The Impact of Collaboration and Communication on Academic Achievement and Satisfaction
By: Derek Lewinski
Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Education
May 2021
Graduate Program in Education

Table of Contents

List of Figures	iv
Abstract	v.
I. Introduction	1
Statement of Problem	2
Hypothesis	2
Operational Definitions	2
II. Review of the Literature	4
Defining Communication, Collaboration, and Academic Self-Efficacy in a School	4
Setting	
Academic Benefits to Students	5
Collaboration and Student Self-Efficacy	8
Factors which Hinder and Foster Classroom Collaboration	9
Reflecting on Collaboration	11
Conclusion	12
III. Methods	13
Design	13
Participants	13

Instrument	14
Procedures	14
IV. Results	16
Analysis of the Data	16
Section 1: Academic Achievement Results	16
Section 2: Academic Self-Efficacy Scores	17
Conclusions of the Data	18
V. Discussion	19
Threats to Validity	19
Discussion of the Similarities and Differences between the Findings of this Study and Related Research	20
Summary, Conclusions, and Directions for Future Research	21
References	22
Appendix	24

List of Figures

1. Figure 1: Average Assessment Scores when Working Collaboratively versus Independently	16
2. Figure 2: Average Self-Efficacy Scores when Working Collaboratively versus Independently	17
паерепаенну	17

Abstract

The purpose of this study was to determine whether collaborative learning has a positive impact on academic achievement and self-efficacy. The researcher hypothesized that students given the opportunity to work collaboratively on lessons leading up to an assessment would achieve higher scores on average than students who worked independently and report higher levels of academic self-efficacy. The design of this study was a counterbalanced repeated measures design in which every student in the sample had social studies assessment score and self-efficacy score when working alone as well as a score for working with others. It was found that collaborative learning increased students' academic achievement and self-efficacy scores. Due to the challenges presented by distance learning and COVID-19, it is advised that research should be replicated to ensure that similar results would be found when traditional schooling is back in session.

CHAPTER I

INTRODUCTION

Collaborative learning is an important aspect of the learning process. As reported by Gaudet and associates (2010), collaborative learning helps improve a student's academic performance, as well as his or her self-efficacy. Carefully implemented collaborative learning experiences are essential in developing communication skills, building student confidence, and helping students comprehend and retain important information (Dobao, 2012). Providing students an opportunity to work with one another is beneficial to students of all ability levels. It gives students who have a grasp on the content a chance to reinforce his or her understanding and it provides struggling students an opportunity to learn the content in a different way from that which the teacher presented. Collaborative learning gives students an opportunity to discuss content with someone who speaks in a way they are better equipped to comprehend (Dobao). Students are much more comfortable discussing the concepts they do not understand with a peer, and because of this, it is more likely that a student will get the help they need to understand the content, which will in-turn, increase a student's self-efficacy. Self-efficacy is an important aspect of the classroom. The more confident a student is in his or her learning and ability to grasp a concept, the better that student's academic achievement will be (Usher, 2009).

This researcher became interested in discovering more about the impact collaborative learning experiences and independent learning experiences have on students' achievement and self-efficacy in his role as a sixth-grade social studies teacher. He observed that students became more engaged and desired to learn if they were able to work collaboratively and develop higher levels of self-efficacy.

Statement of Problem

Within an average American classroom, it is likely that a teacher will have anywhere from 25 to 35 students. Each of these students brings different challenges such as varying amounts of prior knowledge, different learning styles, and various levels of academic achievement, maturity, and social skills. Despite a teacher's best efforts, it may be challenging to implement lessons in a way that meets each individual student's needs and preferred learning styles. Collaborative learning is one technique, that when used effectively, can benefit most students in a class. Research has demonstrated that collaborative learning provides benefits such as better exam scores (Gaudet, 2012), improved grammar and syntax (Dobao, 2012), and can make it easier for students to formulate ideas and opinions (Zhu, 2012). This action research sought to establish a relationship between collaborative learning and its impact on students' academic achievement and satisfaction with a class in which the students were enrolled.

Hypothesis

This study focused on the difference collaborative learning experiences and independent learning experiences have on students in terms of student achievement and self-efficacy. It was hypothesized that when students are given opportunities to work collaboratively, especially on new content, students will perform better academically, as well as exhibit a greater level of self-efficacy.

Operational Definitions

Independent variable: in this study, the independent variable was the type, level, and frequency of opportunities for students to engage in communication and collaborative learning.Dependent variable: the dependent variable in this study was the impact on learning and self-efficacy.

Collaborative Learning: when two or more people work together to learn a concept by combining one another's resources and skills.

Independent Learning: learning that is done by an individual without supervision. Independent learning puts responsibility for the comprehension and learning of a concept on the individual.

Self-Efficacy: is the extent to which an individual believes he or she can complete a task, or in the classroom, his or her ability to learn new concepts.

Student Achievement: the measurement of how much content a student learns. Student achievement is typically measured by a student's ability to master specific goals or standards.

CHAPTER II

LITERATURE REVIEW

This literature review explores the impact communication and collaboration have on students' academic success and self-efficacy. This literature review is presented in five different sections. The first section defines communication and collaboration in addition to explaining what is meant by self-efficacy. In the second and third sections, the academic and social-emotional benefits of student collaboration are highlighted. Factors that could hinder or foster student collaboration are identified in the fourth section. The final section of this literature review explores student perceptions of group work and its value to learning. The final section also provides ways in which teachers can collect data to help them reflect on teaching.

Defining Communication, Collaboration, and Academic Self-Efficacy in a School Setting

Communication is the exchange of thoughts or ideas through either verbal or non-verbal means. In the classroom, clear and concise communication is essential to delivering effective lessons. Collaboration occurs when two or more individuals come together to complete a task or assignment. When communication and collaboration are used in a meaningful way in the classroom, there many benefits result. Research such as that reported by Zhu (2012) suggests shows that learning in a collaborative setting with peers improves overall individual performance.

There are numerous ways to incorporate collaboration within the classroom; however, studies suggest that not all types of collaboration are equally effective. Andres' (2006) research suggests that communication done through technology as opposed to that provided in-person can impact the overall effectiveness of groupwide discussion and learning. Due to the Covid-19 pandemic and the distance learning mandates, this finding is of particular interest to the current

my study, because it highlights a limitation to this study. Collaboration does not happen on command, and because of the hinderance distance learning presents to collaboration, those educators who employ this strategy must be strategic in how they engage their students in collaboration.

Student academic self-efficacy is an important and often overlooked element of academic achievement. In short, academic self-efficacy is the extent to which individuals views their academic ability. A student's self-efficacy plays a role in student engagement and motivation. If students do not believe that they can perform a desired task to a teacher's expectations, their motivation to perform the task may be reduced or eliminated (Usher, 2009). For educators to be successful, it is essential that students have a strong sense of academic self-efficacy. Studies indicate that collaboration and peer-to-peer learning can have a positive impact on academic self-efficacy and academic performance (Usher, 2009; Bouw, 2015; Dobao, 2012; Gaudet, 2010). Student self-efficacy regarding a specific course is important to increasing student engagement and learning, but opportunities to collaborate with peers is not the only factor that affects student self-efficacy. Factors such as teacher expectations, workload, the relevance of lessons, and the way a teacher talks or interacts with the students all can play a role in impacting self-efficacy. The greater the level of self-efficacy a student has with a class, the more likely that student is to perform at a higher-level for that class.

Academic Benefits to Students

Research such as that reported by Gaudet in 2010 indicates that providing students with the opportunity to collaborate with one another has a positive impact on academic performance. Because each student has different strengths and weaknesses, collaboration provides a way for students to collectively use individual strengths to enhance the learning experience for the entire

group. In a study conducted on a fourth-year neurobiology course, students who participated in small group learning scored significantly better than students in the same course who did not participate in small group learning (Gaudet et al., 2010). A common misconception about groupwork is that it benefits lower-performing students more than higher-performing students. Researchers at the University of British Columbia discovered that small group learning improved test scores for low-performing students and the highest performing students (Gaudet et al.). Academic scores aside, small group collaborative assignments enhance student decision-making and problem-solving abilities (Williamson-Ashe & Ericksen, 2017).

In another study conducted at the California Northstate University College of Pharmacy, findings revealed that using a more collaborative approach to teaching, such as team-based learning, is valuable to learning process. Of the 30 students participating in the study, 24 students felt as though team-based learning improved self-directed learning skills (Bouw et al., 2015). Self-directed learning is an important skill for students to have if they are to become successful, independent learners. At the end of this study, 96.7% of the students surveyed stated that they felt as though they were able to achieve the student learning outcomes (Bouw et al.). This finding is supported by the average course grade and score on the final exam in this course. On average students scored 91% on the final exam, ranging from 82%-100%, and an overall course average of 91% (Bouw et al.). These findings are important because they reinforce the notion that collaborative learning fosters greater academic achievement.

Working collaboratively increases academic achievement because students prefer to learn from their peers. Research done by Thompson (2009) indicates that students prefer leaning from peers over a teacher because of "access, availability, and shared context". This shared context is important because it allows students to better help one another because of shared experiences

(Thompson). By working collaboratively students can put new concepts into terms that are more understandable for one another. When peers learn from one another, self-efficacy increases as well. Research done by Scharmann (1995) indicates that collaborative learning, regardless of the way students are grouped is effective in increasing student self-efficacy. After running four tests following collaborative learning, Scharmann provided evidence that whether the collaborative grouping was heterogeneous, random, or student selected, students reported increased levels of self-efficacy.

Collaborative work also plays an important role in helping students develop key writing skills. Research by Dobao (2012) indicated that written assignments done in pairs results in dramatically more accurate responses. When students worked in small group to complete a written assignment, the results were even more impressive. Groups working collaboratively on a written assignment constructed responses with fewer errors per word. (Dobao). Without the opportunity to collaborate with others, students are more likely to have grammatical and lexical errors than students who do collaborate with others. When working in small groups, students pay more attention to language and as a result, are better able to solve language-related problems than those not working small groups (Dobao).

It is important to make note that the degree to which students collaborate has some implications in academic performance. In one study conducted between Chinese students and Flemish students taking identical courses, there was some correlation found between student achievement and collaboration. In this study, the Flemish students posted nearly twice as many messages per student in the asynchronous group discussions (Zhu, 2012). At the conclusion of the study, Flemish students overall, scored better than the Chinese students who completed the same assignments but were less collaborative (Zhu).

Collaboration and Student Self-Efficacy

In addition to boosting academic achievement, research such as that reported by Zhu in 2012 indicates that collaboration can significantly impact student self-efficacy with a class. Self-efficacy with a class is important because it influences how much a student will engage in lessons and the amount of effort that will be put forth. The greater the level of self-efficacy a student has with a class, the more likely that student is to be engaged, participate in class, and put forth maximum effort as reflected in the study involving 30 students from the California Northstate University College of Pharmacy reported by (Bouw et al., 2015). At the end of a course designed around team-based learning, 50% of the students surveyed agreed that they would recommend the class to other pharmacy students, and the other 50% strongly agreed that they would recommend the class (Bouw et al.). These findings indicate that students find collaborative team-based learning to be beneficial.

Collaborative group learning increases student self-efficacy with a class and gives students a more positive attitude towards learning. When asked to discuss a small group learning experience conducted in a college science class, student responses to the question "What is/was positive, beneficial, or valuable about working in a group environment?" suggested that group learning is useful to the learning experience (Gaudet et al., 2010). Student responses to this question suggested that students learned more through group learning, gained a broader understanding of concepts by hearing other perspectives, felt more motivated when working with peers, and enjoyed the friendships that developed from group learning (Gaudet et al.). One of the most challenging tasks educators face is finding ways to keep students engaged in the learning process. Getting students talking through collaboration is an effective way to increase student engagement.

The focus of school for many people, is the attainment of knowledge; however, social-emotional health has become a hot topic over the last decade. Strong, healthy friendships can serve as a safeguard against poor social-emotional health. While a teacher cannot make students become friends, he or she may encourage the development of friendships through collaborative work. In one study, researchers studied first year examination scores of 163 students. This study suggests that successful students had a larger social network of friends. In the study, 108 of the 163 students passed with a score of 4.0 or higher and the other 55 students failed the exam (Schmidt, 2020). When researchers examined friendships, they found that successful students were named more frequently as positive interactions with partners than those who failed. (Schmidt). These findings suggest that the probability of academic success is greater in students who have a large social network of friends.

Factors Which Hinder and Foster Classroom Collaboration

In the classroom, meaningful, effective collaboration rarely happens spontaneously. If teachers want meaningful collaboration to happen, there are certain factors to be aware of which could hinder or foster classroom collaboration. Initially, it is important to identify the factors which need to be present to ensure that collaboration is meaningful. These factors include peers having a shared goal, effective communication, individual accountability, being interdependent of one another, and having joint rewards (Szewkis et al., 2011).

One of the most persistent problems with collaborative work is that one or two students usually do most of the work while other students either wait to be told what to do or just copy answers. To avoid this situation, it is important that a teacher creates a shared goal for the students which requires groups to work collectively to accomplish the goal. Studies suggest that when students are given something unique that they must contribute for a group to accomplish a

goal, collaboration is more likely to occur (Szewkis et al., 2011). Individual accountability is an important factor that influences the effectiveness of group work. This is especially important for students who are not internally motivated. If a student believes that he or she will get a good grade regardless of whether or not that student participates in, it is likely that student may opt out of the collaboration process if the student is not internally motivated.

Collaboration does not always have to follow as sequence such as place students in a group, have students talk about a problem, have students research the problem, and have students come up with a solution to the problem. This type of collaboration is useful, but again, it provides ways for students to "fade to the back" and allow other group members to provide all the answers. One strategy that research suggests improves collaboration and increases student achievement is "silent collaboration." In this type of collaboration, students compare their ideas to those of their classmates (Szewkis et al., 2011). With silent collaboration, students develop ideas before comparing their ideas to that of others in the group. By using this collaboration technique, researchers found that students engaging in silent collaboration academically outperformed students engaging in verbal collaboration (Szewkis et al.).

Verbal behaviors of teachers and students are an often-overlooked factor in the collaborative learning setting. The words teachers use, and the way things are said impact the overall learning experience for students. When teachers use more facilitative learning behaviors, students engage in positive behaviors which benefit the learning of group members (Gillies, 2006). These findings suggest that the way a teacher speaks to his or her students will impact how effectively students are able to collaboratively work together. Gillies examined cooperative groups and group-work only groups completing the same task. The findings of this research suggest that group-work only groups have far more interruptions (twice as many in this study)

than cooperative groups (Gillies). Similarly, cooperative groups in this research recorded twice as many task related interactions (Gillies).

Reflecting on Collaboration

Students who have been asked to reflect on collaborative learning experiences have acknowledged its value to learning. Williamson-Ashe and Erickson (2017) conducted a study using reflective questioning to assess how students perceive group work and its value to learning. Students acknowledged that working collaboratively in a group helps in learning effective problem-solving skills and that it is an effective way to learn (Willamson-Ashe & Erickson). Being able to work collaboratively with peers is an important life skill for all humans to develop, and group work is one-way teachers can help foster this skill. Through reflective questioning, Williamson-Ashe and Erickson conclude that students believe collaborative work increases student success, is a rewarding experience, and is an important skill to have as a professional which will help grow and maintain effective relationships.

It is important that teachers reflect on their teaching to ensure collaboration is both present and effective. Student surveys or questionnaires offer a simple option to assist in reflecting and assessing teaching. Distributing surveys with questions that use a 1-5 scale of strongly agree to strongly disagree is one way for educators to collect data to assist with reflection tasks. Students may be reluctant to write lengthy responses, so keeping written responses to a minimum or optional is suggested. Asking questions such as "there are a lot of opportunities to work with my peers," "working with my peers is important to my success," "working in groups is a waste of time," "I am able to learn more when I am able to work with peers" will provide teachers with feedback on the frequency of collaboration and whether collaborative work is effective. For students to obtain the benefits of collaborative work, the

work it needs to be more than just getting in groups and completing a worksheet. If students respond that there are many opportunities to work with peers but also feel it is a waste of time, their teachers will know that they need to change the way collaborative work is conducted.

Conclusion

Research such as that cited above indicates that collaboration and peer-learning is a useful, effective, and well supported way to enhance student learning, academic achievement, and help students develop key skills needed for adulthood such as problem-solving and critical thinking. Educators need to be aware that working in partners or in small groups does not ensure that the benefits of collaboration will be present. Lessons using collaboration or small group learning need to be carefully planned and implemented. Educators must ensure that there is individual accountability, a shared goal, and that expectations are clear. Building a classroom that collaborates effectively takes time, dedication, and much reflection.

Chapter III

METHODS

Design

The purpose of this study was to find the impact that collaboration with peers has on students' academic success and self-efficacy. The design of this study was a counterbalanced repeated measure design.

In this study, every student in the sample had a score for working alone, as well as working with others for each dependent variable. Academic success was assessed by comparing student scores on different assignments both with and without collaboration. The assignments were different in terms of knowledge being assessed but were the same in terms of how the attainment of knowledge was demonstrated. For the first assessment, one group worked collaboratively on the assignment leading up to it, while the other group worked independently. The collaborative group worked in pairs before moving on to small group discussion. After having time to work in small groups, the class engaged in a whole group discussion of the assignment. The groups that worked independently had a short whole group discussion at the end of the assignment to check for understanding, but they were not given the opportunity to discuss and work with peers. On the second assessment, the group that worked collaboratively worked independently, and the group that worked independently worked collaboratively. Academic self-efficacy was assessed through surveys using a Likert Scale ranging from 1 to 5. Students completed the survey twice, once after working independently and once after working collaboratively.

Participants

The participants in the study included 51 middle school children enrolled in Harford County Public Schools, Maryland. The students ranged in age from 11 to 12 years. Study

participants were very diverse. Thirty of the students were female, while 21 of the students were male. Of the 51 participants, 27 were Caucasian, 21 were African American, and three identified as being two or more races. Participants included 36 students who were on the Free and Reduced Meals plan. Despite the diverse make-up of the participants, academically the two classes were similar. Average scores on standardized tests in math and reading were separated by 52 and 41 points, respectively. The overall Grade Point Average (GPA) of the two classes fell within four percentage points, with one class averaging 82.3% and the other class averaging 78.1%. Both classes performed at a level which met current state and district standards.

Instrument

There were two separate instruments utilized in this study, one that measured academic success and one that measured self-efficacy. To measure academic success, the researcher administered two parallel assessments to each participant. These assessments were both district assessments developed to assess student mastery of a both content topics and specific skills such as analytical and critical thinking skills. The titles of these assessments were "SS GR6 U5 Skill Source E" and "SS GR6 U5 Skill Source F." Both assessments were similar in nature, using a combination of recall questions, short response questions, and an open-ended critical thinking question. Both assessments were centered around economic content. The first assessment focused on the economic system capitalism, while the second assessment focused on the economic system communism.

Procedures

To collect data on the learning impact of the intervention, test results were collected from two formative assessments. In this study, there were two separate sets of data for each group. Each group would have had a lesson the students worked on both collaboratively and

independently. While the lesson topics were different, the formative assessments were of the same structure/scoring method. In the first assessment, one group worked collaboratively on the lesson leading up to the assessment, while the other group worked independently. In the second assessment, the group that worked collaboratively on the lesson leading up to the assessment worked independently while the group that worked independently worked collaboratively. The results of these assessments then were compared two different ways. The researcher compared the scores of the first and second assessments against each other, and then compared the scores of the assessments between each group's first and second assessment.

To assess self-efficacy students completed a Likert scale following the completion of both assessments. The questions on the Likert scale had students reflect on study habits, test results, getting help, and working collaboratively. Scores compiled from these assessments were used to determine overall levels of self-efficacy among the two groups.

CHAPTER IV

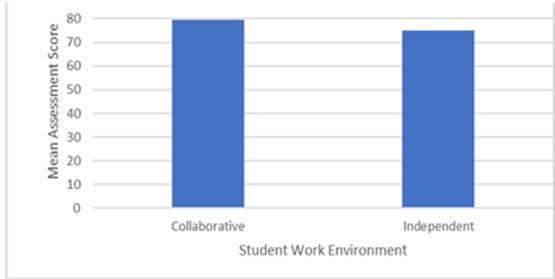
RESULTS

Analysis of the Data

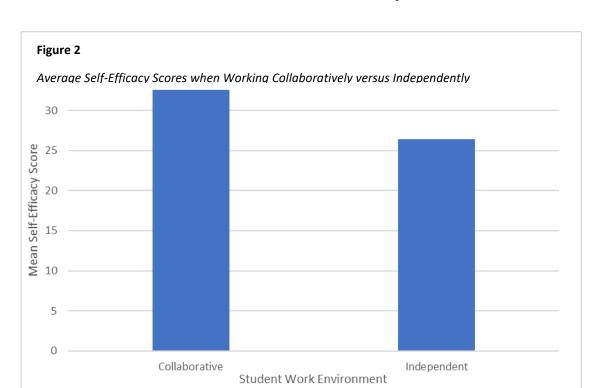
This study examined the impact that collaborative learning had on middle school students' achievement in Social Studies and their academic self-efficacy. This study compared two different assessment scores from two different groups. In the tables below, the results of the dependent samples *t*-tests for differences between collaborative and independent work environments for both the assessment scores and self-efficacy are presented. The two hypotheses of the study were as follows: 1) Academic Assessment Scores will be higher when students work collaboratively than when they work independently; 2) Self efficacy scores will be higher for when students work collaboratively than when they work independently.

Section 1: Academic Achievement Results





A dependent groups t-test revealed that there was a statistically significant difference in assessment scores between when students worked collaboratively (M = 79.55, SD = 12.18, n = 51), as compared to when they worked independently (M = 74.94, SD = 14.31, n = 51), with weak effect size, t(50) = 1.87, p < .05, d = .35. On average there was a 4.6-point difference, as depicted in Figure 1.



Section 2: Academic Self-Efficacy Scores

A dependent groups t-test revealed that there was a statistically significant difference in academic self-efficacy scores between when students worked collaboratively (M = 32.55, SD = 4.48, n = 51), as compared to when they worked independently (M = 26.39, SD = 5.88, n = 51), with strong effect size, t(50) = 7.07, p < .05, d = 1.18. On average there was a 6.1-point difference, as depicted in Figure 2.

Conclusions of the Data

The results of the data collected indicated that collaborative learning had a significant impact on participants' academic achievement and self-efficacy. On average, there was a 4.6 positive difference in points after students worked-collaboratively as opposed to when they worked independently. As for self-efficacy, there was a 6.1-point positive difference in students' self-efficacy scores when working collaboratively as compared to when they were working independently.

CHAPTER V

DISCUSSION

This study examined the impact collaborative learning has on the academic achievement and self-efficacy of middle school students enrolled in a social studies class in a public school in Harford County, Maryland. The results of the data collected indicated that collaborative learning had a significant impact on academic achievement and self-efficacy of students participating in the study.

Threats to Validity

The timing of this study presented threats to its validity. The novel Corona Virus, Covid19, put the sample group in this study in an entirely new learning environment. Covid-19 brought about extensive use of distance learning which has been used infrequently in the public-school setting. As discussed above, distance learning in a public-school setting is a learning experience conducted virtually with the students learning remotely from home or at a district sanctioned internet location. While collaborative learning did take place during this study, it is not the same type of collaborative learning that would have taken place during in-person learning. While many groups participating in the study took the opportunity to verbally communicate with one another, there were groups that almost exclusively used the chat feature in Microsoft Teams to communicate. Students' reluctance to have full on discussions could have hampered the effectiveness of the collaborative learning experience.

The degree to which students were able to be observed during both the lessons and the assessments also offered a threat to the validity of this study. Without any independent means to monitor the students taking the assessments, there was no way to be certain there was not some

degree of inappropriate communication, whether it involved students communicating with one another during the assessment or students using Google to help locate responses to questions.

Use of the Likert scale also presented a threat to the validity of this study. With the participants of this study ranging from 11 to 12 years old, it is difficult to state with confidence that the questions on the Likert scale were fully understood by the students. It is also impossible to ascertain how candid or consistent the students were in completing the survey. A student who had a challenging morning may have taken the survey with a more negative attitude and thus answered the questions in a manner that did not accurately reflect how he or she felt. It also is possible that the 1-5 scale of this Likert survey created inconsistencies in students because of interpretation by the students, which could have resulted in skewed data.

Discussion of the Similarities and Differences between the

Findings of this Study and Related Research

The findings of this study and those discussed in Chapter II of this study were very similar. The research results reported above and those presented in this study both concluded that working collaboratively yields higher academic achievement and greater levels of academic self-efficacy. Research conducted by Dobao (2012) indicated that students who work collaboratively produce more accurate and well written responses. Student responses in this study were on average 3.6 sentences longer when there were collaborative learning experiences leading up to the assessment. Just as discussed in research studies described in Chapter II, results from this study suggest that academic achievement and written expression both benefit from collaborative learning experiences. The findings of this study and studies reported in Chapter II also revealed similar results when examining self-efficacy. For example, the study reported by Bouw et al.,

(2015) indicated that students believed that team-based learning improved his or her overall learning. Both that study and the current research provide evidence that collaborative learning results in improved levels of academic self-efficacy. There were no notable differences between the findings of these studies.

Summary, Conclusions, and Directions for Future Research

This study highlighted the impact collaboratively learning has on students' academic success and academic self-efficacy. Implications for future research suggest that the inclusion of a broader participant sample may provide more insight into the impact of collaborative learning. Future researchers might apply the same procedures to all the participants' classes. In this study, the results were based upon two social studies classes. If a researcher were to compare the impact collaboration has on achievement and self-efficacy in all classes, it may help create a more accurate picture of the impact.

Extending the length of the research in future studies would be beneficial as well.

Comparing multiple sets of scores from collaborative and independent learning also would create a more accurate set of results. This procedure would help to eliminate outlier data such as students who happened to not understand the information being covered or perhaps missed days to collaborate due to illness or some other circumstance.

In summary, the research reported in this study indicated that collaborative learning results in greater academic achievement and higher levels of academic self-efficacy than independent work. Collaborative learning is an effective tool in helping students learn and succeed. However, teachers must ensure that lessons are truly collaborative in nature and that students are working constructively.

References

- Andres, H. P. (2006). The impact of communication medium on virtual team group process. *Information Resources Management Journal*, 19(2), 1-17. doi:10.4018/irmj.2006040101
- Bouw, J. W., Gupta, V., & Hincapie, A. L. (2015). Assessment of students' satisfaction with a student-led team-based learning course. *Journal of Educational Evaluation for Health Professions*, 12, 23. doi:10.3352/jeehp.2015.12.23
- Dobao, A. F. (2012). Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing*, 21(1), 40-58. doi:10.1016/j.jslw.2011.12.002
- Gaudet, A. D., Ramer, L. M., Nakonechny, J., Cragg, J. J., & Ramer, M. S. (2010). Small-group learning in an upper-level university biology class enhances academic performance and student attitudes toward group work. *PLoS ONE*, *5*(12). doi:10.1371/journal.pone.0015821
- Gillies, R. M. (2006). Teachers' and students' verbal behaviours during cooperative and small-group learning. *British Journal of Educational Psychology*, 76(2), 271-287. doi:10.1348/000709905x52337
- Scharmann, L., & Hampton, C. (1995). Cooperative Learning and Preservice Elementary

 Teacher Science Self-Efficacy. Journal of Science Teacher Education, 6(3), 125-133.

 Retrieved April 14, 2021, from http://www.jstor.org/stable/43156035
- Schmidt, S. J. (2020). The importance of friendships for academic success. *Journal of Food Science Education*, 19(1), 2-5. doi:10.1111/1541-4329.12176

- Szewkis, E., Nussbaum, M., Rosen, T., Abalos, J., Denardin, F., Caballero, D., . . . Alcoholado, C. (2011). Collaboration within large groups in the classroom. *International Journal of Computer-Supported Collaborative Learning*, 6(4), 561-575. doi:10.1007/s11412-011-9123-y
- Thompson, B., & Mazer, J. P. (2009). College student ratings of student academic support frequency, importance, and modes of communication. *Communication Education*, *58*(3), 433-458. doi:10.1080/03634520902930440
- Usher, E. L. (2009). Sources of middle SCHOOL Students' self-efficacy in Mathematics: A qualitative investigation. *American Educational Research Journal*, 46(1), 275-314. doi:10.3102/0002831208324517
- Williamson-Ashe, S. R., & Ericksen, K. S. (2017). Social work student perceptions of group

 Work and the presence of value themes that correspond to group work success. *Journal of*Social Work Values and Ethics, 14(2), 43–53.
- Zhu, C. (2012). Student satisfaction, performance, and knowledge construction in online collaborative learning. *Journal of Educational Technology & Society*, 15(1), 127-136.
 Retrieved October 12, 2020, from http://www.jstor.org/stable/jeductechsoci.15.1.127

Appendix

Social Studies GR6 U5 Skill Source E

Source E:

<u>Perspective #1</u> Adam Smith was a Scottish professor who strongly believed in the idea of a free economy. In this passage from his book *The Wealth of Nations (1776)*, Adam Smith discusses his law of self-interest.

"The natural desire of every individual is to improve his own condition. For example, it is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own self-interest. We address ourselves, not to their humanity but to their self-love."

Adam Smith, The Wealth of Nations

Base	ed on Source E, explain what Adam Smith means by, "The natural desire of ev
	vidual is to improve his own condition?"
	•
_	
Base	ed on Source E, which of the following economic theories would <u>Adam Smith</u> suppo
Base	ed on Source E, which of the following economic theories would <u>Adam Smith</u> support
	Communism
A.	Communism Socialism Imperialism
A. B.	Communism Socialism
A. B. C. D.	Communism Socialism Imperialism

Source F:

<u>Perspective #2</u> Karl Marx and Friedrich Engels were two radical thinkers from Germany. They argued that certain economic systems cause social inequality. They wrote the *Communist Manifesto (1848)* to express their ideas on society.

"Above all, [the government]...will have to take control of industry and of all branches of production out of the hands of...competing individuals, and instead institute a system as a whole, that is for the common good, according to a common plan, and with the participation of all members of society. It will... abolish [eliminate] competition....Private property must therefore be abolished."

Friedrich Engels, Principles of Communism

Perspective #3

"The modern bourgeois (middle class) society...has not done away with class antagonisms (hatred between groups of people). It has but established new forms of struggle in place of the old ones. Modern industry has converted the little workshop of the patriarchal (male) master into the great factory of the industrial capitalist. Masses of laborers, crowded into the factory, are organized like soldiers.... They are slaves of the machine and the manufacturer. Instead of rising as industry progresses, they sink deeper and deeper into poverty...."

"Owing to the use of machinery and to division of labor, the work of the proletarians (worker class) has lost all individual character, and consequently, all charm for the workmen. He becomes [a limb] of the machine, and it is only the most simple, most monotonous (boring), and most easily acquired knack (skill or ability), that is required of him."

Excerpts from the Communist Manifesto Friederich Engels and Karl Marx

1.	on Source D, who controls the means of production and property in a <u>communist</u> n?		
		Α.	Government
		В.	Consumers
		C.	Producers
		D.	Middle Class
2.		Accor	ding to Source D, what happens to "competition" in a <u>communist system</u> ?
		A.	Competition is encouraged in a communist system
		B.	Competition is valued in a communist system
		C.	Competition is eliminated in a communist system
		D.	Competition is acceptable in a communist system
	3.		on Source D, how does the bourgeoisie exploit (take advantage of) the arians?
	4.	Based	on what you know about Capitalism. Why do you think America would not want
		an eco	nomic system like Communism to spread?

Self Efficacy Scale

Self-Efficacy Questionnaire for Children (SEQ-C)

		1 Not at all	2	3	4	5 Very well
1.	How well can you get teachers to help you when you get stuck on schoolwork?	0	0	0	0	0
2.	How well can you express your opinions	0	0	0	0	0
3.	when other classmates disagree with you? How well do you succeed in cheering yourself	0	0	0	0	0
	up when an unpleasant event has happened?	0	0	0	0	0
4.	How well can you study when there are other interesting things to do?	0	0	0	0	0
5.	How well do you succeed in becoming calm again when you are very scared?	0	0	0	0	0
6.		_				
7.	children? How well can you study a chapter for a test?	0	8	0	8	0
8.	How well can you have a chat with an					_
9	unfamiliar person? How well can you prevent to become	0	0	0	0	0
	nervous?	0	0	0	0	0
10.	How well do you succeed in finishing all your homework every day?	0	0	0	0	0
11.	How well can you work in harmony with your classmates?	0	0	0	0	0
12.	How well can you control your feelings?	ŏ	ŏ	ŏ	ŏ	ŏ
13.	How well can you pay attention during every class?	0	0	0	0	0
14.	How well can you tell other children that they	-	-	-	-	_
15.	are doing something that you don't like? How well can you give yourself a pep-talk	0	0	0	0	0
	when you feel low?	0	0	0	0	0
16.	How well do you succeed in understanding all subjects in school?	0	0	0	0	0
17.	How well can you tell a funny event to a	0	0	0	0	0
18.	group of children? How well can you tell a friend that you don't					
19	feel well? How well do you succeed in satisfying your	0	0	0	0	0
	parents with your schoolwork?	0	0	0	0	0
20.	How well do you succeed in staying friends with other children?	0	0	0	0	0
21.	How well do you succeed in suppressing	^	0	_	_	_
22.	unpleasant thoughts? How well do you succeed in passing a test?	0	8	0	0	0
23.	How well do you succeed in preventing quarrels with other children?	0	0	0	0	0
24.	How well do you succeed in not worrying	_		_	_	
	about things that might happen?	0	0	0	0	0

Scoring

A total self-efficacy score can be obtained by summing across all items. Items 1, 4, 7, 10, 13, 16, 19, and 22 = Academic self-efficacy