International Journal of Academic Pedagogical Research (IJAPR)
ISSN: 2643-9123
Vol. 9 Issue 5 May - 2025, Pages: 98-102

Effectiveness Of Group Investigation And Lecture-Based Instruction And Learners' Performance

Edchel A. Jabien,

Master of Arts in Teaching major in Social Studies, Valencia Colleges (Bukidnon) Inc., Valencia City, Bukidnon, April 2025.

Abstract: *This study aimed to find out the effectiveness of Group investigation, Lecture-based instruction, and Combined strategies in learning social studies specifically among the ninth-grade Junior High School Students in three Schools of Manolo Fortich District IV for the Third grading period Calendar year 2024-2025. Specifically, it sought to examine the effectiveness of group investigation, lecture-based instruction, and the combination of both strategies in the class. To find out the performance of having group investigation and lecture-based instruction, or in employing both strategies in a class. And to analyze whether students can perform well in one single approach. This study utilized the quasi-experimental research. The statistical instrument being used in this study is the tests assessments pre-test-post-test design. To see if there's a noticeable difference between the three groups, this kind of assessment is used to measures a person's grasp of a subject in academic exams. In this study, the t-test equality of means is applied to compare the mean scores before and after the intervention for three different instructional methods: Group Investigation, Lecture-based Instruction, and a Combination of both strategies. The Group Investigation method led to an improvement in student performance, but the change was not statistically significant, indicating that the observed improvement could be due to random variation rather than the instructional method itself. The findings revealed that student's performance in Group Investigation showed a positive change in student performance, but it was not statistically significant. While in Lecture-based Instruction and Combination of both Strategies, both showed a decrease in student performance, but these changes were also not statistically significant. It is also highly recommended that teachers may provide a variety of activities to help students reach their full potential and involve them in different roles to show leadership, encouraging active participation in the teaching-learning process. School principals may encourage teachers to share their classroom best practices during Learning Action Cell (LAC) sessions, fostering a collaborative environment where effective strategies are exchanged and adopted by the entire group. DepEd officials can award certificates of merit to teachers whose best practices are shared with other schools or districts, thereby encouraging all teachers in the field to adopt and implement these effective strategies. Lastly, Educational policymakers and curriculum designers may consider these findings when developing educational standards and curricula.*

Keywords: *Group investigation, Lecture-based instruction, Teaching Strategies*

1. Thesis Statement

In the last ten years, the Social Studies curriculum has undergone significant transformations in both its content and teaching methodologies. This multifaceted subject encompasses a broad spectrum of societal issues and is informed by various academic disciplines, including history, geography, political science, economics, demography, anthropology, and sociology. Moreover, there exists a widening disconnect between the curriculum and students' perceptions and comprehension levels. As a result, it is crucial for Social Studies educators to develop proficiency in their instructional approaches to effectively engage students. The teaching and learning process incorporates various methods and strategies that promote meaningful learning through the application of diverse techniques Sivakuvar,(2018). However, the selection and organization of resources to enable students to develop a critical understanding of society is a challenging task.

In Education Group Investigation has been introduced as an organizational approach that allows a class to work actively and collaboratively in small groups and enables students to take an active role in determining their own learning goals and processes. On the other hand, Lecture-based instruction is one of the most common teaching methods in the field of education, especially in teaching the Social Studies disciplines such as History, Geography, Economics, Contemporary Issues, and the like. The students perceived didactic lectures as the least effective method. Teaching methods that encourage self-directed learning can effectively deliver core knowledge leading to increased learning.

The researcher has observed that students are having difficulties in effectively learning the different social studies skills across the social studies disciplines. In recent years, teachers have started using new methods to teach students. Instead of just giving lots of information, teachers now help students find knowledge, think about information, solve problems, and try different ways to handle issues. One new method is called cooperative learning through group investigation. In cooperative learning, students work together in groups to solve problems related to a specific goal. The teacher puts students into groups based on what they need, what interests them, how they like to learn, and their

abilities. For the group to do well, everyone needs to work together and contribute to reaching the goal.

Lecture-based Instruction is a common teaching approach in the Philippines. It is the primary method used to teach students, as noted by Kaur in 2011. In this approach, teachers provide information, and students mainly listen and absorb the content. This makes the teacher's task simpler because it focuses more on organizing the material rather than how to deliver it, as stated by Bligh in 2000 and Charlton in 2006. Additionally, this method is cost-effective and particularly suitable for large classes, fitting well with the educational settings in the Philippines.

In the field of Social Studies in the Philippines context, it is observed that students tend to get low grades across the Social Studies discipline in Junior High School, from the seventh grade until the tenth grade. Students are having difficulties with how to read maps, use the globe, state, and locate directions, and the researcher finds it a problem that needs to be addressed so that students can learn effectively acquire social studies skills, and earn high grades in the discipline.

Despite all the interventions, seminars, and workshops given by the Department of Education to all its constituents that encourage and allow all teachers to be creative and effective in teaching, there exists a problem. Therefore, this study focuses on the effectiveness of Group Investigation, one of the many methods/techniques of cooperative learning and Lecture-based Instruction, on students' concept mastery and transfer performance in learning the Social Studies disciplines in Junior High School students.

2. Review of the Literature and Theoretical Framework

Mastropieri and Scruggs (1997) claim that the teaching method empowers students to actively participate in directing and regulating group discussions. According to Millman (1981), Villavicencio (2006), and Zulueta (2004), a good teacher is regarded as the most crucial component of the learning environment for students. The teacher's effectiveness as a teacher can be influenced by the teaching strategy, they employ Ahmann and Glock, (1975). Therefore, to have a more comprehensive assessment of teaching performance, it may also be necessary to evaluate the teaching strategy (Taylor and Frye, 1992).

According to Revathi, Elavarasi, and Saravanan (2019), the main goal of instruction is to use innovative practices that serve as a means of advancing both the institution's and the student's interests. Additionally, they emphasized the value of creativity and innovation in the classroom, which benefits both students and teachers. Innovative teaching strategies not only enhance the educational system but also assist students in reaching their objectives.

According to Mynbayeva, Sadvakassova, and Akshalova (2017), teachers must actively employ innovative teaching techniques in the modern classroom. The more teaching strategies and techniques a teacher employs, the more engaging and varied the classes are, the more it stimulates students' cognitive activity, shapes the experience of solving unconventional problems, encourages in-depth training, and facilitate the gradual integration of technology into practical activities.

Howard Gardner's (1983), theory of Multiple Intelligences suggests that intelligence is not a single, fixed attribute that can be measured solely by IQ tests. Gardner's theory emphasizes that these intelligences are not mutually exclusive but work together in complex ways. This perspective has significantly impacted education, encouraging more personalized and diverse approaches to teaching and learning.

As also been implied in the study of Kazeni, M., Baloyi, E., & Gaigher, E. (2023). The key findings highlight several challenges and implications of the Group Investigation method: Equal Competence: The study found no significant difference in the overall competence in ISIS between students who participated in group investigations and those who conducted individual investigations. This suggests that group investigations may not always be more effective than individual work. Group Dynamics: Managing group dynamics was identified as a challenge. Some students dominated the discussions, while others were less engaged, leading to unequal participation and learning opportunities. Dependence on Group Members: The success of group investigations heavily depended on the collaboration and contribution of all group members. If some members were less motivated or skilled, it negatively impacted the group's overall performance.

Students can actively participate in their learning process through group investigations; they are not merely recipients of knowledge. In the classroom, it is a democratic method. This method has its roots in ancient Greece. Plato and Aristotle promoted the idea of a democratic educational system in their writings as part of the "ideal" society. Teachers like Augustine, Sir Thomas More, and John Locke have since created democratic educational models, but up until now, putting democratic practices into practice in classrooms has proven challenging (Joyce & Weil, 1996).

Educational scholars have credited Dewey with the groundbreaking work in this area. According to him, students learn in a meaningful way when they observe how knowledge is produced Simpson et al., (2005). The bulk of human knowledge can be applied in this way, according to Sharan and Sharan (1992, p. 2), who states that "Dewey's view of teaching and learning [takes] into consideration the organizational, socially interactive, motivational, and cognitive

aspects of the process of schooling." To produce knowledge and develop critical thinking skills that will benefit them as adults in democracies, Dewey believed that students should work together.

Activities that help with integration can be added to group learning strategies. Studies show that students learn more and do better when they work in cooperative groups rather than alone or in competitive settings (Leicester, Modgil, & Modgil, 2000). Cooperative learning leads to significantly improved thinking skills compared to traditional teaching, with a 1.25 improvement measure (Bennett & Rolheiser, 2001). This indicates that group investigation is more effective than traditional methods. Collaborating in group activities allows students to come up with new ideas and solutions together (Driscoll, 2005, p. 396).

Although the concept of cooperative learning has existed for many years, it has never been implemented as effectively as blended learning. Cooperative learning is the process of breaking students up into smaller groups so they can learn a new concept and support one another. This indicates that cooperative learning was based on group work through which students work with each other, having different tasks to perform or concepts to explain. The main thing emphasized is students' involvement in the learning process (Zook, 2018).

Another definition of cooperative learning is a teaching method that allows students to collaborate on a project. Sometimes students are held accountable as a group, and other times they are held accountable for their contributions to the task. According to Lewis (2019), Johnson and Johnson discovered five key advantages for effective small-group learning in the 1990s. These benefits relate to the positive interdependence that makes students feel accountable for their own and the group's efforts, the in-person interactions that foster support and encouragement among students, the individual and group accountability that demands that each student take responsibility for their learning, the social skills that are taught so that group members can cooperate, and help one another, to the individual and group accountability that demands that every student take responsibility for their education, to the social skills that are taught so that the group members can collaborate, and to the group processing that requires the group members to evaluate their own and the group's capacity for cooperation.

Cooperative learning is a teaching method beneficial for all types of students, regardless of their academic level. It supports both fast learners and those who learn at an average speed. This approach not only improves learning but also fosters respect and friendship among students from diverse backgrounds. Typically, students work in teams of four, but they can also pair up for specific tasks and then quickly regroup. Teachers can organize lessons to meet specific goals when using cooperative learning. This method lets students work independently while also collaborating in small groups, ensuring everyone in the group understands the material well (Johnson & Johnson, 2020).

As stated in the study of Klein, K., Calabrese, J., Aguiar, A., Mathew, S., Ajani, K., Almajid, R., & Aarons, J. (2023). This study evaluates the effectiveness of traditional lecture-based instruction compared to active lecture methods in higher education. The key findings highlight several implications of traditional lecture-based instruction: Passive Learning: Traditional lectures often result in passive learning, where students are less engaged and more likely to simply memorize information without fully understanding it. Limited Student Interaction: Traditional lectures do not provide sufficient opportunities for student interaction and active participation, which are crucial for developing critical thinking and problem-solving skills. One-Size-Fits-All Approach: Lectures may not address the diverse learning needs and paces of all students, leading to varying levels of understanding and retention. Dependence on Instructor: The effectiveness of lectures heavily depends on the instructor's ability to engage and motivate students, which can vary significantly.

Everyone has to attend lectures at some point in their lives. Lectures are useful for sharing basic knowledge and can be a good way to teach. However, they might not encourage students to think deeply about what matters. In nursing schools, lectures are often used for teaching. Methods that actively involve students and encourage them to learn on their own can be very effective in teaching complex ideas, leading to better learning outcomes. Some medical schools began changing their approach by introducing problem-based learning (PBL). This shift started with PBL, and now more schools are moving towards team-based learning instead of relying solely on lectures. Many students feel that traditional lectures aren't the best way to learn, but actively involving students during lectures makes learning more effective. Lectures have the advantage of teaching a large number of students at once and providing accurate information. Despite the introduction of new teaching methods, lectures remain an important educational tool. (Alaagib et. al, 2019)

The main purpose of the study is to find out and come up with a possible intervention for where learner performance and engagement are affected in learning the social studies disciplines among the Junior High School learners using the two different teaching strategies. Anchored on the main Educational Learning theory Cognitive learning theory, Behaviorism, Constructivism and Multiple Intelligences. Cognitive learning theory is about how we think and understand things. It says that our mental processes are key to learning and that both internal thoughts and external factors can influence us.

The behaviorist learning theory focuses on how our environment shapes our actions. It suggests that our behavior is learned from outside influences, not from our thoughts. The constructivist learning theory takes a different approach, saying that we learn by adding new information to what we already know. We mix new ideas with our past experiences to understand things better. In 1983, Howard Gardner introduced the Multiple Intelligences theory. He

argued that intelligence is not just one thing that can be measured with an IQ test. Instead, there are different types of intelligence, and each person has different strengths in each type. This shows that education is a personal and ever-changing journey for every individual.

3. Methodology

This study, used quasi-experimental research; the researcher randomly assigned participants to different conditions or groups, which means there may not be a traditional control group for comparison to compare the effectiveness of group investigation, lecture-based instruction, or having both in a class. This study involved eighty-one (81) ninth-grade students from three different schools of Manolo Fortich District IV, divided into three groups. The first group received traditional lecture-based instruction, while the second group engaged in group investigation, and the third group received a combination of both strategies. Before data collection, letters were administered to the respective persons for approval.

Data collection was done by using the Pretest-posttest design: Measuring participants before and after an intervention to observe changes. The analysis of data was done through hypothesis testing by comparing the three different groups to see if there are significant differences. This often involves calculating p-values to assess the likelihood that the results occurred by chance.

Complete Enumeration: Rather than selecting a small sample from each group, this method involves gathering information from every individual in each group. This ensures that the data is comprehensive and covers all members within the categories being studied. This means that every individual in the defined strata is included in the study.

Multiple choice tests were used to measure specific variables, such as cognitive abilities, skills, or knowledge. The respondents have only chosen their answers from the given choices. These tests can be administered to the three different groups to compare outcomes and determine the effectiveness of different instructional methods or treatments. The test questionnaire was adopted from the third quarter examination by the Department of Education Division of Bukidnon grade 9 Araling Panlipunan (Ekonomiks).

Upon the approval by the committee, the researcher requested permission from the principals of three schools: Guilang-guilang Integrated School, Santiago Integrated School, and Maluko National High School. These schools are part of Manolo Fortich District IV in Manolo Fortich, Bukidnon. The researcher needed the principals' permission to carry out the study in these locations. Before gathering data, the approved letter was presented to the school principal and teachers of the school, and the respondents signed an approval to participate in the study.

The researcher personally approached the respondents during their free time. The test assessments used by the researcher were stated in Filipino language. Data collection took place during the second semester of the school year 2024-2025.

Letter addressed to the Schools Division Superintendent where the study is to be conducted. In the letter, it was specified where the researcher will conduct the study and what school will participate in it.

Letter addressed to the School Principal where the study is to be conducted. Informed consent will be given to the respondents and considered to be confidential. Before data collection respondents were sent an invitation to participate in the research. A primer on the research objectives and the estimated length of time to complete the survey was included in the invitation.

Full consent was obtained from the chosen schools before the start of any data collection.

This study used the Raw Score Comparison to Calculate Gain Scores: Subtract the pre-test score from the post-test score for each participant to determine the change in performance. Analyze Gain Scores: Use statistical tests like paired samples t-tests to determine if the mean gain score is significantly different from zero. This scoring procedure is also used in the study by Kwok E., et. al. (2002) entitled "Measuring Change During Intervention Using Norm-Referenced, Standardized Measures: A Comparison of Raw Scores, Standard Scores, Age Equivalents, and Growth Scale Values From the Preschool Language Scales–Fifth Edition," compares various scoring methods, including raw scores, to measure changes in children's language skills during and after an intervention.

The statistical instrument being used in this study is tests assessments pre-test-post-test design. To see if there's a noticeable difference between the three groups, this kind of assessment is used to measures a person’s grasp of a subject in academic exams. In this study, the t-test equality of means is applied to compare the mean scores before and after the intervention for three different instructional methods: Group Investigation, Lecture-based Instruction, and a Combination of both strategies.

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The t-test results include the t-statistic, degrees of freedom (df), p-value, means before and after the intervention, mean difference, and remarks on the significance of the results. This helps in assessing whether the changes in mean scores are statistically significant or not.

4. Limitations

The study was conducted from December to February of the school year 2024 to 2025, from the three district schools of Manolo Fortich District IV namely Guilang-guilang Integrated School, Santiago Integrated School, and Maluko National High School. Two of these schools were located in the hinterlands while one of these schools is located along the highway of Maluko, Manolo Fortich, Bukidnon.

The respondents were grade 9 Junior High School learners who are currently enrolled in the three schools of Manolo Fortich District IV, students from Guilang-guilang Integrated School, Santiago Integrated School, and Maluko National High School. The students coming from this school were coming from different sitios, students with different family backgrounds and upbringings.

5. Results

The following results were revealed in this study:

The Group Investigation strategy led to an improvement in student performance, but the change was not statistically significant, indicating that the observed improvement could be due to random variation rather than the instructional method itself.

While, Lecture-based Instruction strategy resulted in a slight decrease in student performance, but this change was not statistically significant, suggesting that the decrease could be due to random variation rather than the instructional method. The Combined Strategy also resulted in a decrease in student performance, but like the other methods, this change was not statistically significant, indicating that the decrease could be due to random variation rather than the instructional method.

In this study, the differences in means before and after the interventions for all three instructional strategies (Group Investigation, Lecture-based Instruction, and Combined Strategy) are not statistically significant, as indicated by p-values greater than 0.05. This indicates that none of the instructional strategies led to a significant change in the measured outcomes.

The student's performance in Group Investigation showed a positive change in student performance, but it was not statistically significant. While in Lecture-based Instruction and Combined Strategy, both showed a decrease in student performance, but these changes were also not statistically significant.

6. Conclusion and Recommendation

In light of the findings presented in this study, the following conclusions have been drawn:

There were changes in students' performance across the different instructional strategies, none of these changes were statistically significant. This means that we cannot confidently say that any of the instructional methods had been effective on student performance based on this data.

The lack of statistically significant results across all three instructional strategies implies that none of the methods had been effective on student performance within the context of this study. This could be due to several reasons, such as: The sample size might not have been large enough to detect significant differences. The duration of the interventions might have been too short to observe substantial changes. Other external factors (e.g., student motivation, prior knowledge, external support) might have influenced the outcomes.

Based on the findings and conclusions, to gain more conclusive insights, future studies could consider:

To the Learners, they may engage and get involved in different activities inside the class, may it be lecture-based or group investigation to improve their performance in the class.

Teachers may provide a variety of activities to help students reach their full potential and involve them in different roles to show leadership, encouraging active participation in the teaching-learning process.

School principals may encourage teachers to share their classroom best practices during Learning Action Cell (LAC) sessions, fostering a collaborative environment where effective strategies are exchanged and adopted by the entire group.

DepEd officials can award certificates of merit to teachers whose best practices are shared with other schools or districts, thereby encouraging all teachers in the field to adopt and implement these effective strategies.

Educational policymakers and curriculum designers may consider these findings when developing educational standards and curricula.