

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH

2021, Vol. 2, No. 9, 805 – 817

<http://dx.doi.org/10.11594/ijmaber.02.09.10>

Research Article

Pre-Examination Study Preparation and Its Effect on the Summative Test Score in General Mathematics of Grade 11 Senior High School Students of Dr. Carlos S. Lanting College

Ardian D. Malangen^{1*}

¹Department of Teacher Education, Dr. Carlos S. Lanting College, Quezon City, Philippines

Article history:

Submission September 2021

Revised September 2021

Accepted September 2021

*Corresponding author:

E-mail:

ardiandomingo@yahoo.com

ABSTRACT

Examination weeks are the peaks of an academic year. The paper-and-pen test determines whether the learners are able to attain the specific educational standards set by the pedagogical curriculum they follow. The study wants to determine the pre-examination study preparation and its effect on the summative test score in general mathematics of grade 11 senior high school students of Dr. Carlos S. Lanting College. This study centers on two factors, the frequency and strategy of the student used on their pre-examination preparation. The descriptive and quantitative method of research is used in this study. As a results and conclusions in terms of pre- examination frequency, majority of the grade 11 senior high school students allotted one day (69.30%) before the examination 30 minutes to one hour (52.60%) as review time. The most preferred pre-examination study strategy of the respondents is rereading their textbooks and/or lecture notes (3.37 frequently). There is no significant positive correlation between the pre-examination study frequency and the summative test results, there is a significant positive correlation between Tracks and the summative test results and between the study strategy (rereading textbooks/lecture notes, and seeking assistance to parents) and the summative test results of the Grade 11 senior high school students of Dr. Carlos S. Lanting College. Lastly, avoid cramming, students spend at least three days of review before the examination for a better learning in a well managed time and engage their selves to the most significant favored review strategies that will give an impressive test results.

Keywords: *Pre-examination Study Frequency, Strategy, Preparation, Summative results, Senior High School.*

How to cite:

Malangen, A. D. (2021). Pre-Examination Study Preparation and its Effect on the Summative Test Score in General Mathematics of Grade 11 Senior High School Students of Dr. Carlos S. Lanting College. *International Journal of Multidisciplinary: Applied Business and Education Research*. 2 (9), 805 – 817. doi: 10.11594/ijmaber.02.09.10

Background

Examination weeks are the peaks of an academic year. The paper-and-pen test determines whether the learners are able to attain the specific educational standards set by the pedagogical curriculum they follow. Moreover, the summative test scores of the students are used as an assessment tool for the evaluation of the effectiveness of teaching approaches, strategies and methodologies utilized by teacher in delivering the lesson to the class.

In the Philippines education system, the summative tests embody a twenty five percentage of the quarterly marks of the students thus; it is treated as one of the main indicators of what and how much they have learned. The natural positive response of students to upcoming major examinations is to prepare for it. The approaches of each student to their pre-examination study preparation vary in on the aspects such as the frequency allotted and strategy used. The common denominator of all the possible forms of pre –examination study preparation is all aim to revisit, review and relearn the topics that are covered by the approaching summative test.

The researcher of this study wants to determine the pre-examination study preparation and its effect on the summative test score in general mathematics of grade 11 senior high school students of Dr. Carlos S. Lanting College. This study centers on two factors, the frequency and strategy of the student used on their pre-examination preparation. Two different things yet, the students plan, decide and execute these simultaneously and in consideration of each other. Hence, the researcher finds it logical and practical to conduct an investigation that will uncover each respective effect to the summative test scores of the respondents in their general mathematics class.

Pre-examination study frequency shows that most of the students asked these kinds of questions like when do they start to review? How many minutes or hours do they give over to their examination preparation? Does the number of days matter? One problem that arises on this matter is cramming the review time. The students are often to cram studying. Is it helpful? Or does it bring more negative outcomes? However this study aims to determine

the correlation of pre-examination study frequency to the summative test scores of the grade 11 senior high school students. Moreover, this research is designed to know what percentage of the grade 11 senior high school students that having a cram review time and what percentage that allots as a sufficient review time. Pre- examination study strategies also need to answer the question what is the best method to review and prepare for an upcoming examination? This study includes the different the following review styles. First is re-reading textbooks and/or lecture notes. Perhaps, the most common go-to reviews style of the students. The resources needed are already available and accessible to the learners. The coverage of the exams within the contents of these reading materials as the teacher and the school prescribed it.

Next is making a summary review. Rewriting a material is another way used by the students. They usually read and rewrite the important definitions, application of the concepts, examples, and other points to remember from their textbooks and/or lecture notes into a piece of paper that they called as a reviewer. The third is self-testing. This strategy involves looking for practice exercises, problems and mock-tests that the students will answer to determine what they have learned and what topics need a further reinforcement. Using the internet for supplemental learning is the fourth review style. This may include reading articles, watching videos or any learning activities and materials found in the World Wide Web that will help the students prepare for the examination.

Another is joining a study groups. The students choose to learn from and with each other. They organize the venue, time, the topics to be studied, assessment activity and other things that will contribute for them to have a better outcome for their summative test. Lastly, is hiring a tutor. The students like to pay someone that is expert in the specific subject to help him get high score to the upcoming summative test. This study also aims to determine if there is a significant positive correlation between the strands/track and the summative test result in General Mathematics of the grade 11 senior

high school students of Dr. Carlos S. Lanting College.

Research Problem

The purpose of this study is to determine The Pre- Examination Study Preparation and Its Effect on the Summative Test Score in General Mathematics of Grade 11 Senior High School Students of Dr. Carlos S. Lanting College.

Specifically, this study attempts to answer the following questions:

1. What is the demographic profile of the respondents?
 - 1.1 Age
 - 1.2 Gender
 - 1.3 Grade/Section
2. How often do the respondents study before their exam in General Mathematics(pre-examination study frequency) in terms of:
 - 2.1 Hours in a day/ week
 - 2.2 Days in a week
3. What pre-examination study strategy that the respondents prefer the most? The following are the pre-examination study style included in this study:
 - 3.1 Reading textbooks or lecture notes
 - 3.2 Making a summary reviewer
 - 3.3 Self-testing
 - 3.4 Using internet for supplemental articles and videos
 - 3.5 Joining study groups
 - 3.6 Hiring a tutor
 - 3.7 Parents assistance
4. Is there a significant positive correlation effect between the pre-examination study frequency and the summative test result in General Mathematics of the grade 11 senior high school students of Dr. Carlos S. Lanting College?
5. Is there a significant positive correlation effect between the strands/Tracks and the summative test result in General Mathematics of the grade 11 senior high school students of Dr. Carlos S. Lanting College?
6. Is there a significant positive correlation effect between the study strategy and the summative test result in General Mathematics of the grade 11 senior high school students of Dr. Carlos S. Lanting College?

Methods

This study utilized the descriptive method. It aims to answer of the stated problems by means of gathering necessary data. There is no variable that has been manipulated nor controlled. Descriptive research cannot make predictions or determine casually. It is simply described existing phenomenon. According to Calderon and Gonzales (2008), a descriptive survey in fast finding studies with sufficient and accurate interpretations. The correlational design is also structured in this study. The researchers gathered information which from the respondents and converted into numerical equivalents. These data will undergo several statistical analyses to determine the relationship or difference between among the variables of the study. These mathematical treatments will help the researcher draw a conclusion and recommendations that will answer the stated problems of this study

The respondents of this study are only the Grade 11 Senior High School students of Dr. Carlos S. Lanting College for the school year 2017-2018. There are 991 Grade 11 students that are categorizing by strands/tracks. The researcher randomly selected 329 students using the slovin's formula using 95% level of confidence and 0.05 level of significance of this study. Two sets of data will be taken from each respondent. First the information about their pre-examination study frequency and strategy using the questionnaire made by the researcher that the study adviser and experts verified its validity and reliability in gathering the necessary data. The other set of data is the respondents' examination results in General Mathematics examination. The said sets of data will be utilized in different statistical treatments and analysis in order to arrive to sensible conclusions in relation with the stated problems.

The teaching approaches, strategies and methodologies implemented by the teacher in delivering the lesson to the class are not part of this study. Other kinds of pre-examination study strategies not named are not part of this research. The effect of the age and gender to the pre-examination study preparation and summative test scores is not part of this study.

Moreover, intelligence quality (IQ), personality, traits or attitudes of the students, and other cognitive and psychological factors are not considered in this study.

In order to save time, money and such other resources, the researcher chooses to get necessary data from a portion of the pre-determined population called as the sample. Sample, if has appropriate size, could represent the whole of the population. The researcher used the Slovin's formula to determine the appropriate sample size from a total population of students of the Grade 11 Senior High School.

$$n = \frac{N}{1 + Ne^2}$$

From a population of, this study has a sample size of 329. It has 0.05 level of significance and confidence level of 95%. The researcher used the stratified random sampling method to determine who among the population will be the respondents of this study. The strata will be the section and strand or track of the respondents; namely, Grade 11 Science, Engineering, Technology and Mathematics (STEM), Accountancy, Business and Management (ABM), Humanities and Social Science (HUMSS), Technological Vocational and Livelihood (TVL), General Academic Strand (GAS).

The following are the tools used by the researcher as means or source of the data used in this study. The validity and reliability of the following instrument have been also taken into consideration. The study used a survey questionnaire as its tool in gathering necessary information from the respondents. This instrument is designed to collect information regarding the pre-examination study frequency and strategy of the respondents.

The questionnaire has three parts:

The first part of the questionnaire is the background profile of the respondents. Second is the two multiple-choice items described the numerically the pre-examination study frequency of the respondents. Each choice for each item has corresponding quantitative equivalents that will be utilized in the statistical treatments. The last part is the Likert Scale that is designed to describe the preference of the respondents about their pre-examination study strategy. It is a five-point scale with

qualitative – quantitative equivalence. A research adviser, three experts and the director of center for research and development assessed and validated the questionnaire form used in this study. It was determined then that the instrument can able to gather accurate and reliable data from the respondents that will be useful in answering the specific problems aimed to answer by this study. Moreover, the grammar, clarity, visual appearance and such other aspects has been also scrutinized.

Result and Discussion

This section deals with the discussion of the data that has been gathered from the respondents of this research by means of textual, tabular and graphical form of presentation. The data will undergo through different statistical analysis that yields mathematical results will be as basis in answering the stated problems of this study.

The demographic profile

The following are the quantitative of demographic profile of the respondents of this study.

Age

Table 1. Demographic Profile

Age	Number of Respondents	Percentage
15	2	0.60%
16	101	30.70%
17	191	58.10%
18	27	8.20%
19	8	2.40%
Total	329	100%

Table 1 shows that the respondents of this research are stratified randomly selected from pre-determined population. There has no restriction in choosing the sample based on age. The age bracket of the respondents is from 15 to 19 years old. Majority of the respondents are 17 years old comprise of 191 (58.10%). There are 101 (30.70%) respondents that have an age of 16 years old, followed by 27 (8.20%) respondents that have an age of 18 years old. Then lastly 8 (2.40) respondents are 19 years old.

*Gender**Table 2. Demographic Profile*

Gender	Number of respondents	Percentage
Male	170	51.70%
Female	159	48.30%
Total	329	100%

Table 2 shows that the respondents of this research are stratified randomly selected from pre-determined population. There has no restriction in choosing a sample based on the gender. The sample of the study comprised of 170 male respondents (51.70%) and 159 female respondents (48.30%).

*Strand/Track**Table 3. Demographic Profile*

Strand	Number of respondents	Percentage
Stem	65	19.8%
Humss	65	19.8%
Tvl	67	20.4%
Gas	65	19.8%
Abm	67	20.4%
Total	329	100%

Table 3 shows that the respondents of this research are stratified randomly selected from pre-determined population. Majority of the respondents are from strands of TVL (Technological, Vocational and Livelihood) and ABM (Accountancy, Business, and Management) consist of 67 (20.40%) respondents each respectively. While HUMSS (Humanities and Social Sci-

*Hours in a Day/Week**Table 5. Hours in a Day/Week*

Hours in a day/week	Frequency	Percentage
Thirty minutes - one hour	173	52.60%
One hour - two hours	134	40.70%
Two hours - three hours	22	6.70%
Total	329	100%

Table 5 shows that the majority of 173 students (52.60%) allot thirty - minutes to one hour to their review time. They are followed by 134 respondents (40.70%) who spend just one hour to two hours and 22 respondents (6.70%)

ences), STEM (Science, Technology, Engineering and Mathematics), and GAS (General Academic Strand) are the same total number of respondents comprised of 65 (19.80%) each respectively.

*General mathematics score**Table 4. Demographic Profile*

Interval	Frequency	Percentage
6 - 14	93	28.30%
15 - 23	133	40.40%
24 - 32	74	22.50%
33 - 41	24	7.30%
42 - 50	5	1.5%
Total	329	100%

Table 4 shows that majority of 133 (40.40%) respondents got a score of 15 to 23 in General Mathematics. Followed by 93 respondents got a score of 6 to 14 and 74 (22.50%) respondents got a score of 24 to 32. While 24 (7.30%) respondents are in the in range of 33 to 41 score and lastly 5 (1.5%) students got a score of 42 to 50.

Pre - Examination Study Frequency

The respondents were asked about the number of days they allot in a week for them to review and prepare for their examination in General mathematics. The following data were gathered based on their answers.

How often do the respondents study before their exam in General Mathematics (pre-examination study frequency).

are said that they spend two hours to three hours to their review time in general mathematics.

Days in a Week

Table 6. Days in a Week

Days in a week	Frequency	Percentage
One day before the exam	228	69.30%
Two to three days	83	25.20%
Four to five days	8	2.40%
Six to seven days	3	0.90%
One week before the exam	7	2.10%
Total	329	100%

Table 6 shows that majority 228 respondents (69.30%) who said that they only review their lessons one day before the examination. Moreover 83 respondents (25.20%) spend two to three days and 8 respondents (2.40%) allot four to five days. While 3 respondents (0.90%) spend six to seven days. Lastly 7 out of the 329 respondents (2.10%) have a one week long of pre - examination preparation for their summative test in General Mathematics. According to Gezer-Templeton, P. G., Mayhew, E. J., Korte, D. S., & Schmidt, S. J. (2017), Students reported earlier initiation of exam preparation in later

exams compared to exams from earlier in the semester. Student responses were grouped into 5 categories: 1 to 6 hours, 1 to 2 days, 3 to 6 days, 1 week, and more than 1 week in advance. Students reported earlier initiation of exam preparation in later exams compared to exams from earlier in the semester. Student responses were grouped into 5 categories: 1 to 6 hours, 1 to 2 days, 3 to 6 days, 1 week, and more than 1 week in advance.

What is the pre-examination study strategy that the respondents prefer the most?

Table 7. Likert Scale Summary for Statement 1 (Rereading Textbook/Lecture Notes)

Statement	Frequency	Percentage	Weighted Mean
I reread my textbook and or lecture notes.	Always	97	29.5%
	Frequently	79	24.0%
	Sometimes	130	39.5%
	Rarely	18	5.5%
	Never	5	1.5%
Total	329	100%	3.74 (Frequently)

Table 7 shows that majority of 130 respondents (39.5%) have said that they sometimes reread their textbook /lecture notes as their review strategy. Another point of that needs emphasis is that 5 respondents (1.50%) have said that they never do this review

strategy as they prepare for their examination in General Mathematics. The weighted mean for statement 1 is 3.37. Thus, the respondents in general frequently reread their textbook/lecture notes as review strategy for their summative test in General Mathematics.

Table 8. Likert scale for statement 2 (Making a Summary Reviewer)

Statement	Frequency	Percentage	Weighted Mean
I made summary reviewer in general mathematics as test preparation.	Always	44	13.4%
	Frequently	70	21.3%
	Sometimes	130	39.5%
	Rarely	58	17.6%
	Never	27	8.2%
Total	329	100%	3.14 (Sometimes)

Table 8 shows that according to the 130 respondents' majority of them sometimes make a summary reviewer while 27 respondents (8.2%) never used this review strategy. The

weighted mean for statement 2 is 3.14. Thus, the respondents as a whole sometimes make a summary reviewer as their review strategy in General Mathematics.

Table 9. Likert Scale for statement 3

Statement		Frequency	Percentage	Weighted Mean
I answered exercises, problems and mock tests	Always	29	8.8%	2.84 (Sometimes)
	Frequently	48	14.6%	
	Sometimes	129	39.3%	
	Rarely	87	26.4%	
	Never	36	10.9%	
Total		329	100%	

Table 9 shows that 129 out of 329 respondents (39.3%) have said that they sometimes used self-testing as their review strategy. There are 29 respondents (8.8%) always answer practice exercises, problems and mock-tests in their pre-examination review but 36 respondents (10.9%) stated that they never used the self-testing as review strategy. The weighted mean of the statement 3 is 2.84. Thus, the respondents in general sometimes engaged

themselves in self-testing as their preparation for their summative test in General Mathematics. Recall and quiz yourself so you can remember the information. We forget much of what we read within minutes unless we do something to actively recall it immediately. Ask yourself questions as you read and answer them with the information from the problem this is good practice for exams (Oregon State University).

Table 10. Likert scale for statement 4

Statement		Frequency	Percentage	Weighted Mean
I read books, watch videos or use any learning materials in the internet.	Always	37	11.2%	2.81 (Sometimes)
	Frequently	52	15.8%	
	Sometimes	105	31.9%	
	Rarely	80	24.3%	
	Never	55	16.7%	
Total		329	100%	

Table 10 shows that majority of the 105 (31.9%) respondents said that they sometimes read books, watch videos or use any learning materials in the internet as their review aids. 37 out of 329 respondents (11.20%) have said that they always use internet as an aid in their pre-examination review. Furthermore 55 respondents (16.7%) have said that they never used the internet as review strategy. The weighted mean of statement 4 is 2.81. Thus, the respondents in general sometimes used the learning materials found in the internet as their review strategy in preparation for their examination in General Mathematics. Almasi and Zhu

(2017), report that students' knowledge on information retrieval was explored to gauge their techniques on the ways used to search learning materials on the internet. This was done to find out the knowledge of students in using the internet. It was assumed that students with good searching skills or proper knowledge of searching will spend a short time getting what they want. Searching learning materials and other information on the internet could be boring and frustrating when one does not know how to do it.

Table 11. Likert scale for statement 5

Statement		Frequency	Percentage	Weighted Mean
I joined organized study groups with my classmates/peers.	Always	22	6.7%	2.54 (Sometimes)
	Frequently	48	14.6%	
	Sometimes	97	29.5%	
	Rarely	82	24.9%	
	Never	80	24.3%	
Total		329	100%	

Table 11 shows that there are only 22 respondents (6.70%) who have said that they always choose to join organized study group. Then 97 out of 329 (29.50%) respondents said that they sometimes join study groups to prepare for their General Mathematics examination. In addition to that 80 respondents (24.30%) said that they never considered joining study groups. The weighted mean for statement 5 is 2.54. Thus; the respondents in general sometimes join organized study groups with their classmates or peers as their way of preparing their summative test in General Mathematics. On the study conducted by Herrera (2019), the 5th factor perceived as affecting the academic performance of Grade 11 students in General

Mathematics is peer factor or influence. Out of the 12 indicators, the indicator "My peer friends and classmates support me when I am down or hard up in understanding the subject" got the highest indicator with a weighted mean of 2.99 described as "often" and interpreted as "high influence". This implies that peer friends significantly influence the performance of the students in general mathematics. Also, according to Tenny (2021), meet regularly with a Study Group: Group study can be extremely helpful in terms of maintaining motivation to review. Also, you can learn by the example of others. Perhaps others in your group will teach you new ways to study that will benefit you.

Table 12. Likert scale for statement 6

Statement		Frequency	Percentage	Weighted Mean
I hired a tutor to help me prepare in my examination in General Mathematics	Always	8	2.4%	1.48 (Never)
	Frequently	10	3.0%	
	Sometimes	29	8.8%	
	Rarely	37	11.2%	
	Never	245	74.5%	
Total		329	100%	

Table 12 shows that 8 respondents (2.40%) choose always hired a tutor to help them prepare for their examination in General Mathematics. Another 37 respondents (11.2%) rarely considered it and 29 respondents (8.8%) sometimes considered it. However majority of 245 respondents (74.50%) said that they have never considered hiring a tutor.

The computed weighted mean is 1.48. Thus, the respondents in general never considered hiring a tutor as a preparation strategy for their examination in General Mathematics. Based on the study.

Table 13 shows that 165 respondents (50.20%) they never sought assistance from their parents in preparation of their examination in General Mathematics. Also 65 respondents (19.80%) rarely considered it and as well as 70 respondents (21.30%) sometimes did it. But 21 respondents (6.4%) frequently considered and least 8 respondents (2.4%) always considered it. The computed weighted mean is 1.91. It implies in general that rarely of the respondents sought assistance from their parents in preparation for their examination in General Mathematics.

Table 13. Likert Scale for Statement 7

Statement		Frequency	Percentage	Weighted Mean
I sought assistance from my parents in preparation for my examination in General Mathematics	Always	8	2.4%	1.91 (Rarely)
	Frequently	21	6.4%	
	Sometimes	70	21.3%	
	Rarely	65	19.8%	
	Never	165	50.2%	
Total		329	100%	

Is there a significant positive correlation effect between the pre-examination study frequency and the summative test result in General Mathematics of the grade 11 senior high school students of Dr. Carlos S. Lanting College?

Table 14. Hours in a Day/Week vs. General Mathematics Score

	N	χ^2	df	p-value	α
Hours in a day/week General mathematics test score	329	7.574	16	0.961	0.05

Note:

N = total number of respondents

df = degrees of freedom

α = alpha

χ^2 = computed chi square

p - Value = probability value

The Table 14 shows the relationship between hours in a day/ week for preparation in their summative examination and General Mathematics test score. Also using chi-square test ($\chi^2 = 7.574$) shows that there is not enough evidence to reject the null hypothesis,

since the p- value (0.961) is greater than 0.05 level of significance. It implies that there is no significant relationship between hours in a day/ week for preparation in their summative examination and General Mathematics test score.

Table 15. Week in a Day Vs. General Mathematics Test Score

	N	χ^2	df	p-value	α
Week in a day General mathematics test score	329	13.856	8	0.086	0.05

Note:

N = total number of observations

df = degrees of freedom

α = alpha

χ^2 = computed chi square

p - Value = probability value

The Table 15 shows the relationship between week in a day for preparation in their summative examination and General Mathematics test score. Also using chi-square test ($\chi^2 = 13.856$) shows that there is not enough evidence to reject the null hypothesis, since the p- value (0.086) is greater than 0.05 level of significance. It implies that there is no significant relationship between week in a day for

preparation in their summative examination and General Mathematics test score.

Is there a significant positive correlation effect between the strands/Tracks and the summative test result in General Mathematics of the grade 11 senior high school students of Dr. Carlos S. Lanting College?

Table 16. Strands/Track Vs. General Mathematics Score

	N	χ^2	df	p-value	α
General mathematics test score Strands / tracks	329	13.856	16	0.000	0.05

Note:

N = total number of observations

χ^2 = computed chi square

df = degrees of freedom

p - Value = probability value

α = alpha

The Table 16 shows the relationship between strands/tracks and General Mathematics test score of the Grade 11 senior high school students. Also using chi-square test ($\chi^2 = 13.856$) shows that there is enough evidence to reject the null hypothesis, since the p-value (0.000) is less than 0.05 level of significance. It implies that there is significant relationship between week in a day for preparation

in their summative examination and General Mathematics test score.

Is there a significant positive correlation effect between the study strategy and the summative test result in General Mathematics of the grade 11 senior high school students of Dr. Carlos S. Lanting College?

Table 17. Study Strategy Vs. General Mathematics Score

Study strategy Vs. General Mathematics score	R - value	P - value	Alpha Level	Decision	Interpretation
Strategy 1 Vs. General Mathematics test score	0.190	0.001	0.05	Reject H_0	Significant
Strategy 2 Vs. General Mathematics test score	-0.023	0.674	0.05	Accept H_0	No significant
Strategy 3 Vs. General Mathematics test score	-0.017	0.755	0.05	Accept H_0	No significant
Strategy 4 Vs. General Mathematics test score	-0.009	0.871	0.05	Accept H_0	No significant
Strategy 5 Vs. General Mathematics test score	-0.29	0.600	0.05	Accept H_0	No significant
Strategy 6 Vs. General Mathematics test score	-0.097	0.079	0.05	Accept H_0	No significant
Strategy 7 Vs. General Mathematics test score	-0.149	0.007	0.05	Reject H_0	Significant

Table 17 shows the relationship between the study strategies and General Mathematics test score of the grade 11 senior high school students. Also using Pearson Product - Moment Correlation Coefficient (r) shows that there is two strategies that have enough evidence to reject the null hypothesis, since the p-value of strategy #1 (I reread my textbook and or lecture notes) is (0.001) and the p - value of strategy #2 (I sought assistance from my parents in preparation for my examination in General Mathematics) is (0.007) which is less

than 0.05 level of significance. It implies that there is significant relationship between strategy #1 and General Mathematics test score, also Strategy #2 and General Mathematics Test Score. The remaining strategies have greater p - value compare to 0.05 as level of significance. It means that most of the remaining strategies are accept the null hypothesis. Thus the strategy used by the students especially strategy 1 and 7 make their score increasing or improving.

Conclusion

Based on the above findings, the stated problems of this study can now be answered by drawing conclusions supported by the evidence gathered from the respondents.

The following are the statements of the conclusions:

In terms of demographic profile of the respondents, the female Grade 11 senior high school students are slightly greater in numbers than the male. The age bracket of the respondents is from 15 to 19 years old. Wherein, majority of the respondents has the age of 17. Furthermore, majority of the respondents are in the strands of ABM and TVL followed by HUMSS, GAS and STEM respectively. Lastly, most of the respondents have a score in General Mathematics Examination from 15 to 23.

In terms of pre-examination frequency, majority of the grade 11 senior high school students allotted one day before the examination having thirty minutes to one hour as review time. This means that they have a crammed review time. Having said that it is concluded that the students have insufficient time in reviewing. The rest of the respondent spent time in reviewing a week before the examination. The most preferred pre-examination study strategy of the grade 11 senior high school students is rereading their textbooks and/or lecture notes. It is also notable to conclude that making summary reviewers and self-testing are also prominent as review strategy used. Lastly, it could be concluded that only few choose to hire tutor and seek assistance to their parents to help them prepare for their examination in General Mathematics.

The researcher also concluded that there is no significant positive correlation between the pre-examination study frequency and the summative test results in General Mathematics of the Grade 11 senior high school students of Dr. Carlos S. Lanting College. This implies that the students allot more or least time in preparing and studying for their examination in General Mathematics. The researcher also completed that there is significant positive correlation between Strands/Tracks and the summative test results in General Mathematics of the Grade 11 senior high school students of Dr. Carlos S. Lanting College. This implies that the students

allot more or least time in preparing and studying for their examination in General Mathematics. The researcher also concluded that there is significant positive correlation between the study strategy (rereading textbooks/lecture notes, and seeking assistance to parents) and the summative test results in General Mathematics of the Grade 11 senior high school students of Dr. Carlos S. Lanting College. This implies that the students allot more or least time in preparing and studying for their examination in General Mathematics.

This should state clearly the main conclusions of the research and give a clear explanation of their importance and relevance. Summary illustrations may be included.

Recommendations

To shed light about the findings and conclusions of this study the following recommendations are offered:

To the students Avoid cramming and the researcher recommended spending at least three days of review before the examination for a better learning in a well managed time. Explore other pre-examination study strategies. Also students must engage their selves to the most significant favored review strategy which is rereading textbooks or lecture notes that will give an impressive test result.

To the teachers since most of the grade 11 senior high school students rely on their reading materials in reviewing for their examination which is significant, the researcher recommends to always finding the best prescribe reference textbooks. Furthermore, provide well explained lecture examples during lesson discussions that serve as a tool for their preparation in the examination. Orient the Grade 11 senior high school students about other review strategies. Discuss the advantages and disadvantages of each pre-examination study strategy. Educate their students about the significant or not significant effect of increasing or decreasing the pre-examination study frequency (hours, days or week in reviewing the lessons) to their summative test score in General Mathematics. Discuss to the class the negative effect of cramming review time for the examination in General Mathematics.

To the Parents, School Administration/Institution and other Stakeholders. Help the students to have a conducive learning environment by providing whatever they will need to have a healthy pre-examination preparation for their summative test in General Mathematics. Conduct seminars and training activities that will help the Grade 11 senior high school students develop a better pre-examination preparation. This could center on the appropriate strategy, the study time management or both. Observe the test scores and the academic performance of the students in general, and try to relate it with their review strategy. The researcher recommends also to provide enough textbooks or modules that will be used as references of the grade 11 senior high school students.

Future researchers. Future studies may fill the gaps this research has. They can use this study as references to their research purposes only. They could focus only to one area either pre-examination study strategy or pre-examination study frequency. Future studies about pre-examination strategy may include other styles that are not part of this study. Future researchers may choose other subject areas. They may also conduct a study about the effect of pre-examination study preparation to the overall academic performance. Conduct a study that involves the significant positive effect or differences between strands and their academic performance.

Acknowledgement

The researcher would like to extend his deepest gratitude to his beloved research adviser Dr. Ronnie V. Tavarro who exemplifies the high quality guidance provided timely and instructive comments, and for giving his time consistently educating on the statistical methods, and instrumental assistance that benefited to the study. In addition, the researcher is truly grateful for the assistance from his family and friends that are always there supporting and constantly motivate. Also, the researcher would like to thank the respondents of the study on their cooperation, patience; time and effort while answering the survey that helped the researcher easily come up with conclusion.

References

- Almasi, M., Machumu, H., & Zhu, C. (2017, March). Internet use among secondary schools students and its effects on their learning. In *Proceedings of INTED2017 Conference 6th-8th March*.
- Brown, P. C., Roediger III, H. L., and McDaniel, M. A. *Making it Stick: the Science of Successful Learning*. Cambridge, MA: the Belknap Press Harvard University Press, 2014.
- Chen, P. Ph. D (2017). Thinking strategically about the study resources boosts students' final grade retrieved at <https://www.sciencedaily.com/releases/2017/05/1705011094252.htm>
- Chorley, H., Connelly, W. & Finn, J. (2016). It does not Add Up: Why does 39% of our student population pay for math tutoring?. The Tam News Online. Retrieved at <http://thetamnews.org/features/it-doesn't-add-up-why-does-39-of-our-student-population-pay-for-math-tutoring/>
- Congos, D. (nd) Self - Testring Concept: Discovering what has been learned before an exam. The Learning Center Newsletter. Retrieved at www.learningassistance.com
- Dunsloky J, Rawson KA, MARSH EJ, Nathan MJ, Willingham DT. Improving students' learning with effective learning techniques: promising directions from cognitive and educational psychology. *Psychol Sci Public Interest* 2013; 14:4-58.
- Espinoza, J. (2015). Teens' Cram revision into night, 'survey says'. The Telegraph. Retrieved at www.telegraph.co.uk/education/educationnews/11497143/
- Fundamentals: Preview, Read, Recall. Oregon State University. Retrieved from http://success.oregonstate.edu/sites/success.oregonstate.edu/files/LearningCorner/Tools/preview_read_recall.pdf
- Gezer-Templeton, P. G., Mayhew, E. J., Korte, D. S., & Schmidt, S. J. (2017). Use of exam wrappers to enhance students' metacognitive skills in a large introductory food science and human nutrition course. *Journal of Food Science Education*, 16(1), 28-36.
- Hannah, K. (nd). 5 benefits of Cramming Right before a Test. The prospect. Retrieved at www.theprospect.net
- Herrera, Melody. (2019). Factors Affecting the Academic Performance of Grade 11 Students in General Mathematics. 10.13140/RG.2.2.16645.68325.
- Kang, S. (nd). Temporal Dynamics of Learning Center. An NSF Science Learning Center. Retrieved at http://tdlc/ucsd.edu/educators_ask_the_scientist_kang.html
- Karpicke JD, BUTLER AC, Roediger HL. Metacognitive strategies in student learning: do students practice retrieval when they study on their own? *Memory* 2009;17:471-9.
- Mind Tools. (bd_ Review Strategies, Committing Learning to Long-Term Memory. Retrieved at http://www.mindtools.com/pages/article/newLSS_05.htm

Morgan, K. (nd). The Advantages of Internet in Education. Classroom. Retrieved at classroom.synonym.com/advantages-internet-education-554917.html

Oxford Learning. Pros and Cons of Cramming. Retrieved at <https://www.oxfordlearning.com/the-pros-and-cons-of-cramming/>

Reading to Remember: Textbook Strategies. Willamette University. Retrieved

from http://willamette.edu/offices/lcenter/resources/study_strategies/reading2remember.html

Schartek, A., & Pharm, D. (2014). Stop Rereading... and Try Self-Testing!. Retrieved at <http://edtheory.blogspot.com/2014/08/stop-re-reading-and-try-self-testing.html>

Tutor Field (2017). Benefits and Disadvantages of Study Groups. Retrieved at <http://tutorsfield.com.au/articles/2017/06/29/benefits-disadvantages-study-groups/>