

Full Length Research

The Effect of Group Work Strategy on Students Achievement

Ahlam Aljohani

University of West Alabama, United States of America

Author's E-mail: Aljohania@uwa.edu

Author Note

Ahlam Aljohani, School of Graduate Studies, Master of Elementary Education and Teaching, University of West Alabama. This proposal was written as part of the graduate course ED-504, Techniques of Education Research, under the Guidance of Dr. Kevin Jones.

Accepted 25th December, 2017.

The purpose of this research study is to answer the following question: Does using of group work strategy effect higher achievement scores? With the transformation of modern development of teaching methods, an urgent need for trained teachers appeared on the use of a variety of different strategies of teaching methods, so when teachers design education methods, they must think to the way that student group is taken as a hub of learning, such as research projects. Sixty female students ranging in age from 11-12 will be haphazardly selected. Sixty students will be from sixth grade, and they will part into two groups. The experimental group will be together and do group work by researching one subject daily for three months, while the comparison group will complete their research by themselves. The researcher will utilize a quantitative methodology with a randomized control group, pre-test\ post-test experimental research design. Participants will have done a test while they will be in a group The score will let the researcher to determined the student's achievement level before whenthey were in traditional class and after the study when they will do group work.

Keywords: Group Work, Increase, Achievement.

INTRODUCTION

According to Frykedal and Chiriac (2014), "Group work is a teaching strategy that promotes academic achievement and socialization" (p.222). Recently, teachers and educators have realized the importance of working in groups and how that plays an important role in the development of communication skills of learners and sows the seeds of cooperation and creates a team spirit they have.

this study evaluates the impact of group work on students' achievement. Some teachers tend to use traditional methods in a classroom without insurance of delivering the idea or concern for the improvement of the student's mind. Thus, students will be not active and will misunderstand, which will result at the end poor outcomes.

Problem to Be Investigated

To explore the issue of whether students are sufficiently prepared to engage in group work strategy,

Purpose of the Study

The motivation behind this study is to find whether using a group work strategy affects students' achievement in the classroom. If working in a group will

motivate students' achievement, then it will consider an appropriate strategy that can teachers follow to help students achieve their goals and shorten their distances and save their time.

Justification of the Study

Modern education needs to change the traditional pattern in the education process and find the type or alternative types adapted to scientific development. Moreover, it requires methods that have a significant effect on the same information to make them easy to understand and have an impact on the student's minds to make them think deeper and more thoughtfully. Moreover, according to Fung, Dennis (2014), "group work strategies were found to be effective in the teaching intervention" (p.45). In other words, group work is the most effective way that teachers can use it to treat the problems that their students are suffering from.

Additionally, according to C-P. Lin, W. Chen, S.-J. Yang, W. Xie and C.-C. Lin (2013), "working in a group could deepen and expand one's thinking as the participants could access to a diversity of ideas proposed by others" (p.75). To be more specific, the group work is a way to exchange experiences and knowledge, which means that, when a student meets a number of classmates to be a group work, each one of them can benefit from his/her classmate. They learn from each other and benefit sharing the skills and knowledge in the context of the mutual feelings of love and friendship.

Therefore, the student's score will be better than before. By using group work, social skills and spirit of working within a team will be developed. Working in groups will cause students to socially love their classmate and interact with them and to gain social skills seeks through its interaction with other classmates and engage in that experience, the student will not work then alone because of his knowledge of the value of group work and its benefits.

Research Question and Hypothesis

This research will endeavor to answer the question: Does using the group work affects students' achievement in the classroom? This study will work with the hypothesis that students doing group work through learning will perform better than who being in a traditional setting and do not be in the group. This hypothesis suggests an association between the dependent variable higher achievement scores as reflected in course grade – and the independent variable is the group work strategy.

Definition of Term Used

Constitutive definition. The following definitions were acquired from <http://www.merriam-webster.com>.

- Group work is defined as a number of people who are connected by some shared activity, interest, or quality.
- Increase is defined as to make (something) larger or greater in size, in amount, in number, etc.
- Achievement is defined as something that has been done or achieved through effort: a result of hard work.

Operational definition. The following definitions are illustrations of activities or procedures utilized as a part of the study.

- Group work refers to the experiment group that the teacher has randomly assigned. They will be together by going to the library and conducting a research about a specific topic. Then they will discuss the research.
- Achievement will be measured by a pre-test and post-test. The test will be given to two groups: an experiment group and a control group. Upon finishing of the experiment, the increase in the student's achievement

from pre-test to post-test will be arrived at the midpoint of both groups. A comparison will be to determine if group work influenced higher or lower scores.

Overview of the Study

Working with the hypothesis that students who do group work in the classroom will participate and achieve higher scores than those who do not do group work and they will be in the traditional classroom. The study will have a random sample of 60 female fourth-grade students from Skyland Elementary School during the 2016 \ 2017 school year. Sixty female students, fourth-grade will take a pre-test prior the research period. The pre-test will show the student's score and their participation after they read a new book and take a test on it while they have been in a traditional class. The group will be randomly assigned in two groups with thirty students in each group. One group will be together and do group work, and they will observe one subject for thirty minutes per day in the library. This group would be the experiment group. The other group will be as a traditional class, which means every student will research alone without helping or being into a group work with other students. Teachers would have a responsibility to give students the subject and ask them to research about it in the library then they have to meet each other to discuss what they have found; this will be

during the three months research period.

At the end of the study period, both groups will be given the post-test which is similar to the pre-test, but the experimental group will be as group work, which means they will read the book together and answer the test. The outcomes of the post-tests of the experimental group will compare to the outcomes of the comparison group to determine whether being in a group work and helping each other improve the students' achievement.

Background and Review of the Literature

Several studies have been done to establish the effect of group work on students' academic performance. This paper examines the background and literature on students' group work and looks at the directly related studies done and tangentially related studies. It is a continuation of research on the topic "The effects of group work on students' achievement."

Theory

Group work on students is aimed at fulfilling the old adages that "two heads are better than one" and "more hands make work lighter." Because groups bring together students with diverse backgrounds, it is important to acknowledge that diversity is a source of knowledge and experience to members. Working in a group is the latest method of instruction that moves away from the traditional individual participation. Traditionally, teaching was done through lectures in a classroom environment that had little student interactions with the teacher (Sellitto, 2011). It was a passive, teacher-centered method that initially assumed that the minds of the student were empty, and they had to be filled with expert information transfer from the lecturer who was an expert. Evaluation of the students understanding of

the subject matter was done through sit-in tests or examinations that were taken from essential resources used in class work. This model of pedagogy had its pros and cons. In the classroom setting of the method, students could receive formal education and learned to focus on the subject fully (Davies, 2009). However, the cons of the system are that the learning involved rote learning which required students to memorize what they had been taught without understanding the subject. The key objective of learning was to sit and pass tests that involved descriptions that were all that mattered. The system was less engaging and with less attention from the students that had little interaction with their classmates or the lecturer.

The benefits of group work on students are many and help in achieving active participation and attainment

of good grades, unlike the traditional method (Burke, 2011). The students develop skills that are instrumental to the individual or group and those that improve their collaborative efforts. Individually or as a group, the student can break complex tasks into steps or stages, plan and manage time appropriately, and develop a refined understanding of the subject matter through deep discussions and explanations. The group members can assess their performance, challenge assumptions or theories, and develop strong communication and interpersonal skills (Davies, 2009). These are critical benefits for the group work on students when developing individual skills. On the collaborative efforts, group work in helping students tackle complex problems that they could not handle on their own, the students learn the aspect of delegating roles and responsibilities, and it is an opportunity to share diverse cultural or individual perspectives. The method is fundamental in pooling knowledge and skills together thus helping participation and achievement of better results, giving room to the students to hold one another accountable, and giving students moral support and encouragement to take risks and learn. The diversities in the group will help develop new approaches to resolving differences, establish a shared identity and find peers to emulate.

Studies Directly Related

A critical analysis of research studies done on the same topic extracts relevant information that helps to answer the research question "Does group work help students achieve better results?" The findings and conclusions of the previous studies provide the direction of the research and have helped the researcher identify the effects of group work on students' achievement of better grades.

Martin Davies (2009) looks at group work as a form of assessment in tertiary institutions. In his research, he addresses the common problems associated with group work and recommends their solutions. Some of the issues the author talks about are "free riding", the "sucker effect", ethnic diversity, and the social dilemma problems that lead to conflicting demands between self-interest and altruism.

The author outlines the models of effective group work and makes suggestions on how group work tasks can be implemented. He acknowledges that additive, conjunctive, discretionary, and disjunctive tasks are the most suitable to group works for students. Martin looks at the group work issues related to task complexity and recognition in effort and group size. Davies (2009) appreciates that group work helps students to participate actively in the assigned tasks and concludes his research by providing recommendations on how to maximize the advantages of group work.

A research study by Sellitto (2011) identified and documented the benefits that students expect to achieve as a result of participating in group work activities. He classifies the benefits as experiential, personal, and skills related. He posits that experiential benefits are holistic in nature that shapes the student persona that allows him to derive elements of socialization, role playing, and active learning. The personal benefit enables the student to develop an independent identity and enhances his collaboration, resource, and time management skills. The process of group work participation refines his leadership and conflict resolution capabilities. Sellitto (2011) accepts that group work helps students become versatile members of the community and is good for practical skills and not theoretical sessions.

Alison Burke (2011) in his research note that employers in the present world want to employ college graduates who have developed teamwork skills through group work participation. He posits that group work is useful to students and teachers although some students do like that method of instruction. Burke (2011) gives an overview of the preferences and hindrances of working with a group. He further discusses the techniques accessible to upgrade group learning and communication. He concludes his study by stating that students who participate in collaborative learning get good grades, are more satisfied with their education and like being in college to attend to the assigned tasks.

Studies Tangentially Related

A research study by Hamer and O'Kefe (2013) looks at how to achieve change in students' attitudes toward group work projects. The authors have indicated that despite the many benefits that the instruction method has over the traditional teaching approach, many students dislike being assigned group work. After presentations of information on the advantages of group work to students, the authors measured the attitudes of the students after assigned group work, and they found out that they were negative. The results of the measurement indicated that the students had negative interactions that did not produce the expected positive results. Hamer and O'Keefe (2013) conclude that the negativity towards group work is in the students who are new to college, but they change their perspective when they stay longer.

Pineda, Barger and Lerner (2009) carried out a research study to explore differences in student perceptions of teamwork by US and Lithuanian students. They got a similar definition of teams and teamwork and agreed on the value of teams regarding self-development. The authors indicate that the views and perceptions of the students diverged when asked if

teamwork produces better results and if they are satisfied with teamwork activities. The authors discuss the reasons and conclude that the students from the US appreciated the fact that teamwork was instrumental in achieving better results. Pineda, Barger and Lerner (2009) want further research to be done on the same topic to establish what caused the divergent opinion.

In conclusion, it is evident from research studies that group work impacts positively on the participation of students and their overall performance in class is improved making them get better grades.

Methods

For this experiment, 60 female, fourth-grade students will be randomly selected from 120 fourth-grade students at Skyland Elementary School at the beginning of the 2016 school year. Participants will be given a waiver that must be signed by their legal guardian permitting the student to participate. Students will be guaranteed that their data will be anonymous and confidential. Additionally, students will be informed that they can drop out from the research at any time.

Description of the Research Design

The study will be a randomized pre-test/post-test control group outline. Sixty female, fourth-grade students from Skyland Elementary School will be randomly divided into two groups with 30 students each. The 60 students will finish a pre-test before the study period starts. The pre-test will show the students' scores and their cooperation after they read a new book and take a test on it while they have been in a traditional class. The first section is the experimental group, and will work as a group in a library for 30 minutes, while the other group will remain with students working on their own.

After that, teachers should introduce a topic for study (e.g. the book) and the three-month period for students to thoroughly review and discuss the subject. Afterwards, both groups will be given the post-test, which is similar to the pre-test, to assess their progress and to compare the results of these two groups. After the experiment, the researcher will give an intervention to ensure that the results are definitive. The hyper individual prediction is that fourth-grade students who do group work in the classroom will achieve higher scores than those who do not do group work and were in the traditional classroom.

Participants

The sample includes a simple randomized sample. The whole group of participants will consist of 60 out of

120 fourth-grade students in Skyland Elementary School. They are eleven to twelve-year-old female students with middle SES levels. The group of participants will consist of Asian Americans and African Americans. Males and students of all the races except African Americans and Asian American will be excluded. The experiment takes place in Tuscaloosa, Alabama. In addition, students will be identified only by numbers. Among them will be students with different learning skills (gifted, disabled).

Instrumentation

The Peer Outcomes Protocol (POP) will be used. Campbell et al. (2015) believed that POP should be designed as a recovery subscale in the Well-Being Module. This subscale will be used to assess the impact of using group work as a learning strategy on the level of students' performance/achievement. The instrument will be comprised of 10 distinct items which will need responses on a scale ranging from one to four. While responding to the questions, the students will circle the response on the scale showing the extent to which they agree or disagree with the proposition. The values will represent the qualitative responses.

Importantly, the questionnaire's wording and the contents will be changed to ensure they present relevant inquiries regarding the use of group work and the impact on student performance. The questionnaire will be used to conduct a pre-test and post-test. The students will need to complete the post-test after they have done the group work over the three-month. The score awards will be as follows:

1. After the responses are provided, scores will be awarded by hands.
2. A total figurative score will be calculated by adding all the individual values.
3. The scores for the pre-test and post-test will be documented on an Excel document and the differences in performance assessed.
4. The assessment of the differences will be based on determining the extent to which self-reported performance either improves or deteriorates after the group work and discussions in accordance to the post-test and pre-test analysis.

Campbell revealed that the instrument has a number of favorable characteristics. To start, the instrument has an internal consistency with an alpha value of 0.79, implying that it is essentially reliable. In addition, the correlation for the pre-test and post-test registers a value of 0.52, which is low because of the few items included. The author also realized that the instrument registered a correlation of 0.63 in relation to the recovery criterion scale applied the psychometric analysis in regard to the instrument. Given these

attributes, the instrument is considered reliable for the research. However, poor concentration by the participants may negatively affect the reliability of the instrument.

Procedures

The accompanying procedure are important for the success of the study. The effects of group work on student achievement will be assessed by the researcher utilizing the adapted version of the recovery subscale in the Well-Being Module of the POP questionnaire (Campbell et al., 2005). The proposed hypothesis is that forth-grade students in the traditional class will exhibit lower scores.

Data collection. Using a pre-test/post-test experimental approach, the researcher will gather data from participants. Students will finish the recovery subscale. At the beginning of the three month experimental period, students will finish the pre-test, and at the end of the three month, they will finish the post-test. The ten-item questionnaire will be scored based on the answers chosen. Only the researcher will gather and inspect the data. The researcher will utilize the data to contrast the outcomes of the pre-test/post-test of the experimental group and will compare the outcomes to the control group.

Explanation of procedures. To make the results of the experiment clear, the sample will be randomly chosen. The students will be divided randomly into two groups with thirty students each in the experimental group and the control group. The researcher will ensure students know that their participation will be confidential and no names will be utilized through the study. Students will also be told they will not be discriminated against and are welcome to ask questions. In addition, the research should inform students that they can drop out from the study whenever they want. Moreover, participants will get extra credit for participating. Students would be given an object, selected by lecturer, which they must study, and they must take the pre-test and the post-test.

As long as both groups' working strategy is different, their results will be different as well. One group will work daily during a three months as a group, and students will help each other, while students in the other group will work separately. This will be done to confirm of the theory of group work benefits. Students in one group will go to a library for thirty minutes per day to research this subject. Teachers remain close to their students to provide help and answer questions about the research. While students will be learning about the topic, they also will gain some communication skills and will learn to search for and classify information. After the research is finished, students will be given the post-test,

which will provide the final conclusion of this experiment. The researcher will compare the results and determine whether the final goal was achieved. If the students from the experimental group have better results than those from the control group, the hypothesis will be confirmed.

Teachers are to treat students as equals to their peers and show no favoritism. Students must be aware that as long as the aim of this research is to evaluate their own knowledge, no help from the teacher is allowed. However, there might be some exceptions, which are described below.

Ethical considerations. All of the participants should be treated equally and be allowed equal conditions in order not to put anyone in an awkward position. This is important because participants of this study will be children, and they are quite vulnerable to the different forms of injustice.

In addition, the teacher must make sure that children get along. From both the moral and scientific points of view, there must be a friendly atmosphere during the study. Conflicts could make students unwilling to participate.

As in every experiment, this one could have some disadvantages. The researcher has to be prepared to fix any harm from this research. One potential negative effect is that students of the control group may feel academically and socially inferior, which could damage their self-esteem. The researcher must talk to the class and explain that both groups are equal in their skills, and both groups are important to the experiment.

In addition, some students chosen for the control group may not be able to process the given material. This can lead to stress, which is harmful for health. In this situation the researcher must recognize such students and offer aid. However, this concern must not to be shown in public to avoid creating favoritism or the perception of favoritism.

Some students of the experimental group may not be ready for teamwork. They might stay away from their classmates, which could definitely harm their psyche and relationships with peers. The researcher must help such students become a part of the team and encourage them to make friends with other participants.

During group work, if several leaders emerge, some students may feel undermined and too self-conscious to speak up to seek aid. In order to do this, the tasks of different team members should be clearly identified so that every student has equal participation in the project.

Internal Validity. Of course, the whole experiment depends on the students themselves. There are no clear results of this research without observing the situation from the inside. Students will communicate with each other, for example, threatening the purity of the experiment. Other potential limitations include the following:

Subject Characteristics are a threat because of the difference in IQ level of the participants, their awareness in the researching subject, socioeconomic status. It is possible to aid such students and explain that everyone must be treated equally. This may help some students become cleverer and make friends with them.

Testing may lead to the practice effect. The pre-test should be given to both groups at the same time to make sure that both groups experience equal conditions.

Historical events at school or after school may affect students' willingness to study this subject. To avoid that, staff should document any event and its effect on students. Both groups should experience the same events, so they do not influence students' final results.

Subject attitude can influence students' scoring. Considering that participants will remain students, they deserve special equal attention. Both groups should have free time when they do not have to focus on their studies. The researcher will give affirmations in the study by utilizing random sampling, painstakingly outlining usage, selecting a proper instrument, and managing threats quickly.

External validity. The results of this study will be generalized to all fourth-grade students in Skyland Elementary School System as this a local experiment. Since the conditions are equal for everyone, other schools could take part in this experiment. Unfortunately, the results cannot be generalized to all of the schools because the test group is so small.

According to this information, one could make the following conclusion about the benefits of a system that involves group work. Group work can provide different schools with quality system, which would guarantee the exceptional understanding of a specific topic.

Every school will be able to participate in such an experiment. Teachers could predict the usefulness of this method.

Overall, the goal of group work is to make each individual stronger in his or her own position. Each member understands that he is associated with others in such a way that one cannot succeed while others do not do their job. Participants will together learn what they can better use individually in the future.

REFERENCES

- Chiriac, K. F. (2014). Group Work Management in the Classroom. *Scandinavian Journal of Educational Research*, 28(2), 222–234.
- Fung, D. (2014). Promoting critical thinking through effective group work: Attaching intervention for Hong Kong primary school students. *International Journal of Educational Research*, 66, 45-62.

- Lin, C. C. (2013). Exploring students' learning effectiveness and attitude in Group Scribbles-supported collaborative reading activities: A study in the primary classroom. *Journal of Computer Assisted Learning*, 30(1), 68-81.
- Burke, A. (2011). Group work: how to use groups effectively. *The Journal of Effective Teaching*, 11(2), 87-95.
- Davies, W. M. (2009). Group work as a form of assessment: common problems and recommended solutions. *Higher Education*, 58(4), 563-584.
- Hamer, L. O., and O'Keefe, R. D. (2013). Achieving Change in Students' Attitudes Toward Group Projects by Teaching Group Skills. *Journal of Higher Education Theory and Practice*, 13(2), 25-33.
- Pineda, R. C., Barger, B., and Lerner, L. D. (2009). Exploring differences in student perceptions of teamwork: the case of US and Lithuanian students. *Journal of International Business and Cultural Studies*, 1, 1.
- Sellitto, C. (2011). Capabilities Associated with University Group-work Activities: Experiential Benefits, Personal Attributes and Practically-acquired Skills. *The International Journal of Learning*, 18(1), 401-410.
- Campbell, E., Meddings, S, Guglietti, S., Lambe, H., Locks, L., Byrne, D. and Whittington, A. (2015). From Service User to Student: The Benefits of Recovery College. *Clinical Psychology Forum*.

Appendix A
Permission to Conduct Research

Skyland Elementary School
Lindsay Jone, Principle
Tuscaloosa, AL 35405

January 1, 2016

Dr. Sara Admes, Superintendent
XYZ County Board of Education
Tuscaloosa, AL 35405

Dear Dr. Admes,

I would like to conduct a study using fourth-grade students at Skyland Elementary School. The study proposes to research the effects of group work for fourth-grade female students on student achievement. The results of this study will improve the educational practice of teachers and directly impact the student' scores. The study will take

place from January 15, 2016 to April 15, 2016. It will be conducted by me, Ms. Ahlam Aljohani, School of Graduate Studies, Student in Masters of Elementary Education and Teaching, University of West Alabama.

I feel that this research study is a very worthwhile endeavor for your students and school. Please review the enclosed information in order to make a decision concerning your school's ability to conduct this research. A consent form has been included.

Sincerely,

Ahlam Aljohani

Appendix B

Consent Form

Ahlam Aljohani

The University of West Alabama

Research Proposal Title: The Effects of Group Work on Student Achievement

- 1. What is the purpose of the study?** The purpose of this study is to examine the effect of group work on improving student achievement.
- 2. How was I chosen?** All participants of the study are randomly chosen.
- 3. What will be involved in participating?** Participants may have to invest the same measure of energy and time as in regular schools. In other words, participants are requested that partake in a study that includes assessing level of achievements through the use of group work.
- 4. Who will know what I say?** The name of the participants and their addresses will have stayed confidential. Nothing will be emerged through the study period.
- 5. What risks and benefits are associated with participation?** The risk connected with cooperating in this study is lowered the student's score. While the advantage connected with cooperating in this study is the likelihood of higher student's score.
- 6. What are my rights as a respondent?** You may ask any questions regarding the research, and they will be answered fully. Your participation in the study is voluntary; you may withdraw at any time.
- 7. What will be published?** Following the completion of this research proposal, I plan to maintain my records for use in future publications and scholarly presentations. I plan to publish my findings as articles in professional journals with the ultimate goal of publishing a book or a chapter in a book.
- 8. If I want more information, whom can I contact about the study?** This study has been approved by the University of West Alabama's Internal Review Board for the Protection of Human Subjects. This board can be contacted through the office of Mrs. Patricia Pratt. In addition, my research advisor, [Dr. Kevin Jones](#), can be contacted at [205-652-3635](tel:205-652-3635).

Ahlam Aljohani Project Director

Respondent's signature, date

Appendix C

AUTHORIZATION FOR A MINOR TO SERVE

AS A SUBJECT IN RESEARCH

I authorize the service of _____ as a subject in the research investigation entitled: Effects of Group Work on Students Achievement.

The nature and general purpose of the research procedure and the known risks have been explained to me. I understand that _____

(name of minor)

will be given a preservice explanation of the research, and that he/she may decline to serve. Further, I understand that he/she may terminate his/her service in this research at any time he/she so desires.

I understand the known risks are the possibility of reading scores not increasing or being given behavior modification when it is not needed.

I also understand that it is not possible to identify all potential risks in an experimental procedure, and I believe that reasonable safeguards have been taken to minimize both the known and the potential but unknown risks.

I agree further to indemnify and hold harmless the University of West Alabama and its agents and employees from any and all liability, actions, or causes of actions that may accrue to the subject minor as a result of his/her activities for which this consent is granted.

Witness _____ Signed _____
(parent or guardian)

Date _____

Appendix D

Adapted version of the Recovery subscale of the Wellbeing Module of the POP.

“Peer Outcomes Protocol (POP): Questionnaire” by Campbell et al. (2005).

	Disagree	Somewhat Disagree	Somewhat Agree	Agree
1. In general, I am satisfied with my advancement towards my grades.	1	2	3	4
2. I often know if I am doing great with my grades.	1	2	3	3
I have trust that I will improve in the school.	1	2	3	4
3. I understand what the study involves for me.	1	2	3	4
4. I trust that self-improvement in my life is possible..	1	2	3	4
5. I am making positive improvements throughout my life.	1	2	3	4
6. If I am having emotional issues, I able to handle that.	1	2	3	4
7. I feel comfortable talking to people in this project.	1	2	3	4
8. This project gives me hope that I will enhance my grades.	1	2	3	4
9. I am open to discussing about work issues with my classmates in this project.	1.	2	3	4
10. This project helps me to understand what improvement can I be able to accomplish.	1	2	3	4