Examining the Influence of Socratic Method Strategy on Learners' Academic Performance in the Grade 12 Accountancy, Business, and Management Strand

Roston D. Sangngangao

Department of Education, Division of San Jose City, Philippines[2]

Corresponding author's email: roston.sangngangao@deped.gov.ph

Submitted: January 2025. Accepted: April 2025. Published Online: June 2025.

ABSTRACT

This action research aims to determine the effects of the Socratic method strategy on the academic performance of grade 12 students in the Accountancy, Business, and Management strands. The Socratic Method is a powerful strategy that can be used to motivate learners and focus their attention on a topic. The researcher will distribute the pretest to each section of Grade 12 from the ABM strand. The researcher will analyze the results to ensure that the two sections, which will serve as the control group and experimental group, have identical mean scores, thereby ensuring the accuracy of the research results. The researcher will use appropriate statistical tools to analyze the collected data, including measures of central tendency (mean) and tests of difference (t-test). The researcher will use test questionnaires as the instrument to determine the respondents' performance in using the Socratic method of teaching strategy. This strategy is also used in some lessons. The Socratic method may also be used to revisit the content from the previous lesson by asking critical thinking questions or as a lead-in to introduce a new topic. The Socratic method is enjoyable, as its primary aim is to engage students more fully in school activities and encourage them to participate actively in all activities. Hence, this study was conceptualized to improve the Business Mathematics performance by using the said strategy. The findings emphasized that the results of the evaluation test for the control and experimental groups reveal a significant difference.

The researcher proposed using the Socratic method strategy to motivate learners, encourage their activity, and foster cooperation, with a focus on discussion and activities.

***Keywords**: Socratic Method Strategy, Business Mathematics Performance, and Business Mathematics Activities.*

INTRODUCTION

Education is essential to all members of society nowadays because it helps learners develop their skills, including critical thinking, problem-solving, and logical thinking. These skills enable learners to face their problems in both their professional and personal lives. Also, these skills help them in their decision-making. Nowadays, learners face various challenges in their studies, including developing learning skills.

In the 21st century, learning is becoming increasingly complex and challenging. With the rapid pace of change in the world, it is difficult for students to stay current with the latest information and skills. Additionally, they must be able to apply what they have learned to real-world situations. (Llego, 2022, September 14).Socrates employed the method of questioning to encourage people to examine the things they were told critically and to look beyond the surface level. (Scholle, 2022).

According to Dalim et al. (2022), the use of Socratic questioning has positive effects on enhancing students' critical thinking and communication skills. The method is a teaching tactic in which questions are asked continually until either the student provides an incorrect answer or reasoning, or the teacher is satisfied with the student's responses. (Miller, 2021, November 11). It is a teaching style that involves asking a series of questions. Teachers use the Socratic method when they want students to utilize their critical thinking, problem-solving, and logical skills. It also involves two-way dialogue and questioning to elicit knowledge from students. Educators who employ the Socratic Method use probing questions to help students develop and evaluate arguments related to a specific topic. The Socratic Method emphasizes the

importance of critical thinking, logic, and reasoning in achieving mastery of a subject. (Top Hat, n.d.). Law students and medical students typically employ these strategies to develop their critical thinking and problem-solving skills, which they will utilize in their future professions.

According to Garret (1988), the Socratic Method provides all students with greater confidence in speaking to large groups, enables them to develop the ability to argue forcefully and persuasively, and teaches them to think critically. This confidence helps our learners to become better students and improve their skills; then, later in the future, they become successful professionals if they develop such skills; if there are problems with their professions and personal aspects, they know how to address or solve such issues, and that is why the researcher wants to introduce the Socratic method strategies to help the learner to become effective and globally competitive in the future.

Scholle (2020) cited that the Socratic method remains in use today. Because it helps develop critical thinking skills, and it forces students to be prepared and attentive.

The Socratic method fosters critical thinking skills by teaching students how to pinpoint the weak points in an argument. Once they can identify what makes an argument weak, they can then strategize the argument at a higher level. By teaching students to respond to questions quickly, it prepares them for a judge's rapid-fire questioning. Being forced always to be prepared and attentive teaches students the importance of accountability. It is also used to help arouse curiosity in students. Encouraging them to think in different ways about various subjects prompts them to wonder how things could be different.

Additionally, it transitions from a passive experience to a participatory one. The advantages of the Socratic method include developing active learning and listening skills, promoting critical thinking skills, Learning how to be challenged, and understanding how to respond when challenged. Discovering how to examine issues in-depth.

These advantages help them improve their performance and prepare for their future careers in Accountancy, Business, and Management.

METHODOLOGY

This study employed a quasi-experimental design, in which a pretest and post-test were administered to determine the effectiveness of the strategy or intervention used by the researcher to improve learners' performance.

In Quasi-experimental research, units are assigned to either an experimental group or a treatment group. The treatment group, also known as the experimental group or the group using the Socratic method, receives the treatment being studied by the researcher. The control group, on the other hand, does not receive any treatment at all. The participants in this study were the Grade 12 ABM students enrolled for the 2023–2024 academic year's first semester. The researcher distributed the research test material questionnaire twice, face-to-face, to the respondents, specifically to the ABM grade 12 learners.

RESULTS AND DISCUSSION

The level of performance of ABM Grade 12 students, the control group, and the experimental group in the pretest

Table 1 presents the performance level of the ABM Grade 12 students (control and experimental groups) in the pretest. In the Control group, there were six students, or 14.63% out of 41 students, who got a result of very good; compared to the Experimental test result, out of 41 students, there were five students, or 12.20%, who reached a level of very good; in 31-42 range score there are 28 students out of 41 students who are in the level of good, however in the experimental group, out of 41 students 85.36% of the students are in the sound level of performance. With an adequate level of performance in the control and experimental groups, 7 out of 41 students in each group are at this level. Lastly, there is no low level of performance in both the control and experimental groups. The mean scores of the control group and experimental group in the pretest are 36.88 and 38.39, respectively, indicating that the level of performance in Business

Mathematics is at a reasonable level.

Table 1. The level of performance of ABM Grade 12 students, the control group, and the experimental group in the pretest

Interval Score	Pretest (Control)	Percentage	Pretest (Experimental)	Percentage	Level of Performance
43-50	6	14.63%	5	12.20%	Very Good
31-42	28	68.29%	35	85.36%	Good
15-30	7	17.08%	1	2.44%	Enough
1-14	0	0	0	0	Low
Total	41	100%	41	100%	
Mean	36.88				Good
Mean			38.39		Good

The level of performance of ABM Grade 12 students, the Control and Experimental groups, in the post-test

Table 2 presents the performance levels of the ABM Grade 12 students (control and experimental groups) in their post-test. In the control group, there were 19 students, or 46.34% out of 41 students, who got a result of very good; compared to the experimental group result, out of 41 students there are 39 students, or 95.12% of the learners are in the level of very good; in 31-42 range score there are 19 students out of 41 students who are in a level of good, however in the experimental group, out of 41 students only two students are in the sound level of performance. With an adequate level of performance in the control group, only 3 out of 41 students achieved an adequate level of performance. The means of the students in the control and experimental groups are 41.37 and 47.47, respectively, which indicates that the level of performance in Business Mathematics subjects is at a good to excellent level.

Table 2.The level of performance of ABM Grade 12 students, the Control and Experimental groups, in the post-test

Interval Score	Pretest (Control)	Percentage	Pretest (Experimental)	Percentage	Level of Performance
43-50	19	46.34%	39	95.12%	Very Good
31-42	19	46.34%	2	4.88%	Good
15-30	3	7.32%	0		Enough

1-14	0		0		Low
Total	41	100%	41	100%	
Mean	41.37				Good
Mean			47.47		Very Good

The difference in pretest results between the lecture method and the Socratic Method technique

Table 3 shows the data of computed t statistics is 1.692, the Degree of freedom is 40, that is (41-1), and the alpha level or p Value sig. is (2-tailed) is .098, which is p>.005, since P>.05 we accept the null hypothesis saying that there is no significant difference in the performance of the control groups and experimental groups in their pretest.

Table 3. *The difference in pretest results between the lecture method and the Socratic Method technique*

Group	Mean	Mean Difference	*t*	*p*
Experimental Group	38.39	1.512	1.692	.098
Control Group	36.88			

*No significant difference was found

Difference in Post-test results between the Lecture method and the Socratic method.

Table 4 shows the data of computed t statistics is 4.039, the Degree of freedom is 40 that is (41-1), and the alpha level or p Value sig. is (2-tailed) is .000, which is p<.005, even less than P<.01, since P<.05 we reject the null hypothesis saying that there is highly difference significant in the performance of the two groups. The experimental group outperformed the control group in their post-test.

Table 4. ***What is the difference in*** **Post-test results between the Lecture method and the Socratic method?**

Group	Mean	Mean Difference	*t*	*p*
Experimental Group	47.37	4.878	4.039	.000
Control Group	42.49			

*Significant at 0.05 level
**Significant at 0.01 level

CONCLUSIONS

The data show the performance of the ABM12 class, the control group (lecture method), and the experimental group (Socratic Method strategies) during the pretest and post-test, which were analyzed. There is an increase in their scores, indicating that the Socratic method is an effective strategy.

The data show the level of performance of the ABM Grade 12 (control and experimental group) students in the pretest in Business Mathematics is at a reasonable level.

The data on the level of performance of the ABM Grade 12 (control and experimental group) students in their post-test indicates that the level of performance in Business Mathematics subjects is at a good to excellent level.

There is a highly significant difference in the performance of the two groups. The experimental group outperformed the control group in their post-test.

RECOMMENDATIONS

Thus, in the light of the foregoing findings and conclusions, the following recommendations are made:

1. School heads should support the research results to achieve the objective of quality education.
2. The other teachers may use or adopt this strategy if it applies to their chosen subjects.

3. The school may conduct regular evaluations and refinements of the action research implementation to improve student performance.
4. The school may conduct training and seminars for other teachers on the Socratic method strategy to help improve student performance.

REFERENCES

Dalim, S.F., Ishak, A.S., & Hamzah, L.M.(2022, October 7). Promoting Students' Critical Thinking through Socratic Method: Views and Challenges. https://doi.org/10.24191/ajue.v18i4.20012

Garret, E. (1998). The University of Chicago Law School. The Socratic Method. https://www.law.uchicago.edu/socratic-method

Miller, R. (2021, November 11). Edutopia. Using the Socratic Method of teaching in your Classroom. https://www.edutopia.org/article/using-socratic-method-your-classroom/

Llego, M. A. (2022, September 14). 21st-Century Learning: What It Is and Why It Is Important. TeacherPH. Retrieved September 14, 2022 from, https://www.teacherph.com/21st-century learning/

Scholle, C. (2022). Understanding the Socratic Method of Teaching. https://www.alu.edu/alublog/understanding-the-socratic-method-of-teaching/

Scholle, C. (2020, February 10). Understanding the Socratic Method of Teaching. Abraham Lincoln University. https://www.alu.edu/alublog/understanding-the-socratic-method-of-teaching

Top Hat (n.d). Socratic Method. https://tophat.com/glossary/s/socratic-method/

Voxco (n.d.). True experiment design. Type and how to conduct. www.voxco.com