

A TUTORIAL SESSION IN COLLEGE ALGEBRA AMONG SELECTED THIRD YEAR COLLEGE STUDENTS: AN ACTION RESEARCH

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Abstract

The advancement of mathematics education is an increasing priority nationwide. Currently, schools have challenges in identifying optimal methods and tactics for implementing effective mathematics programs while striving to close achievement gaps for kids who do not meet the standards. This study aimed to examine the efficacy of an intervention program on the performance of a college algebra class to enhance the mathematics performance of Math 2 students. The choice of the action research-based method was founded on the concept that it would improve the researchers' comprehension of algebra and promote learner performance. The findings revealed that most of the respondents were 20-21 years old, and they were all males; most of them were third-year college and third-takers already in Math 2. In Addition, in terms of respondents, scores before the tutorial session (prelim), the majority got a failing score. After the tutorial session, the majority of the respondents still had poor performances. Few have improved their performances. Furthermore, the findings also showed that there is a significant difference between the respondents, grades in the prelim and midterm examinations. It was found that peer tutoring was a beneficial way to support and improve students' learning performances in College Algebra.

Keywords: Tutorial Session, Learner Performance, Teaching Method, Intervention Program.

INTRODUCTION

Education is an instrument for a worthwhile existence. It gives knowledge of the world around people and changes it into something better. It develops a perspective of looking at life. However, according to Reda (2015), education is critical to be self-dependent. It helps one become financially independent, but that is not all. Education also makes one wiser so that he/she can make their own decisions. Concerning that curriculum is a dynamic process, there are always changes that occur that are intended for improvement. This adaptation does not eliminate the standardization of different teaching methods to give students better information. Moreover, tutoring is frequently used when the teacher asks the older, brighter, and more cooperative class members to tutor (teach, coach, instruct) other classmates.

This is due to their closeness in age, skills, study habits, and even learning styles. Tutoring arrangements may be in the following areas: instructional tutoring, same-age tutoring, monitorial tutoring, and structural tutoring. Each of the following has strengths and weaknesses. This is practiced when there is a big difference between the tutor and the tutee. This arrangement works well with children who can act as interactive pairs that are more able to assist the less able (Salandanan, 2006). Hence, a tutorial session is a way to support the poor performance of every learner, especially in mathematical concepts. Mathematics is one of the most difficult subjects at school. Many students struggle with mathematics because they do not understand its practical applications. College algebra is one of the branches of mathematics learning and is a course many educators consider failing (Gordon, 2009; Herriott, 2006; Owens,

2003). College algebra should not only prepare calculus-bound students for higher mathematics but also help them become more mathematically skilled in order to succeed in today's rapidly changing world.

Verma (2019) states that mathematics is a methodical application of matter. It is said that the subject makes a man methodical or systematic. Mathematics keeps one's life organized and prevents chaos. Mathematics fosters the ability to reason, be creative, think abstractly or spatially, think critically, solve problems, and even communicate practically. As a result, the intervention program places a high value on mathematical proficiency in all learner development. Furthermore, around 20% of students exhibit low numeracy skills, and based on various classification methods, between 4% and 14% have been identified as having a learning disability in Mathematics (Butterworth, 2013). This intervention is designed to enhance mathematical performance among students facing mathematical challenges.

The Mindanao State University system offers Math 2 (College Algebra), which is considered a complex subject for the selected college students of the MSU-Main Campus. College Algebra contains the following topics: the introduction to set, algebraic expression, rational exponent, and radical, the set of complex numbers. Equations in one variable, inequalities in one variable, and equations in two variables. This course is one of the reasons why some students are delayed in proceeding and taking higher math courses.

To improve equity in mathematics instruction, the National Mathematics Advisory Panel Final Report (2008) recommends that schools work to prepare all students for algebra in grade eight, requiring students to understand basic mathematical and problem-solving skills prior to the start of grade eight and ensuring that they have mastered algebraic concepts before beginning high school. If children have not learned algebra by the start of high school, interventions are required to ensure success in the next years (Fuchs & Fuchs, 2008). According to the panel, instructors and educational authorities must adopt research-based solutions to assist children. These interventions should be support-focused and aim to assist students make progress toward their goals. As a result, schools must provide the highest quality curriculum and standards for all students.

Exploring the role of age in tutorship program delivery and implementation in higher education institutions, using empirical examples from one institution (Muhuro & Kang'ethe, 2014). The development and implementation of tutorial programs in many higher education settings can be a panacea if the program can enhance learning and improve outputs among learners from various cadres. The study discovered that age was a significant predictor of tutorial learning. On the other hand, some mature first-year students felt less confident in their younger instructors' ability to help them study. Thus, the study suggests that tutor age be considered when assigning tutors to certain tutorial groups. Strategies are, therefore, central to assuring the development and implementation of new mathematics education that activates and maintains students' interest in Mathematics classes. Interest is essential to making students engaged with learning and willing to learn mathematics inside the classroom. The study promotes interest in learning mathematics by involving the learners in tutorial classes.

Moreover, this study aims to help lessen the burden of every teacher in handling and teaching college algebra. Leading the learners to be involved in tutorial classes will produce something more pleasant or make the lesson more straightforward and transparent. Apart from that, this research could determine the effectiveness of the researchers' way of teaching, considering that they were in charge of the instruction and guidance of the learners. This could further show their abilities and capability in teaching Mathematics. The study's respondents were the learners enrolled in the College Algebra course, which the Department of Mathematics teacher carried out. One of the aims of this study was to improve their skills and interest in learning mathematics and eventually pass the said course. The main purpose of the intervention was to furnish the students with information and knowledge and to make it a tool to help them cope with the lesson, which may not be apparent to them during the classroom discussion. This study did not seek to determine an intervention course's most compelling design but solely reviewed its effectiveness. The results of this study provided the treatment outcome and not the course development for particular participants. It may be possible for schools with similar demographics to learn how to structure a remedial math course based on the findings of this study.

Conceptual Framework

This study aimed to evaluate the efficiency of the tutorial sessions in the College Algebra courses as an intervention program among selected Math 2 students in MSU-Main Campus. This study also aimed to describe the respondents in terms of their age, gender, year level, and course, as well as the number of times Math 2 was taken and the number of hours spent studying Mathematics. Furthermore, the respondents who failed their prelim examination were the study's respondents. The tutorial sessions then started during the midterm. The conceptual framework of this study is shown in Figure 1 below:

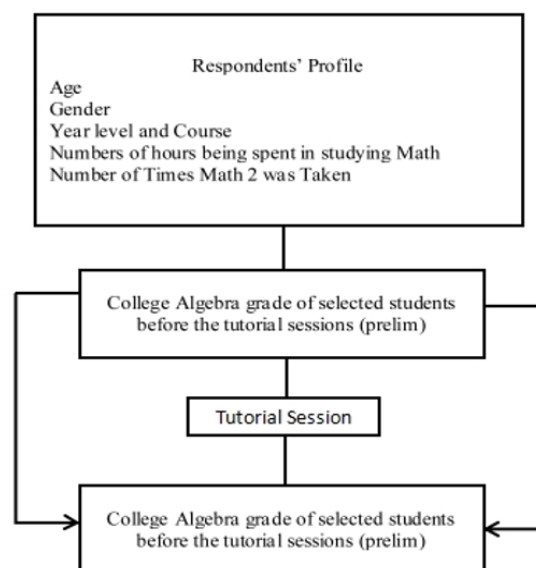


Figure 1: A Schematic Diagram of the Conceptual Framework of the Study

Statement of the Problem

This study aims to find out the tutorial sessions in College Algebra as an intervention program among selected Math 2 students. Specifically, the study sought to answer the following questions:

1. What is the respondents' profile in terms of:
 - 1.1 Age;
 - 1.2 Gender;
 - 1.3 Number of times Math 2 was taken;
 - 1.4 Year level and course;
 - 1.5 Number of hours being spent studying Math.
2. What was the respondents' college algebra grade before the tutorial session (Prelim)?
3. What is the respondents' College Algebra grade after the tutorial session (Midterm)?
4. Is there a significant difference between the respondents' College Algebra grades before and after the tutorial sessions?

Scope and Limitation of the Study

The study was conducted at the MSU-Main Campus in Marawi. The respondents were Math students enrolled in the Math 2 course in the First Semester of 2018–2019. This study focused on the effectiveness of an intervention program through tutorial sessions among the said respondents. A preliminary survey was conducted to determine the sections in Math 2 (College Algebra). After finding the selected sections, the researchers approached the faculty handling the course, and, with the approval of the assigned professor, the selected students under the said subject were taken as part of the tutorial session. The time spent doing this tutorial session depended on the respondents' vacant time and standard time. In line with this, the researchers and the professor handling this course consulted with each other regarding respondents' performances.

METHODOLOGY

A. Design

The study was conducted in the College of Natural Science and Mathematics (CNSM), Mindanao State University-Main Campus, Marawi City, specifically to determine the feasibility of an intervention program through tutorial sessions for Math students taking Math 2 (College Algebra) during the First Semester of 2018-2019 academic year. A pilot study pointed out the Math 2 sections, the researchers then sought permission from the faculty overseeing the course. Some students opted to join the tutorial sessions in this study, and this was done in consultation with the professor and the timetable that the students were free to attend tutorial sessions. The work used an action research approach to compare the students'

College Algebra scores before (prelim) and during (midterm) the conducting of the tutorials. Such comparison shed light on their assertion that there was enhancement and improvement in respondents' learning process. To that end, preparations of the materials required for this study were accomplished, and a formal request to carry out the study was obtained through a letter of endorsement signed by the thesis adviser and the dean of the school, respectively. The authors were also able to coordinate the sessions with a College Algebra teacher, Prof. Intod. Section Qq was selected, and the tutorials were conducted in Room 202 at CNSM every Saturday and Sunday from 8:00 to 11:30 and 14:00 to 16:30 and took about one month. After the midterm examinations, the researchers convened, tallied, evaluated, and interpreted the findings to determine the program's effectiveness regarding the student's academic performances.

B. Participants of the Study

The respondents of this study were the students who were enrolled in Math 2 (College Algebra) for the first semester of the academic year 2018-2019. The researchers first approached college algebra students, especially those who failed the preliminary examination. The total number of students for the selected section was 19. From that section, six students passed, and 13 students failed during the preliminary examination. Thus, there were 19 respondents for this study. However, all of the enrollees of the said section were encouraged to attend the tutorial session to improve their grade status in class.

C. Instrumentation

The following data-gathering tools were used in this study: (1) questionnaires that contained the profile of the respondents and (2) test questionnaires. Moreover, the reference that was used in this study was the *College Algebra Book* by Paul K. Rees, Fred W. Sparks, and Charles Sparks Rees, which covers the particular topics for the Second Quarter examination such as Algebraic Expressions with subtopics such as Methods of Factoring Polynomials, Operations on Rational Expressions, Complex or Compound Fractions, Rational Exponents, Radicals and Operation on Radicals, and The Set of Complex Numbers with subtopics such as Operation on Complex Numbers and Square Roots of Negative Real Numbers; and lastly the Equation in One Variable with subtopics such as Solution of Equation, Linear Equation in One Variable, Quadratic Equation in One Variable, and Application. Each subtopic was given a one-hour-and-thirty-minute discussion by the researchers in every session.

RESULTS AND DISCUSSIONS

I. Respondents' Profile

Table 1: Distribution of the Respondents' Age

Age	Frequency (f)	Percentage (%)
20–21 years	14	74%
22–23 years	4	21%
24–26 years	1	5%
Total	19	100%

Table 1 shows the frequency and percentage distribution of the respondents' age. As shown, no one is between 18–19 years old; 14, or 74%, were between 20–21 years old; 4, or 21%, were between 22–23 years old; and 1, or 5%, were between 24–26 years old. The findings showed that most respondents were 20–21 years of age. In this bracket, they were expected to be mature enough physically and mentally. According to Muhuro and Kang'ethe 2014, age has become a significant component, potentially limiting the program's success. Their study used a mixed-method approach, and the more mature first-year students were less confident in the younger instructors. It may also indicate that the respondents were expected to be responsible college students, knowing their ages were already adults. Mathematics is not new to them because they have already encountered it in high school.

Table 2: Distribution of the Respondents' Gender

Gender	Frequency (f)	Percentage (%)
Male	11	58%
Female	8	42%
Total	19	100%

Table 2 indicates the frequency and percentage distribution of the respondent's gender. It shows that of 19 respondents, 11, or 58%, were male, and only 8, or 42%, were female. Unfortunately, 8 out of 11 female students failed the Prelim exam in Math 2, and half of the eight male students failed the Prelim exam. According to Kommer and Sax's (2006) research, because most females are left-brain dominant, they learn better with concrete notions, whereas males are right-brain dominant and learn quickly with abstract concepts. This means that gender composition is important because it appears to influence the outcomes of tutoring for both tutees and tutors. Gender composition is also important for tutees and tutor outcomes other than academic achievement. Female tutors had much more significant academic improvement when tutored by males than females (Robinson et al., 2005). Furthermore, Powell (1997) found that tutoring moderately improves learner performance. They were discovered to possess more optimistic perspectives regarding the subject matter in which they were instructed. This approach proves to be an effective strategy for enhancing learner performance. Students who received tutoring demonstrated more favorable attitudes towards the subject.

Table 3: Distribution of the Respondents' Year-Level

Year Level	Frequency (f)	Percentage (%)
Second year	5	26%
Third year	12	63%
Fourth year	2	11%
Total	19	100%

Table 4.3 presents the respondents' year-level frequency and percentage distribution. As the table showed, there were no first-year students; 5, or 26%, were second-year; 12, or 63%, were third-year; and 2, or 11%, were fourth-year. The findings showed that most students were in the third year. This implies that the respondents were now half of their college years and were expected to have most of the learning in their field, that is, to be almost entirely equipped with the needed knowledge.

Studies have shown that students' academic progress is closely tied to their year-level and the depth of knowledge they have accumulated in their field of study. In particular, third-year students, like those in your study, are typically expected to demonstrate a deeper understanding of their chosen discipline compared to first and second-year students. Research by *Pascarella and Terenzini (2005)* suggests that students in the later years of their studies tend to have developed more advanced cognitive skills, such as critical thinking and problem-solving, which are essential for success in higher education and future professional endeavors. According to Robinson, Schofield, and Wentzell (2005), tutoring has a beneficial effect on various mathematics proficiencies, such as arithmetic computation, conceptual understanding, and problem-solving skills.

Table 4: Distribution of the Respondents' Course

Course	Frequency (f)	Percentage (%)
BS Nursing	1	5%
BS PE	4	21%
BSED Biology	2	11%
BS Agie Ed	1	5%
BEED Gen Ed	2	11%
BS ABM	8	42%
BSED TLE	1	5%
Total	19	100%

Table 4 presents the frequency and percentage distribution of the respondents' courses. As the table presents, 1 or 5% were BS Nursing students; 4 or 21% were BS PE students; 2 or 11% were BSED Biology students; 1 or 5% were BS Agie Ed students; 2 or 11% were BEED General Education students; 8 or 42% were BS ABM students; 1 or 5% were BSED TLE students. This means that the respondents were taking up seven courses.

The majority of them had a Bachelor of Science in Agricultural Business Management. According to BS-ABM respondents, Math 2 is one of the Mathematics subjects they need to pass as soon as possible because it is a prerequisite subject that they need to enroll in, but it takes many attempts to pass it. Additionally, tutorials are organized differently depending on discipline, the stage of the student's course, and the tutors' style to achieve this purpose (Palfreyman, 2001). It clearly showed that tutorial classes can develop the students' behavioral aspects regarding self-discipline and self-esteem.

Table 5: Distribution of the Respondents' Number of Hours being spent in Studying Math

Number of Hours	Frequency (f)	Percentage (%)
21-30 minutes	2	11%
31-45 minutes	3	15%
1 hour	8	42%
1 hour and a half	4	21%
Two hours or more	2	11%
Total	19	100%

Table 5 indicates the frequency and percentage distribution of the respondents' hours spent studying Math. It shows that 2, or 11%, spent 21-30 minutes studying Math, 3, or 15%, spent 31-45 minutes; 8, or 42%, spent 1 hour; 4, or 21%, spent 1 hour and a half, and 2, or 11%, spent 2 hours or more. This implies that most of the respondents spent 1 hour of their time studying Math 2.

According to the respondents during the interview regarding the time they spent studying Math, they cannot stay longer studying a particular topic because they find it difficult to understand if they were to solve another problem; at the same time, they felt bored in looking at some problems.

Teachers in Mathematics must have strategies on how to learn and motivate their students in terms of learning the subject because many students today have a negative impression of the subjects. Most students have already considered mathematics one of the most challenging subjects.

Motivation gives additional benefits to the learners. At the same time, they will be motivated to solve problems even though they encounter some struggles. Consequently, according to Hock, Pulvers, Donald, and Schumaker (2001), tutoring helps learners help themselves and become independent learners. A tutor primarily serves as a facilitator, with the goal of tutorials, especially for learners who are struggling, to assist them in attaining improved test scores.

Table 6: Distribution of the Respondents' Number of Times Math 2 was Taken

Number of Times Math 2 was Taken	Frequency (f)	Percentage (%)
ONCE	3	15%
TWICE	5	26%
THRICE	9	47%
FOURTH	1	5%
FIFTH	1	5%
TOTAL	19	100%

Table 6 shows the frequency and percentage distribution of the respondents' number of times Math 2 was taken. It reveals that 3, or 15% were first takers; 5, or 26% were second takers; 9, or 47% were third takers; 1, or 5%, were fourth takers; and 1, or 5% were fifth takers. The majority of the respondents were third-takers. This implies they were already familiar with most of the topics covered in Math 2. Based on their insights, math 2 is a complex subject in Algebra.

They find it most challenging during the significant exams, especially in the final exam, because it is comprehensive. According to them, teaching strategies matter because every time they retake the subject, they can compare the teaching strategies used by their different teachers.

Furthermore, they said that the time is limited in giving examples, which is not enough to ensure they understand every topic. Powell (1997) found that tutoring moderately improves learner performance. Their attitudes towards the subject in which they received tutoring were notably more positive.

II. Respondent's College Algebra grade before the tutorial session (Prelim score)

Table 7: Transmuted Grade, Frequency, Percentage, Mean Grade, Standard Deviation, and Qualitative Description of the Respondents' Performance in their Prelim Exam

Prelim Score	Transmuted Grade	Frequency	Percentage (100%)	Qualitative Description	Mean Grade	Standard Deviation	Overall Qualitative Description
85	1.25	1	5.3	Excellent			
59	2.50	1	5.3	Satisfactory			
53	2.75	1	5.3	Fair			
52	2.75	1	5.3	Fair			
46	3.00	1	5.3	Passing			
45	3.00	1	5.3	Passing			
36	5.00	2	10.5	Failure			
31	5.00	1	5.3	Failure			
30	5.00	2	10.5	Failure			
27	5.00	2	10.5	Failure			
25	5.00	1	5.3	Failure			
23	5.00	1	5.3	Failure			
21	5.00	2	10.5	Failure			
12	5.00	1	5.3	Failure			
10	5.00	1	5.3	Failure			
Total		19	100		4.2237	1.22445	Failure

Scaling: 1.0–1.25–Excellent, 1.50–1.75–Very Good, 2.00–2.25–Good, 2.50–Satisfactory, 2.75–Fair, 3.00–Passing, 5.00–Failure.

Table 7 presents the transmuted grade, frequency, percentage, mean grade, and qualitative description of the respondents' prelim exam performance based on the one hundred (100) item test. This shows that the majority of the respondents failed in the preliminary examination. Only one of the respondents got an excellent grade.

The mean grade is 4.2237, and the standard deviation is 1.22445, which is a qualitative description of failure, which means that the respondents failed to attain the passing grade of 3.0. This implies that the respondents performed poorly in the preliminary examination.

One of the student's weaknesses in learning mathematics is their lack of confidence to ask their teacher questions. Research indicates that a student's confidence significantly impacts their ability to complete assigned work effectively. For instance, a study on peer tutoring found that cooperative learning approaches can positively affect a student's self-confidence, which in turn enhances their academic performance (Corral, 2018)

Thus, Math teachers must keep fighting the stigma that follows mathematics daily. At the same time, future educators must utilize different instruction methods to increase their students' confidence levels. Successful peer tutoring may have positive effects in many different ways, but the important thing is to be clear on your primary purpose using this method or strategy.

III. Respondent's College Algebra grade before the tutorial session (Midterm score)

Table 8: Transmuted Grade, Frequency, Percentage, Mean Grade, Standard Deviation, and Qualitative Description of the Respondents' Performance in their Midterm Exam

Midterm Score	Transmuted Grade	Frequency	Percentage (100%)	Qualitative Description	Mean Grade	Standard Deviation	Overall Qualitative Description
80	1.50	1	5.3	Very Good			
74	1.75	1	5.3	Very Good			
65.5	2.0	1	5.3	Good			
62.5	2.25	1	5.3	Good			
54.5	2.75	1	5.3	Fair			
53	2.75	1	5.3	Fair			
50	2.75	1	5.3	Fair			
46.5	3.0	1	5.3	Passing			
45	3.0	1	5.3	Passing			
40.5	5.0	1	5.3	Failure			
34	5.0	1	5.3	Failure			
30	5.0	2	10.5	Failure			
25.5	5.0	1	5.3	Failure			
24	5.0	1	5.3	Failure			
18	5.0	2	10.5	Failure			
17	5.0	1	5.3	Failure			
10	5.0	1	5.3	Failure			
Total		19	100		3.7763	1.37663	Failure

Scaling: 1.0–1.25–Excellent, 1.50–1.75–Very Good, 2.00–2.25–Good, 2.50–Satisfactory, 2.75–Fair, 3.0–Passing, 5.0–Failure.

Table 8 presents the transmuted grade, frequency, percentage, mean grade, and qualitative description of the respondents' performance in their midterm exam based on the given one hundred (100) item test. The modal grades during the midterm were 30 and 18. In addition, it has a mean grade of 3.7763, a standard deviation of 1.37663, and a qualitative description of failure. The table presents that only nine (9) out of 19 respondents had passed the Midterm Examination; the rest were below the passing rate. This shows that only a few of the respondents had improved their standing. Hence, the midterm mean grade was lower than the prelim. In general, the special tutorial sessions, which were the basis for the intervention program, may not have influenced and improved the standing of the majority of the students and may not have strengthened their performance in Math 2 because some of the students had poor background on the Basic Education Mathematics subjects. They do not love to practice solving different problems because they lack confidence. However, there were still some of the respondents who had improved their performances after the tutorial sessions. Consequently, the tutorials given influenced them to increase their class standing. According to Greenwood and Maheady (1997), the peer tutor assists the student in learning, practicing, or reviewing an academic skill that the classroom teacher has planned. Most of the students participated in the intervention. They ask questions whenever they are confused about the problem; they want to solve many problems, so if they are stuck on that problem, they ask how it will be solved. Also,

whenever the tutors gave a problem on the board, most of the tutees were eager to answer the question, and they asked voluntarily to answer without any fear. This is probably because they thought the tutors were just students like them, and they were not ashamed to ask or answer problems or solve any math problem.

Table 9: Result of Paired Sample T-Test of the Respondents between Prelim Grades (Before the tutorial session) and Midterm Grades (after the tutorial sessions)

Grade	Mean Score	Qualitative Rating	t-value	p-value	Interpretation	Action Taken
Prelim	4.2237	Failure	1.518	0.146	Insignificant Difference	Accept Ho
Midterm	3.7763	Failure				

Table 9 presents the results of the paired sample t-test between prelim and midterm grades. As indicated, the prelim grade obtained a mean of 4.2237, and the computed value of test statistics is 1.518, more significant than the p-value of 0.146. Hence, at a 0.05 significance level, there was insufficient evidence in the sample that may support the rejection of the null hypothesis. Thus, the decision was to accept the null hypothesis. Therefore, there was no significant difference between the prelim and midterm grades in College Algebra achievement. However, regarding the efficiency of tutorial sessions, only six (6) respondents improved their scores in the prelim exam. Hock, Pulvers, Donald, and Schumaker (2001) note that before and after-school tutoring programs can transform poor performance into academic success. However, it is proved by some students, especially those motivated and willing to learn during the session and those who have passed the exam. They are the students who were active and always present in every session. Those who failed did not pass the exam because sometimes they did not attend the session and were confident enough with their stock knowledge in the previous years.

SUMMARY OF FINDINGS

The main purpose of this study was to investigate the effectiveness of a tutorial session as an intervention program, knowing that mathematics is one of the most important subjects. This research was an action study that also aimed to determine the significant difference between the test results before and after the tutorial session of the Mathematics 2 students during the first semester, A.Y. 2018–2019. It involved 19 selected students, especially those who failed their prelim exam, as the respondents.

Specifically, this study dealt with the following research questions:

- 1) What is the respondents' profile in terms of age, gender, number of times Math 2 was taken, year level and course, and number of hours being spent studying Math?
- 2) What is the respondents' College Algebra grade of the selected students before the tutorial session (prelim)?
- 3) What is the respondents' College Algebra grade of the selected students after the tutorial session (midterm)?
- 4) Is there a significant difference between the respondents' College Algebra grades before and after the tutorial sessions?

The researchers conducted actual tutorial sessions to benefit the whole Math 2 class. The instructor's record was used to gather the data for the study. To arrive at a valid conclusion, statistical tools like frequency and percentage distribution and paired sample t-tests were used to analyze the gathered data.

FINDINGS

Based on the data that were gathered and interpreted, the researchers were able to obtain the following findings of the study:

- 1) The majority, or 73%, of the respondents were 20-21.
- 2) The majority, or 57% of the respondents, were female.
- 3) The majority, or 63.12%, of the respondents were in the third-year level.
- 4) Most, or 47.36% of the respondents were third takers.
- 5) Most or 47% or half of the respondents were Agriculture Students.
- 6) Most 42% of the respondents spent one hour studying math.
- 7) Only 6 out of 19 had passed the Prelim examination.
- 8) 9 out of 19 had only passed the Midterm examination.
- 9) At a p-value of 0.146, the null hypothesis (H_0) was accepted because the computed value of test statistics is greater than the p-value. Hence, at a 0.05 significance level, there was insufficient evidence in the sample that may support the rejection of the null hypothesis. Thus, the decision was to accept the null hypothesis.

CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

- The respondents were 20-21 years old, females, at third-year level, agriculture students, and third takers in Math 2. The researchers conducted the actual tutorial sessions as an intervention program since they had been observed, and most students found it difficult to pass the significant examination in Math.
- The prelim grades of the respondents had a more significant individual mean and average total compared to midterm grades because some students could not cope with the lessons during the discussion, and they lacked a background in introductory algebra in their high school days.
- After intervention as a tutorial session, there was a fraction of an increase in Midterm Examination results even though it is a more difficult exam than the preliminary examination because most respondents attended and participated in every session. Thus, it eliminated their negative feelings, such as shyness and doubtfulness. However, the intervention program still influenced some respondents to improve their class standing. In addition, there was no significant difference between the respondents' Prelim and Midterm grades.

- The tutorial session, as an intervention program, effectively improved a few Math 2 students during the first semester of 2018-2019.

Recommendations

From the findings, conclusions, and implications of the study, the researchers recommended the following:

1. School administrators should formulate innovative plans to conduct a similar intervention program, such as the tutorial sessions conducted in this study. This kind of intervention is believed to be more convenient because the tutees did not hesitate to ask questions of their tutors because they were assisted one-on-one by the tutors.
2. Instructors should evaluate their teaching strategies and check their ways of dealing with students.
3. Parents must be aware of their roles in achieving students' success in terms of their moral and financial support.
4. Tutors must be more innovative to catch the students' interest and provide different teaching styles to encourage students to love Mathematics.
5. Tutees, the result of this study will help them appreciate the effectiveness of tutorial sessions.
6. Future researchers can conduct studies that are more about helping improve the student's performance in learning Mathematics. However, they must choose the appropriate time and venue to minimize factors that may cause hindrances in improving students' performance.

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