent of family support?
2. What is the extent of negative outcomes to classroom routines experienced by students in terms of:
 - 2.1 technological;
 - 2.2 learning environment;
 - 2.3 self-regulation;
 - 2.4 learning resources;
 - 2.5 assessment?
3. What is the extent of positive outcomes to classroom routines experienced by students in terms of:
 - 3.1 technological;
 - 3.2 learning environment;
 - 3.3 self-regulation;
 - 3.4 learning resources;
 - 3.5 assessment?
4. What is the students' level of academic performance in Mathematics in the Modern World in terms of:
 - 4.1 written major exam rating; and
 - 4.2 final grade?
5. Is there a statistically significant relationship between the students' demographic profile and their extent of negative outcomes to classroom routines in re-establishing face-to-face classes?
6. Is there a statistically significant relationship between the students' demographic profile and their extent of positive outcomes to classroom routines in re-establishing face-to-face classes;
7. Is there a statistically significant relationship between the students' demographic profile and their academic performance?
8. Is there a statistically significant relationship between the students' extent of negative outcomes to classroom routines and their academic performance in re-establishing face-to-face classes?
9. Is there a statistically significant relationship between the students' extent of positive outcomes to classroom routines and their academic performance in re-establishing face-to-face classes?

2. REVIEW OF RELATED LITERATURE

Many studies believe that teachers have a big impact on determining students' level of academic success. According to a study by Burroughs et al. [5], teacher effectiveness is identified to have key factors that may be associated with higher level of academic achievement. These are teaching experience or number of years in teaching, teacher professional knowledge or education and self-reported assessment to teach mathematics, and professional development. A study also discovered that effective planning improves, fosters, smoothen, and has a positive relationship with effective teaching and learning among secondary school students. It was also discovered that there is a significant relationship between effective planning and academic performance of students [6].

Students' Sex and Their Academic Performance

A study conducted by Kisigot et al. [7] showed the effect of gender on students' academic achievement. The results presented that the boys performed better than the girls. The

study also found out that the boys' performance did not show improvement unlike girls' performances that showed a persistent improvement. On the contrary, a study conducted by Jiang [8] has drawn an implication that female students' academic performance in mathematics was significantly better than male students' academic performance, this performance was specifically on sets, complex numbers, plane vectors, statistics, trigonometric functions, and analytic geometry. While there were no significant differences between male students and female students' performance in the following areas: logic and reasoning, geometry, statistics, calculus, and abstract knowledge modules. A study shows enough proof that the girls have negative attitude towards mathematics and showed little interest in it, while the boys' view of learning mathematics is favorable [9].

Students' Marital Status and Their Academic Performance

Most of the past researches show that marital status of students does not have a significant effect or is not a significant predictor on their academic performance. Similarly, Darwish et al. [10], have found in their study that marriage is not a predictor for academic performance, just like with the other prior studies. However, the study specified that the change in study duration after marriage had a decreased duration which means that this may be a barrier for married students to get a good academic performance. Likewise, the results of the study, in particular, presented the following factors that influence academic performance: having children as one of the strong factors has showed that their grade point average has decreased significantly; and having a supportive wife as a strong factor has shown that the students had an unchanged and some higher-grade point average in the category of having a highly supportive wife. On the other hand, marital status did not significantly predict the academic performance of the students in college [11]. The negative association between marital status and academic performance may relate to certain experiences specific to married couples than non-married couples. Married couples may face more issues than non-married students when it comes to college [12].

Student Employment Status and Their Academic Performance

Studies have shown that students who have part-time jobs have either competent or incompetent semestral grades, but these findings depend on underlying factors. In a longitudinal study conducted by Thies [13], it showed that students who were employed in higher study-related jobs have average better semestral grades. In contrast, being new in the job and increased number of hours for the job led a lower credit points per semester. In addition, specific student groups studying mathematics, natural sciences, and engineering experience delay in their study progress due to higher demands in their jobs.

Students' Type of School and Their Academic Performance

Results have shown that the students in private schools have better academic performance than those in public schools [14]. In the study of Bernal Jr. et al. [15] had found out that there is a significant difference between public school and private school students in terms of academic performance. On

the other hand, in the study of Bonsu [16], findings revealed that there is no significant difference in the academic performance of students in private and public schools. Further, the study found out that private schools were better resourced and the parents were really involved in their children's education.

Students' Family Support and Their Academic Performance

Many studies claim that the role of family support in facilitating academic success of the students has really a great impact to student learning. They also "agree" that their parents provide financial assistance for them especially in their studies. While, in a study conducted by Roksa et al. [17], the relationship between academic outcomes such as grades, credit accumulation, and persistence and two different forms of family support namely emotional and financial support was examined. The results from the study showed that the family emotional support was beneficial for academic outcomes because it promotes psychological well-being and facilitates greater student engagement. While the family financial support does not greatly affect the academic outcomes. In a study by Acharya [18] on the factors affecting difficulties in learning mathematics, it illustrated how parents support affect the learning performance of students in mathematics. The results have shown that the parents' involvement, spending time in assisting their children to leads to high performance. While poor economic status cause their low performance. The study also discovered that lack of parents' knowledge and interest of the subject matter affect their children's performance.

Students' Negative Outcomes to Classroom Routines Experienced in Re-establishing Face-to-Face Classes

The study conducted by Almarashdi et al. [19] revealed results that students have different perspectives on the distance learning experience in mathematics and most of the students have negative perceptions on it. As enumerated, students do not like missing interactions with their teachers and classmates and they disapprove with longer screen times. Moreover, Tagare Jr. [3] enumerated in his study that students are demotivated to go to face-to-face classes, students are misbehaving and doing inappropriate learning actions, classroom settings need to be modified to follow standard health protocols, teaching strategies and learning activities need to be retrofitted, teachers' and students' performances are affected by the protective gear they have to wear all the time, and there is a worry that COVID may surge again. While Javier [20] had found that the extent of challenges encountered by teachers is equivalent to a high degree of challenge. It was further stated that the teachers in both private and public schools had struggled from different dimensions such as instruction, preparation of materials, sustaining work-life balance, and fulfilling additional workload. It was also added that the teachers of both private and public schools had struggles in dealing with the students' behavior in the physical classroom.

Students' Academic Performance

A study by Kumar et al. [21] summarized expected predictors that have an effect on the students' academic performance in the higher education institutions (HEIs). York et al. [22] illustrated their operationalized model of academic success in

which academic performance in the form of academic achievement is the most frequently measured aspect of academic success among all. The study defined academic achievement is most commonly measured as grades by course or assignments and general point average (GPA). Furthermore, with respect to measuring the academic performance, it showed that the GPA is universally accepted to measure academic performance which also happened to be conveniently available when talking about students' academic performance.

3. SIGNIFICANCE OF THE STUDY

The study is significant because it provides empirical evidence on the positive and negative outcomes of classroom routines experienced by students during the re-establishment of face-to-face classes and how these outcomes relate to their academic performance in Mathematics in the Modern World. The findings are expected to contribute to the continuous improvement of teaching and learning in higher education and serve as a basis for evidence-informed educational policies and interventions. Specifically, the study will benefit the following:

Students. The study primarily benefits students by identifying the classroom routines and learning experiences that positively or negatively influence their academic performance. The findings may help students become more aware of factors affecting their learning, enabling them to develop effective study habits, strengthen self-regulation, maximize available learning resources, and adapt successfully to face-to-face learning environments.

Teachers. The findings provide teachers with valuable insights into students' experiences during the transition back to face-to-face instruction. Understanding students' technological, environmental, self-regulatory, learning resource, and assessment-related experiences will assist teachers in designing learner-centered instructional strategies, improving classroom routines, and creating supportive learning environments that promote student engagement and achievement.

Parents and Guardians. The study highlights the importance of family support in students' academic success during the transition to face-to-face classes. The findings may increase parents' and guardians' awareness of how their emotional, financial, and academic support contributes to students' adjustment, motivation, and learning performance, thereby encouraging stronger home-school collaboration.

Higher Education Institutions (HEIs). The study provides HEIs with evidence regarding the factors that influence students' learning experiences and academic performance after returning to physical classrooms. The results may serve as a basis for developing institutional policies, student support services, learning resource programs, and academic interventions that facilitate successful transitions and improve student outcomes.

Basic Education Schools. Although conducted in higher education, the findings may also provide useful insights for schools under the Department of Education (DepEd) as they continue strengthening face-to-face instruction. Understanding students' adjustment experiences may guide school administrators and educators in designing strategies

that promote effective classroom routines, student well-being, and academic success across educational levels.

Future Researchers. The study serves as a valuable reference for future investigations involving classroom routines, student adjustment, learning experiences, and academic performance in post-pandemic educational settings. The validated research instrument, conceptual framework, and findings may be replicated, extended, or modified in different disciplines, educational contexts, and geographical locations to further enrich the existing body of knowledge.

Policy Makers and the National Government. The findings may assist policy makers and government agencies in formulating evidence-based educational policies that support students' successful transition to face-to-face learning. The study provides information that may guide the allocation of educational resources, enhancement of student support programs, and development of initiatives that strengthen the quality, accessibility, and resilience of higher education in the Philippines.

4. METHODOLOGY

This study examined the positive and negative outcomes of classroom routines experienced by students during the re-establishment of face-to-face classes and determined their relationship with students' academic performance in Mathematics in the Modern World. The study likewise investigated the association between students' demographic characteristics and their classroom experiences, as well as developed a theoretical model based on the findings.

Research Design

The study employed a quantitative research approach utilizing descriptive, survey, and correlational research designs. The descriptive design was used to describe the demographic profile of the respondents, the extent of the positive and negative outcomes of classroom routines experienced during the re-establishment of face-to-face classes, and their academic performance. The survey design facilitated the systematic collection of data through a structured questionnaire. The correlational design was utilized to determine the relationships among students' demographic characteristics, their positive and negative classroom experiences, and their academic performance in Mathematics in the Modern World.

Research Respondents

The study involved 540 student respondents who had successfully completed Mathematics in the Modern World during the first semester of the School Year 2023–2024. The respondents were enrolled in various universities and colleges throughout the Province of Negros Oriental.

The respondents were selected using random sampling techniques depending on the research conditions of each participating institution. Where feasible, simple random sampling or systematic random sampling was employed to ensure that every qualified student had an equal opportunity to participate in the study.

Research Environment

The study was conducted during the second semester of the School Year 2023–2024 among students enrolled in Mathematics in the Modern World in universities and colleges throughout Negros Oriental. These institutions included the Negros Oriental State University campuses in

Dumaguete City, Pamplona, Bayawan–Sta. Catalina, Siaton, Bais City, Mabinay, and Guihulngan City; Saint Francis College in Guihulngan City; Negros College Negros Academy in Ayungon; La Consolacion College in Bais City; Villaflores College and Diaz College in Tanjay City; Negros Maritime College Foundation, Inc. and St. Joseph Seminary College in Sibulan; Presbyterian Theological College; St. Paul University Dumaguete; Metro Dumaguete College, Inc.; AMA Computer College; Colegio de Sta. Catalina de Alejandria; Foundation University; Asian College, Inc.; Silliman University; and STI College Dumaguete.

Research Instrument

The study utilized a researcher-made survey questionnaire that underwent content validity and reliability testing before its administration. Content validity was established through evaluation by a panel of experts, while reliability was determined through a pilot test using Cronbach's alpha to measure the internal consistency of the instrument.

The questionnaire was designed to gather data that directly addressed the objectives of the study and consisted of three major parts:

Students' Demographic Profile, including sex, marital status, employment status, type of school, and extent of family support;

Negative Outcomes of Classroom Routines, which measured students' experiences in terms of technology, learning environment, self-regulation, learning resources, and assessment; and

Positive Outcomes of Classroom Routines, which assessed the same five dimensions from a positive perspective.

Responses for Parts II and III were measured using an appropriate Likert-type rating scale.

Data Gathering Procedure

Data collection was conducted during the second semester of the School Year 2023–2024 in the participating universities and colleges throughout Negros Oriental.

Letters requesting permission to conduct the study were submitted to the presidents, vice presidents, school directors, chancellors, campus administrators, rectors, and college deans of the participating institutions. Upon approval, coordination was made with the faculty members handling Mathematics in the Modern World to facilitate access to qualified student participants.

The survey questionnaires, together with the informed consent forms, were administered either through face-to-face distribution or online platforms, depending on the preference and accessibility of each institution. Participation was voluntary, and only students who provided informed consent were included in the study.

Students' academic performance was determined using their written major examination ratings and final grades in Mathematics in the Modern World. With the students' consent, these academic records were obtained from the official class records maintained by the respective course instructors.

Ethical Considerations

Since the study involved human participants, ethical principles governing research involving human subjects were strictly observed. Every participant received a written informed consent form explaining the purpose of the study,

the nature of participation, potential risks and benefits, confidentiality measures, and the voluntary nature of participation.

Participants were informed that they could decline participation or withdraw from the study at any stage without penalty or prejudice. Should a participant decide to withdraw before the completion of data collection, all information provided would be excluded from the study and permanently discarded.

To ensure confidentiality and privacy, no personally identifiable information was disclosed in any publication or presentation of the findings. All collected data were treated with strict confidentiality in accordance with the provisions of the Data Privacy Act of 2012 (Republic Act No. 10173) and were used solely for research purposes.

Both printed and online survey questionnaires included informed consent statements, allowing respondents to decide whether to participate before answering the questionnaire.

This study underwent expedited ethical review and received approval from the University Research Ethics Committee of Silliman University during the second semester of the School Year 2023–2024.

Statistical Tools

Descriptive statistics were used to summarize the data. These included frequency count, percentage, mean, weighted mean, standard deviation, range, and confidence interval in describing the respondents' demographic profile, the extent of positive and negative outcomes of classroom routines, and students' academic performance.

To determine the relationships among the variables, pairwise correlational analyses were performed using the most appropriate statistical procedures according to the level of measurement of the variables. These included Point-Biserial Correlation Coefficient (r_{pb}) that was used to test the significant relationship between the dichotomous variables such as sex, marital status, and , Rank-Biserial Correlation Coefficient (r_{rb}), Spearman-Rank Order Correlation Coefficient (r), Kendall's Tau-b Correlation Coefficient (T_b), Eta Correlation Coefficient (η) and the Chi-Square Test of Association contingency coefficient (c), together with the corresponding p-values to determine statistical significance.

RESULTS AND DISCUSSION

Table 1.1 The Students' Sex

Sex	Frequency	Percentage
Male	223	41.3
Female	317	58.7
Total	540	100

The table on the students' sex, displays data that among 540 students, 41.3% are male and 58.7% are female. This gives an implication that there is a reasonably larger number of female respondents than that of the male respondents. Vazquez et al. [2] on the challenges encountered by the students in the face-to-face class implementation, had 18% females greater than the number of males.

The table on the students' marital status, reveals that among 540 students, 98.33% are single and 1.67% are married. This suffices that majority of the student respondents are single.

Correspondingly, Amuda *et al.* [11] on marital status and age as predictors of the students' academic performance, had 749 single students that is far more than 162 married students that were included in the study.

Table 1.2 The Students' Marital Status

Marital Status	Frequency	Percentage
Single	531	98.33
Married	9	1.67
Widowed	0	0
Separated	0	0
Total	540	100
Total	540	100

Table 1.3 The Student Employment Status

Employment Status	Frequency	Percentage
Full-time student w/ job	47	8.70
Part-time student w/ job	19	3.52
Full-time student	474	87.78
Total	540	100

Note. Full-time students with job are students enrolled with complete academic load while employed; part-time student with job are students enrolled with required minimum number of units while employed; and full-time student are students enrolled with complete academic load but not employed.

The table, on the student employment status, reveals that among 540 students, 8.70% are full-time students with job that means they are enrolled with complete number of academic units while employed or working, 3.52% are part-time students with job that means they are enrolled with a required minimum number of academic units while employed or working, and 87.78% are full-time students without job that means they have a complete number of academic units and they are non-working students. The result suggests an implication that majority of the students are full-time students who are non-working.

Similarly, Sanchez *et al.* [23] on working while studying in higher education and the impact of economic crisis on academic success, revealed that the largest percentage was apportioned on students who “study only” (full-time students who are non-working) followed by students who “study with part-time related work” (students who are simultaneously working while studying).

Table 1.4 The Students' Type of School

Type of School	Frequency	Percentage
Public	204	37.8
Private	336	62.2
Total	540	100

The table on the students' type of school, illustrates that among 540 students, 37.8% are from the same public school which is Negros Oriental State University campuses and 62.2% are from private universities and colleges. The result suggests an implication that a larger number of student participants are from private schools than those who are from public schools.

Apparently, Hahn *et al.* [14] on the effects of public and private schools on academic achievement, have presented that

more students (64%) are from private schools and the rest of the students (36%) are from public schools.

Table 1.5 The Students' Extent of Family Support

Forms of Support	SD	CI	X _w	Verbal Description	Value
My family pays for my education.	1.30	3.98-4.20	4.09	Moderately Agreeable	High
My family provides financial assistance in my other school-related activities.	1.16	4.06-4.25	4.16	Moderately Agreeable	High
My family encourages me to get good grades.	0.96	4.24-4.40	4.32	Strongly Agreeable	Very High
My family supports me in my extra-curricular activities.	1.01	4.09-4.26	4.18	Moderately Agreeable	High
My family helps me in my academics.	1.25	3.49-3.70	3.60	Moderately Agreeable	High
My family discusses with me my academic results.	1.18	3.49-3.69	3.59	Moderately Agreeable	High
My family is concerned with my well-being.	0.88	4.36-4.50	4.43	Strongly Agreeable	Very High
My family constantly gives guidance in my studies.	1.12	4.03-4.22	4.13	Moderately Agreeable	High
Composite Value	1.11	3.97-4.15	4.06	Moderately Agreeable	High

The table on the students' extent of family support, reveals that based on the 5-point Likert scale, the result yields a standard deviation of 1.11, a confidence interval from 3.97 – 4.15, and a composite mean of 4.06 which is classified within the mean range 3.41-4.20. This proposes that the students view the situations on the forms of family support as “moderately agreeable” and is classified at a “high” extent. This justifies that the students are given creditable support by their family when it comes to their studies.

The table on the negative outcomes of technological adoption experienced by students in re-establishing face-to-face classes demonstrates a standard deviation of 1.18, a confidence interval from 2.89 – 3.09, and a composite mean of 3.00 which classify within the mean range 2.61 – 3.40 that is considered of a “moderate” extent. This result articulates the students agree that the situations are relatively difficult to

deal with and view them as a fair negative encounter in learning the content area

Table 2.1 The Students' Scale of Negative Outcomes of Technological Adoption in Re-establishing Face-to-Face Classes

Negative Outcomes of Technological Adoption	SD	CI	X _w	VD
I am not allowed to use my device such as smart phone, laptop, and tablet in the classroom.	1.17	2.86-3.05	2.95	Moderate
I am concerned with the absence of technology inside the classroom.	1.14	3.16-3.36	3.26	Moderate
I do not have a good data/internet connection inside the classroom.	1.14	3.47-3.66	3.56	High
I find a hard time accessing and flipping pages of the textbooks or handouts.	1.22	2.61-2.82	2.72	Moderate
I find a hard time answering exams because I am not allowed to browse through the internet anymore.	1.19	2.39-2.59	2.49	Low
I find a hard time finishing my classroom activities because the internet is not available.	1.22	2.90-3.11	3.01	Moderate
Composite Value	1.18	2.89-3.09	3.00	Moderate

Legend:
Mean Range Value
4.21 – 5.00 Very High
3.41 – 4.20 High
2.61 – 3.40 Moderate
1.81 – 2.60 Low
1.00 – 1.80 Very Low

Zhao & Xue [24] on the outcomes encountered by international students at a university in the post-pandemic era, have discovered that the reduction of digital tools and learning materials during the shift from online to offline classes also presented challenges to students since they already have developed reliance on digital resources while learning remotely.

Table 2.2 The Students' Scale of Negative Outcomes of the New Learning Environment in Re-establishing Face-to-Face Classes

Negative Outcomes of the New Learning Environment	SD	CI	X _w	VD
I find it difficult to adjust in the new learning environment.	1.11	2.93-3.12	3.02	Moderate
I find it difficult to ask queries in a physical classroom.	1.06	2.83-3.01	2.92	Moderate
I am distracted by loud and dominating classmates in the classroom.	1.19	3.10-3.30	3.20	Moderate
I can focus more in an online class than on the physical classroom.	1.30	2.58-2.80	2.69	Moderate

I prefer self-study than being helped by my teacher or my peer.	1.22	2.72-2.93	2.83	Moderate
I do not participate actively in group discussions and in the class.	1.26	2.42-2.63	2.52	Low
Composite Value	1.19	2.76-2.97	2.86	Moderate

Legend:

Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the negative outcomes of the new learning environment experienced by students in re-establishing face-to-face classes reveals a standard deviation of 1.19, a confidence interval from 2.76 – 2.97, and a composite mean of 2.86 which classify within the mean range 2.61 – 3.40 that equally denotes a “moderate” extent. The result conveys that the students agree that the situations are relatively difficult to deal with and view them as a fair negative encounter in learning the content area.

Dayagbil *et al.* [25] on teaching and learning continuity amid and beyond the pandemic, have discovered that majority of the respondents declared that the learning environment is not conducive for learning. Bordeos [26] has also shown that students had learning challenges during the face-to-face classes and specified lack of instructional time, lack of collaboration, adjustments, and difficulty in understanding the lessons and activities.

Table 2.3 The Students’ Scale of Negative Outcomes of Self-Regulation in Re-establishing Face-to-Face Classes

Negative Outcomes of Self-Regulation	SD	CI	X _w	VD
I prefer to complete my workload at home.	1.23	2.92-3.13	3.03	Moderate
I get exhausted by face-to-face classes as it requires more rigorous teaching-learning preparations.	1.15	3.04-3.23	3.14	Moderate
I am still overwhelmed by face-to-face classes.	1.20	2.77-2.98	2.87	Moderate
I am physically exhausted by face-to-face classes.	1.21	2.86-3.07	2.96	Moderate
I am anxious about the ongoing threat of the virus.	1.25	2.81-3.02	2.92	Moderate
I am demotivated by the downgrade in teaching-learning.	1.28	2.22-2.44	2.33	Low
Composite Value	1.22	2.77-2.98	2.89	Moderate

Legend:

Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the negative outcomes of self-regulation experienced by students in re-establishing face-to-face classes illustrates a standard deviation of 1.22, a confidence interval from 2.77 – 2.98, and a composite mean of 2.89 which classify within the mean range 2.61 – 3.40 that is considered of a “moderate” extent. The result suggests that the students agree that the situations are relatively difficult to deal with and view them as a fair negative encounter in learning the content area.

Similarly, Vazquez *et al.* [2] in his study on the outcomes encountered by the students in the face-to-face class implementation in the post-COVID learning Context, revealed that the extent of challenges of the students had the highest mean of 2.42 and a standard deviation of 1.157 which further explained that the students are divided whether they feel comfortable or not of the new normal classroom rules.

Table 2.4 The Students’ Scale of Negative Outcomes of the Access to Learning Resources in Re-establishing Face-to-Face Classes

Negative Outcomes of the Availability of Learning Resources	SD	CI	X _w	VD
I am demotivated by the type of resources or the lack of resources in my subjects.	1.16	2.80-3.00	2.90	Moderate
I have an insufficient access to library resources.	1.10	2.64-2.83	2.73	Moderate
I have an insufficient access to laboratory equipment and materials.	1.11	2.73-2.92	2.83	Moderate
I have limited access to textbooks, worksheets, and other instructional materials.	1.11	2.83-3.02	2.92	Moderate
I believe that the textbooks and other instructional materials provided are outdated.	1.12	2.69-2.88	2.79	Moderate
I do not own any learning resources such textbooks and other instructional materials.	1.20	2.90-3.10	3.00	Moderate
Composite Value	1.13	2.77-2.96	2.86	Moderate

Legend:

Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the negative outcomes of access to learning resources experienced by students in re-establishing face-to-face classes illustrates a standard deviation of 1.13, a confidence interval from 2.77 – 2.96, and a composite mean of 2.86 which classify within the mean range 2.61 – 3.40 that is considered of a “moderate” extent. The result gives an implication that the students agree that the situations are relatively difficult to deal with and view them as a fair negative encounter in learning the content area.

Equally, Javier [20] on the outcomes encountered during the full implementation of face-to-face classes, revealed that the extent of outcomes encountered was equivalent to a high degree of challenge and even emphasized that the challenges in the teaching and learning resources aspect had a mean of 3.21 which classify under the moderate degree of a challenge.

Table 2.5 The Students' Scale of Negative Outcomes of the Assessment for Student Learning in Re-establishing Face-to-Face Classes

Negative Outcomes of Assessment for Student Learning	SD	CI	X _w	VD
I experience less access to laboratories for performance-based tasks.	1.19	2.83-3.03	2.93	Moderate
I feel uncomfortable being monitored during the exam period.	1.23	2.84-3.05	2.95	Moderate
I experience less content self-learning during face-to-face learning.	1.09	2.72-2.90	2.81	Moderate
I prefer to perform activities and tasks alone with the absence of collaborative learning.	1.13	2.80-2.99	2.89	Moderate
I am unmotivated because there is no flexibility in assignment deadlines.	1.15	2.69-2.89	2.79	Moderate
I am not allowed to browse through the internet during face-to-face exams.	1.38	2.64-2.87	2.76	Moderate
Composite Value	1.20	2.75-2.96	2.86	Moderate

Legend:

Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the negative outcomes of assessment for student learning experienced by students in re-establishing face-to-face classes shows a standard deviation of 1.20, a confidence interval from 2.75 – 2.96, and a composite mean of 2.86 which classify within the mean range 2.61 – 3.40 that is considered of a “moderate” extent. This result entails that the students agree that the situations are relatively difficult to deal with and view them as a fair negative encounter in learning the content area.

Zhao & Xue [24] on the outcomes encountered by students at a university, stated that the complete reversion to the traditional face-to-face classes is not a perfect option and thus pedagogies developed during the pandemic should be incorporated into offline teaching. Because if not, certainly more challenges on assessment for student learning will take place.

Table 3.1 The Students' Scale of Positive Outcomes of Technological Adoption in Re-establishing Face-to-Face Classes

Positive Outcomes of Technological Adoption	SD	CI	X _w	VD
I can still freely use my device such as smart phone, laptop, and tablet in the classroom.	1.10	3.54-3.72	3.63	High
I am motivated with technology allowed inside the classroom.	1.10	3.50-3.68	3.59	High
I am provided with data/internet access by the school.	1.27	3.24-3.46	3.35	High
I enjoy accessing and flipping pages of the textbooks or handouts.	1.07	3.43-3.61	3.52	High
I find it easy to answer exams because I am allowed to browse through the internet.	1.28	2.78-3.00	2.89	Moderate
I find it easy to finish my classroom activities because the internet is provided.	1.27	3.34-3.55	3.44	High
Composite Value	1.18	3.31-3.50	3.40	Moderate

Legend:

Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the positive outcomes of technological adoption experienced by students in re-establishing face-to-face classes presents a standard deviation of 1.18, a confidence interval from 3.31 – 3.50, and a composite mean of 3.40 which classify within the mean range 2.61 – 3.40 that is considered of a “moderate” extent. This denotes that the students agree that the situation is relatively advantageous and view them as a fair positive experience in learning the content area.

Table 3.2 The Students' Scale of Positive Outcomes of the New Learning Environment in Re-establishing Face-to-Face Classes

Positive Outcomes of the Learning Environment	SD	CI	X _w	VD
I am motivated because it allows more engagement and it increases students' participation.	1.04	3.67-3.85	3.76	High
I see an authentic group interaction for various projects.	1.01	3.59-3.76	3.68	High
I am more enthusiastic to learn the subject with the classroom atmosphere.	1.017	3.71-3.88	3.80	High

I am encouraged to interact with peers.	1.024	3.68-3.85	3.76	High
I am able to gain greater understanding, stories, and real-world examples.	0.97	3.88-4.05	3.97	High
I experience better interaction with my teacher and my classmates.	0.97	3.86-4.02	3.94	High

Composite Value	1.01	3.73-3.90	3.82	High
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Legend:	
Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the positive outcomes of the new learning environment experienced by students in re-establishing face-to-face classes reveals a standard deviation of 1.01, a confidence interval from 3.73 – 3.90, and a composite mean of 3.82 which classify within the mean range 3.41 – 4.20 that is considered “high” extent. This signifies that the students agree that the situation is highly advantageous and view them as a reasonable positive experience in learning the content area.

Table 3.3 The Students’ Scale of Positive Outcomes of Self-Regulation in Re-establishing Face-to-Face Classes

Positive Outcomes of Self-Regulation	SD	CI	X _w	VD
I can quickly adapt to change.	0.95	3.60-3.76	3.68	High
I am able to concentrate harder on my learning.	0.94	3.62-3.78	3.70	High
I am confident in using e-learning during the pandemic.	1.09	3.28-3.46	3.37	High
I have a greater chance of actually doing work.	0.93	3.61-3.77	3.69	High
I prefer to attend physical school as it will help me to get back to the normal situation.	1.02	3.82-3.99	3.90	High
I am more excited to learning in a face-to-face classroom.	0.97	3.94-4.10	4.02	High
Composite Value	0.98	3.65-3.81	3.73	High

Legend:	
Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the positive outcomes of self-regulation experienced by students in re-establishing face-to-face classes bares a standard deviation of 0.98, a confidence interval from 3.65 – 3.81, and a composite mean of 3.73 which classify within the mean range 3.41 – 4.20 that means the students view the situations at a “high” extent. This signifies that the students agree that the situation is highly advantageous and

view them as a reasonable positive experience in learning the content area.

Table 3.4 The Students’ Scale of Positive Outcomes of the Availability of Learning Resources in Re-establishing Face-to-Face Classes

Positive Outcomes of the Availability of Learning Resources	SD	CI	X _w	VD
I am motivated by the type of resources or the available resources in my subjects.	0.95	3.70-3.87	3.79	High
I have a sufficient access to library resources.	0.99	3.46-3.63	3.55	High
I have a sufficient access to laboratory equipment and materials.	1.04	3.31-3.48	3.40	Moderate
I have an array of access to textbooks, worksheets, and other instructional materials.	1.02	3.36-3.53	3.45	High
I believe that the textbooks and other instructional materials provided are updated.	0.99	3.55-3.72	3.64	High
I own learning resources such as textbooks and other instructional materials.	1.16	3.14-3.34	3.24	Moderate
Composite Value	1.03	3.42-3.60	3.51	High

Legend:	
Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

The table on the positive outcomes of access to learning resources experienced by students in re-establishing face-to-face classes displays a standard deviation of 1.03, a confidence interval from 3.42 – 3.60, and a composite mean of 3.51 which classify within the mean range 3.41 – 4.20 that means the students view the situations at a “high” extent. This signifies that the students agree that the situation is highly advantageous and view them as a reasonable positive experience in learning the content area.

The table on the positive outcomes of assessment for student learning experienced by students in re-establishing face-to-face classes exhibits a standard deviation of 0.99, a confidence interval from 3.60 – 3.77, and a composite mean of 3.68 which classify within the mean range 3.41 – 4.20 that means the students view the situations at a “high” extent. This denotes that the students agree that the situation is highly advantageous and view them as a reasonable positive experience in learning the content area.

Table 3.5 The Students' Scale of Positive Outcomes of Assessment for Student Learning in Re-establishing Face-to-Face Classes

Positive Outcomes of Assessment for Student Learning	SD	CI	X _w	VD
I am more motivated with varied and more engaging assessments.	0.94	3.54-3.70	3.62	High
I am given more time for learning.	1.02	3.66-3.83	3.75	High
I receive an immediate feedback in my exams.	0.94	3.62-3.78	3.70	High
I have a complete access to laboratories in performance-based exams.	1.09	3.35-3.53	3.44	High
I am well guided by my teacher in solving during oral recitations and classroom activities.	0.98	3.75-3.91	3.83	High
I am more productive with collaborative assessments.	0.94	3.68-3.84	3.76	High
Composite Value	0.99	3.60-3.77	3.68	High

Legend:

Mean Range	Value
4.21 – 5.00	Very High
3.41 – 4.20	High
2.61 – 3.40	Moderate
1.81 – 2.60	Low
1.00 – 1.80	Very Low

Stoian et. al. [1], on the students' perspective on the transition from online to face-to-face education after COVID-19, revealed that the students can learn better with better interaction, electronic open book quizzes, more relaxing lessons, faster feedback, time-saving, and teamwork.

Table 4.1 The Students' Written Major Exam Rating

Exam Rating	Description	Frequency	Percentage	Mean	SD
99-100	Excellent	2	0.37		
93-98	Very Good	146	27.04		
87-92	Good	125	23.15		
81-86	Satisfactory	147	27.22	86.2	7.91
75-80	Pass	78	14.44		
60-74	Conditional	42	7.78		
Total		540	100		

The table on the students written major exam scores, reveals that among 540 students, 0.37% gained 99-100% exam rating with verbal description "excellent", 27.04% gained 93-98% exam rating with verbal description "very good", 23.15% gained 87-92% exam rating with verbal description "good", 27.22% gained 81-86% exam rating with verbal description "satisfactory", 14.44% gained 75-80% exam rating with verbal description "pass", and 7.78% gained 60-74% exam rating with verbal description "conditional". The values arrived at a standard deviation of 7.91 and a mean of 86.2% with verbal description "satisfactory".

Brownstein [27], on the effect of test scores on the educational outcomes, had found that the students' math scores were close to cutoff. Equivalently, Roman et al. [28] showed that the mean of the students' test scores in Mathematics in the Modern World is ranging from 84-89 which is between "good" and "satisfactory."

Table 4.2 The Students' Final Grade

Grades	Description	Frequency	Percentage	Mean	SD
99-100	Excellent	2	0.37		
93-98	Very Good	152	28.15		
87-92	Good	259	47.96		
81-86	Satisfactory	106	19.63	89.8	4.47
75-80	Pass	21	3.89		
60-74	Conditional	0	0		
Total		540	100		

The table on the students' final grade in Mathematics in the Modern World, reveals that among 540 students, 0.37% acquired a grade of 99-100% which verbally denotes "excellent", 28.15% acquired a grade of 93-98% which verbally denotes "very good", 47.96% acquired a grade of 87-92% which verbally denotes "good", 19.63% acquired a grade of 81-86% which verbally denotes "satisfactory", 3.89% acquired a grade of 75-80% which verbally denotes "pass", and none of them acquired a grade between 60-74% which verbally means "conditional". The results give a standard deviation of 4.47 and a mean of 89.8% which verbally implies "good".

Equivalently, Roman et al. [28] showed that the mean of the students' test scores in Mathematics in the Modern World is ranging from 84-89 which is between "good" and "satisfactory."

Table 5 The Students' Demographic Profile and The Negative Outcomes of Classroom Routines they Experienced in Re-establishing Face-to-Face Classes

Correlated Variables	Statistic	P-value	Decision	Interpretation
Sex and Extent of Negative Outcomes	$r_{tb} = 0.141$	0.132	Fail to Reject H_0	Non-significant
Marital Status and Extent of Negative Outcomes	$r_{tb} = 0.267$	0.305	Fail to Reject H_0	Non-significant
Student Employment and Extent of Negative Outcomes	$c = 0.148$	0.178	Fail to Reject H_0	Non-significant
Type of School and Extent of Negative Outcomes	$r_{tb} = 0.050$	0.453	Fail to Reject H_0	Non-significant
Family Support and Extent of Negative Outcomes	$r_b = -0.000$	0.451	Fail to Reject H_0	Non-significant
Total		0.304	Fail to Reject H_0	Non-significant

The table on the association of the students' demographic profile and their extent of negative outcomes in re-establishing face-to-face classes displays the statistic values and p-values of the respective variables correlated. On the students' sex and extent of negative outcomes in re-establishing face-to-face classes, $r_{tb}=0.141$ and the p-value=0.132; on the students' marital status and extent of negative outcomes in re-establishing face-to-face classes, the $r_{tb}=0.267$ and the p-value= 0.305; on the student employment status and extent of negative outcomes in re-establishing

face-to-face classes, the $c=0.148$ and the $p\text{-value}=0.178$; on the students type of school and extent of negative outcomes in re-establishing face-to-face classes, the $r_{tb}=0.050$ and the $p\text{-value}=0.453$; on the students' extent of family support and negative outcomes in re-establishing face-to-face classes, $\tau_b=0.000$ and $p\text{-value}=0.451$. Given the values, there is a sufficient evidence that the null hypothesis must not be rejected. In other words, there is no significant relationship between the students' demographic profile and their extent of negative outcomes in re-establishing face-to-face classes. This also indicates that the students' demographic profile does not have a great influence on their negative outcomes in re-establishing face-to-face classes.

It was also concluded by Vazquez [2] that there is no significant difference between the students' challenges during the face-to-face implementation in the post-COVID learning context when grouped according to their profile.

Table 6 The Students' Demographic Profile and The Extent of Positive Outcomes of Classroom Routines They Experienced in Re-establishing Face-to-Face Classes

Variables Correlated	Statistic	P-value	Decision	Interpretation
Sex and Extent of Positive Outcomes	$r_{tb} = 0.059$	0.323	Fail to Reject H_0	Non-significant
Marital Status and Extent of Positive Outcomes	$r_{tb} = 0.196$	0.337	Fail to Reject H_0	Non-significant
Student Employment and Extent of Positive Outcomes	$c = 0.221$	0.002	Reject H_0	Significant
Type of School and Extent of Positive Outcomes	$r_{tb} = 0.073$	0.288	Fail to Reject H_0	Non-significant
Family Support and Extent of Positive Outcomes	$\tau_b = 0.160$	0.017	Reject H_0	Significant
Total		0.193	Fail to Reject H_0	Non-significant

The table on the association of the students' demographic profile and their extent of positive outcomes in re-establishing face-to-face classes presents the statistic values and p-values of the respective variables correlated. On the students' sex and extent of positive outcomes in re-establishing face-to-face classes, the $r_{tb}=0.059$ and the $p\text{-value}=0.323$; on the students' marital status and extent of positive outcomes in re-establishing face-to-face classes, $r_{tb}=0.196$ and the $p\text{-value}=0.337$; on the student employment status and extent of positive outcomes in re-establishing face-to-face classes, $c=0.221$ and the $p\text{-value}=0.002$; on the students type of school and extent of positive outcomes in re-establishing face-to-face classes, the $r_{tb}=0.073$ and the $p\text{-value}=0.288$; on the students' extent of family support and negative outcomes of classroom routines experienced in re-establishing face-to-face classes, the $\tau_b=0.160$ and the $p\text{-value}=0.017$. Given the values, two of the demographic profile variables are noted to have a significant association

with the students' extent of positive outcomes in re-establishing face-to-face classes. These variables are student employment status and extent of family support. However, the total p-value on the students' profile is 0.193 which indicates that the null hypothesis must not be rejected. This is a sufficient evidence that there is no significant relationship between the students' demographic profile and their extent of positive outcomes in re-establishing face-to-face classes. This also suggests that the students' demographic profile does not significantly impact their positive outcomes in re-establishing face-to-face classes except for the student employment status and extent of family support.

Shah *et al.* [29], revealed results in their study that the students' demographic variables are not associated with their perception of school worthiness that reflect on seeing assigned schoolwork as meaningful and important and seeing that schooling is important for their later life.

Table 7 The Students' Demographic Profile and Their Academic Performance

Variables Correlated	Statistic	P-value	Decision	Interpretation
Sex and Academic Performance	$r_{pb} = 0.043$	0.366	Fail to Reject H_0	Non-significant
Marital Status and Academic Performance	$r_{pb} = 0.066$	0.317	Fail to Reject H_0	Non-significant
Student Employment Status and Academic Performance	$\eta = 0.042$	0.358	Fail to Reject H_0	Non-significant
Type of School and Academic Performance	$r_{pb} = 0.093$	0.186	Fail to Reject H_0	Non-significant
Family Support and Academic Performance	$r = 0.024$	0.234	Fail to Reject H_0	Non-significant

The table on the association of the students' demographic profile and their academic performance, reveals that on the students' sex and academic performance, the $r_{pb}=0.043$ and the $p\text{-value}=0.366$; on the students' marital status and academic performance, the $r_{pb}=0.066$ and the $p\text{-value}=0.317$; on the student employment status and academic performance, the $\eta=0.042$ and the $p\text{-value}=0.358$; on the students' type of school and academic performance, the $r_{pb}=0.093$ and the $p\text{-value}=0.186$; and on the students' extent of family support and academic performance, $r=0.024$ and the $p\text{-value}=0.234$.

With the given results, a sufficient proof tells that the null hypothesis must not be rejected since the p-value are all above the significant level which is 0.05. This is to say, there is no significant relationship between the students' demographic profile and their academic performance. This also conveys that the students' demographic profile does not influence greatly on their academic performance but could've been something else.

According to Stoten [30], the age is not a significant barrier to learning among undergraduate students. The findings of Christopher *et al.* [31] also revealed that gender had no significant relationship with the students' performance.

Amuda *et al.* [11] also exclaimed that marital status and age did not significantly predict academic performance in colleges.

Table 8 The Students' Extent of Negative Outcomes of Classroom Routines Experienced in Re-establishing Face-to-Face Classes and Their Academic Performance

Variables Correlated	Statistic	P-value	Decision	Interpretation
Negative Outcomes of Technological Adoption and Academic Performance	-0.049	0.255	Fail to Reject H_0	Non-significant
Negative Outcomes of New Learning Environment and Academic Performance	-0.018	0.399	Fail to Reject H_0	Non-significant
Negative Outcomes of Self-Regulation and Academic Performance	-0.026	0.384	Fail to Reject H_0	Non-significant
Negative Outcomes of Access to Learning Resources and Academic Performance	-0.018	0.595	Fail to Reject H_0	Non-significant
Negative Outcomes of Assessment for Student Learning and Academic Performance	-0.035	0.351	Fail to Reject H_0	Non-significant
Total	-0.029	0.397	Fail to Reject H_0	Non-significant

The table on the students' extent negative outcomes of classroom routines experienced in re-establishing face-to-face classes and their academic performance, displays a negative values of Kendall's tau-b correlation and the p-values are all less than the significant level. The students' extent of negative outcomes on technological adoption and academic performance has $r=-0.049$ and a p-value = 0.255; the students' extent of negative outcomes on the new learning environment and academic performance has $r=-0.018$ and a p-value = 0.399; the students' extent of negative outcomes on self-regulation and academic performance has $r=-0.026$ and a p-value = 0.384; the students' extent of negative outcomes on access to learning resources and academic performance has $r=-0.018$ and a p-value = 0.595; and the students' extent of negative outcomes assessment for student learning and academic performance has $r=-0.035$ and a p-value = 0.397. The p-values generally indicate that the null hypothesis must not be rejected. And thus, there is no significant relationship between the students' extent of negative outcomes of classroom routines in re-establishing face-to-face classes and their academic performance. This also implies that within the certain scope, the students' extent of negative outcomes of

classroom routines in re-establishing face-to-face classes does not significantly influence their academic performance.

Fray *et al.* [32] have reported that student learning was not significantly affected, the upheaval to schooling caused by the pandemic is having worrying consequences for their well-being. Escuña *et al.* [33], had shown that there is a weak positive correlation between the challenges encountered and the academic performance of students and further expounded that the two variables are not significantly correlated.

Table 9 The Positive Outcomes of Classroom Routines the Students Experienced in Re-establishing Face-to-Face Classes and Their Academic Performance

Variables Correlated	Statistic	P-value	Decision	Interpretation
Positive Outcomes of Technological Adoption and Academic Performance	0.023	0.379	Fail to Reject H_0	Non-significant
Positive Outcomes of New Learning Environment and Academic Performance	-0.013	0.354	Fail to Reject H_0	Non-significant
Positive Outcomes of Self-Regulation and Academic Performance	0.007	0.604	Fail to Reject H_0	Non-significant
Positive Outcomes of Access to Learning Resources and Academic Performance	-0.018	0.595	Fail to Reject H_0	Non-significant
Positive Outcomes of Assessment for Student Learning and Academic Performance	-0.006	0.398	Fail to Reject H_0	Non-significant
Total	0.088	0.308	Fail to Reject H_0	Non-significant

The table on the students' extent of positive outcomes of classroom routines in re-establishing face-to-face classes and their academic performance, presents a positive and negative values of Kendall's tau-b correlation and the p-values are all less than the significant level. The students' extent positive outcomes of technological adoption in re-establishing face-to-face classes and academic performance has $r=0.023$ and a p-

value = 0.379; the students' extent positive outcomes of the new learning environment in re-establishing face-to-face classes and academic performance has $r=-0.013$ and a p -value = 0.354; the students' extent positive outcomes of self-regulation in re-establishing face-to-face classes and academic performance has $r=0.007$ and a p -value = 0.604; the students' extent positive outcomes of access to learning resources in re-establishing face-to-face classes and academic performance has $r=-0.018$ and a p -value = 0.595; and the students' extent positive outcomes of assessment to student learning in re-establishing face-to-face classes and academic performance has $r=-0.006$ and a p -value = 0.398. The total $r=0.088$ and p -value = 0.308 which generally indicate that the null hypothesis must not be rejected. And thus, this suffices that there is no significant relationship between the students' extent of positive outcomes of classroom routines in re-establishing face-to-face classes and their academic performance. In other words, the students' positive outcomes of classroom routines in re-establishing face-to-face classes do not directly impact their academic performance.

CONCLUSION

Among the 540 student respondents, there is a reasonably larger number of female respondents than the male respondents. While majority of the them are single. More so, majority of the students are full-time students who are non-working. In addition, there is a larger number of student participants are from private schools than those who are from public schools. Then, the students' extent of family support proposes that the students view the situations on the forms of family support as "moderately agreeable" and is classifies at a "high" extent. This justifies that the students are given creditable support by their family when it comes to their studies.

The means of the students' extent of negative outcomes of technological adoption, new learning environment, self-regulation, access to learning resources, and assessment for student learning in re-establishing face-to-face classes were viewed by the students at a "moderate" extent. This result articulates the students agree that the situations are relatively difficult to deal with and view them as a fair negative encounter in learning the content area.

The mean of the students' extent of positive outcomes of technological adoption in re-establishing face-to-face classes is viewed at a "moderate" extent. This denotes that the students agree that the situation is relatively advantageous and view them as a fair positive experience in learning the content area. While, the means of the students' extent of positive outcomes of new learning environment, self-regulation, access to learning resources in re-establishing face-to-face classes is considered a "high" extent. This signifies that the students agree that the situation is highly advantageous and view them as a reasonable positive outcome in learning the content area.

The students' written major exam scores, reveals a mean of 86.2% with verbal description "satisfactory". While the students' final grade in Mathematics in the Modern World reveals a mean of 89.8% which verbally implies "good".

The association of the students' demographic profile and their extent of negative outcomes of classroom routines in re-

establishing face-to-face classes reveals that there is a sufficient evidence that the null hypothesis must not be rejected. In other words, there is no significant relationship between the students' demographic profile and their extent of extent of negative outcomes of classroom routines in re-establishing face-to-face classes. This also indicates that the students' demographic profile does not have a great influence on the negative outcomes the students experience in re-establishing face-to-face classes.

Two of the students' demographic profile variables are noted to have a significant association with the students' extent of positive outcomes of classroom routines in re-establishing face-to-face classes. These variables are student employment status and extent of family support. However, the total p -value on the students' profile is 0.193 which indicates that the null hypothesis must not be rejected. This is a sufficient evidence that there is no significant relationship between the students' demographic profile and their extent of positive outcomes of classroom routines in re-establishing face-to-face classes. This also suggests that the students' demographic profile does not significantly impact the positive outcomes of classroom routines they experienced in re-establishing face-to-face classes except for the student employment status and extent of family support.

The association of the students' demographic profile and their academic performance reveals that with the given results, a sufficient proof tells that the null hypothesis must not be rejected since the p -values are all above the significant level which is 0.05. This is to say, there is no significant relationship between the students' demographic profile and their academic performance. This also conveys that the students' demographic profile does not influence greatly on their academic performance but could've been something else.

The students' extent of negative outcomes of classroom routines in re-establishing face-to-face classes and their academic performance displays that the p -values generally indicate that the null hypothesis must not be rejected. And thus, there is no significant relationship between the students' extent of negative outcomes of classroom routines in re-establishing face-to-face classes and their academic performance. This also implies that within the certain scope, the students' extent of negative outcomes of classroom routines in re-establishing face-to-face classes does not significantly influence their academic performance.

The students' extent of positive outcomes of classroom routines in re-establishing face-to-face classes and their academic performance presents that the total $r=0.088$ and p -value=0.308 generally indicate that the null hypothesis must not be rejected. This suffices that there is no significant relationship between the students' extent of extent of positive outcomes of classroom routines in re-establishing face-to-face classes and their academic performance. In other words, the students' positive outcomes of classroom routines experienced in re-establishing face-to-face classes do not directly impact their academic.

RECOMMENDATION

1. The Commission on Higher Education (CHED) is suggested to strengthen programs that embolden tertiary

education teachers to enroll in graduate and post-graduate programs for their professional development.

2. The Commission on Higher Education (CHED) and other agencies are suggested to offer more scholarships that shall employ a reasonable criteria and screening in both public and private schools to ensure support to students who are passionate and committed in finishing their studies.

3. The higher education institutions (HEIs) are recommended to address the insufficiency of learning resources, audio-visual classrooms, learning materials, and if possible, offer internet connectivity to students.

4. The higher education institutions (HEIs) may strengthen learning opportunities among teachers and students and may design programs that address the teachers and students' negative outcomes experienced in the implementation of full face-to-face classes.

5. Tertiary education teachers and HEIs are proposed to design grading systems that suit the strengths of the learning environment and the school's learning resources. The teachers are suggested to further ensure that the students are well-informed of the grading system and the objectives to promote fairness in the knowledge and competencies of the students.

6. The Commission on Higher Education (CHED) is suggested to design programs that focus on the professional competence and professional development of the teachers.

7. The Commission on Higher Education (CHED), higher education institutions (HEIs), and tertiary education teachers are suggested to be physically and substantially prepared and equipped with alternative learning materials and modules that can be utilized at any sudden calamity to avoid the dragging in learning among teachers and students.

8. The higher education institutions (HEIs) are proposed to design trainings and programs that may be helpful during the sudden shifts and transitions in education.

9. The higher education institutions (HEIs) are suggested to plan different and separate programs for the teachers and the students where their individual skills and proficiencies shall be refined in appropriate spaces where learning can grow and foster.

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