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Bausman, Rachel A. ***Effect of a Cooperative Learning Environment on Students' Attitudes Relative to the Accounting Course at Blaine High School***

Abstract

There has been a call for change regarding secondary accounting curriculum by the Accounting Education Change Commission in hopes of developing active learning for students utilizing case studies in the classroom (Libby, 1991). Teachers need to enhance their conventional teaching techniques from the traditional format for students to be able to develop their critical thinking and problem-solving skills. When students can think critically, they will develop a deeper understanding of the content and will be developing the 21st century skills required in the workplace. The purpose of this study was to gain the perceptions of students' attitudes towards accounting during and after the instruction where cooperative learning strategies were implemented. Permission was obtained from 26 parents and students from one classroom at Blaine High School. A pre- and post-survey was used to compare the student perceptions and confidence after the cooperative learning, and a paired t-test was used to analyze the data. The Blaine accounting program is taught by a licensed/certified business and marketing teacher and the results of the study showed a slight increase in student confidence about completing the activities after the cooperative learning took place. The results demonstrated beneficial outcomes when cooperative learning is utilized in the classroom setting.

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Chapter I: Introduction

Career and technical education (CTE) has often been an afterthought when looking at the education system. Former U.S. Secretary of Education, Arne Duncan, spent time focusing on restructuring the CTE curriculum and pushed that educators not only focus students on college-ready, but also career-ready practices that will provide students with the "knowledge and skills that employers need from day one" (Duncan, 2011, p.1). One of the main impacts of this restructuring on CTE is that "CTE programs need to strengthen their rigor and relevance – and deliver better outcomes for students" (Duncan, 2011, p. 1). With a developing curriculum, there may be great benefit to students and CTE programs across the country, but there needs to be a strong curricular correlation among CTE students and the relevance of the curriculum.

Business and marketing education is one of the career and technical education discipline areas. In Minnesota, the marketing and business education curriculum model focuses on 10 content areas which can provide students with relevant learning experiences that will help them gain a better understanding on future careers. The content areas include: marketing, management, accounting, business law, career development, economics and personal finance, communication, entrepreneurship, information systems, and international business (Minnesota Department of Education, 2016). The course description for Accounting given by the MDE is as follows:

> Courses in this classification introduce and expand upon the fundamental accounting principles and procedures used in businesses. Content typically includes the full accounting cycle, payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students will also learn how to apply standard auditing principles and prepare budgets and final reports. Calculators, electronic spreadsheets, or other

> automated tools are usually used. Advanced topics may include elementary principles of partnership and corporate accounting and the managerial uses of control systems and the accounting process. (Minnesota Department of Education, 2016)

No part of this accounting course description aligns with utilizing collaborative and teamwork techniques in the accounting; although, the accountancy profession has changed dramatically over time. In a 2016 Salary Guide for Accounting & Finance research done by Robert Half ® one of the main attributes for accountants is a collaborative personality and strong communication abilities, both of which are not included in a description of the accounting course that many Minnesota students take (Robert Half, 2016). There was also a call for change regarding secondary accounting curriculum by the Accounting Education Change Commission in hopes of developing active learning for students utilizing case studies in the classroom (Libby, 1991). Other Accounting institutions, such as the American Institute of Certified Public Accountants have requested an increase in critical thinking along with "leverage of technology, lifelong learning, communication, leadership, and teamwork" (Wu, 2008, p. 65). Teachers need to enhance their conventional teaching techniques from the traditional format for students to be able to develop their critical thinking and problem-solving skills. When students can think critically, they will develop a deeper understanding of the content and will be developing the 21st century skills required in the workplace.

Conventional learning techniques focus on teacher-centered learning, where instructors lecture and students learn through listening. This type of strategy may not be the most effective for students to learn the 21st century skills needed in a variety of accounting professions. Utilizing the constructivism learning theory suggests that the classroom should be a more collaborative learning environment where students learn through creating their own outcomes

through the learning activities. Utilizing cooperative learning techniques may benefit students in understanding and retaining the accounting concepts presented where the teacher acts more as the facilitator than the information foundation (Duplass, 2005). Studies have shown that "active and collaborative teaching methods increase student learning" (Ralston, Tretter, & Kendall-Brown, 2017). This allows researchers to understand and implement a more collaborative learning environment in the secondary CTE classrooms.

Statement of the Problem

The business education department has a focus on continually improving and increasing student engagement and achievement in the business and marketing courses taught at Blaine High School. A recent approach at the school is to focus on incorporating a collaborate learning environment for all courses. In the Accounting course at the secondary level, it is unknown how cooperative learning impacts the students' perceptions of their engagement and attitudes toward the Accounting class. This research focused on implementing a cooperative learning approach in the Accounting I classroom and gaining perceptions of students' attitudes towards accounting during and after the instruction takes place. This study attempted to answer the following research questions:

1. To what extent did the use of cooperative learning techniques lead to changes with student attitudes towards learning Accounting?
2. How did the use of cooperative learning techniques facilitate and sustain student perceptions of engagement with the accounting classroom?

Definition of Terms

To address the research questions and gain understanding in the literature, the following terms will be used.

Accounting. Introductory business course designed to teach business fundamental concepts to high school students, such as financial statement analysis.

Attitudes. Emotions and motivations felt when working within the cooperative learning environment (Kohli, Lancellotti, & Thomas, 2017).

Conceptual understanding. Student knowledge more than facts and methods. Students can view accounting material and understand the ideas and is able to transfer knowledge and provide recommendations for a business (Twissell, 2018).

Cooperative learning. An educational approach which aims to organize classroom activities into academic and social learning experiences (Gillies, 2016).

Student engagement. Meaningful student involvement in the learning environment (Marks, 2008). Little instructional time is wasted redirecting students because they are focused and excited to learn and analyze the financial statements.

Limitations of the Study

There were some limitations to the study of cooperative learning within the Accounting I classroom. One significant limitation that could be encountered would be the academic achievement levels of the Accounting I course during the second trimester at Blaine High School. If students have not mastered the beginning concepts in the Accounting course, they may not be able to create accurate financial statements. In addition, the researcher created survey might be limited by the question design. The small sample size may also not be the best representation of the overall effectiveness of utilizing cooperative learning in a secondary Accounting classroom.

Assumptions of the Study

It was assumed that the one section of Accounting I will be taught during the second trimester of the 2018-2019 school year. It was also assumed that students understand basic accounting concepts that have been presented since the beginning of the trimester. Students utilized the information learned earlier in the course to be able to create the financial statements and interpret them to provide recommendations. It was assumed that students provided honest responses to their attitudes toward Accounting after utilizing the cooperative learning strategies.

Chapter II: Literature Review

The following literature review enhances the understanding of cooperative learning in the classroom. The different learning theories, attitude scale assessment, and overall cooperative learning techniques will be described. In addition, there was a focus on social constructivist theory utilized and how it pertains to the research study, student achievement levels in a collaborative learning environment in the accounting classroom, student attitudes toward a business collaborative learning environment, and critical thinking skills of students in a business simulated accounting classroom.

Social Constructivist Learning Theory

The theory that supported the study will be the social constructivist learning theory. This theory focuses on students learning through social interaction where students utilize "problem solving, scaffolding, and application of critical thinking skills" as they are working together on concepts (Nyikos & Hashimoto, 1997, p. 506). Social constructivism has been primarily a theory of cognitive development that shifts from the individual decision maker to the interaction between the individual and their environment to develop new meanings on the learning outcomes. The process of socializing students with others aids in the development of developing joint construction of different meanings in learning (Sivan, 1986). An instructional technique that aligns with a social constructivist theory would be cooperative learning, which allows students to work in small groups focused on enhancing student achievement through "social and interpersonal" skill development (Editors, 2014). Studies have found that students responded more enthusiastically and excitedly in the cases when utilizing the group-centered cooperative or collaborative learning approach, which correlates to utilizing the social constructivist theory

where students are learning through student-centered interactions instead of teacher-centered instruction (Vu Thu Hang, Meijer, Bulte, & Pilot, 2015).

History and Development of Cooperative Learning and Structures

Cooperative learning has been an instructional technique studied since the 1920s; however, until researchers Johnson, Johnson, and Slavin, integrated cooperative learning into the K-12 classroom in the 1960s that became a popular method for increasing student engagement. Focused on providing students with social and interpersonal skill development, cooperative learning has shown an increase in academic achievement, self-esteem, and overall attitudes toward learning when implemented correctly (Editors, 2014). This instructional technique focuses on five essential elements in the classroom: positive interdependence, face-to-face interactions, individual and group accountability, interpersonal skills, and opportunities for group processing (Johnson, Johnson, & Holubec, 1990). Researchers have found that the cooperative learning methodology may be utilized in a variety of classrooms along with subject disciplines. There has been growth in student achievement and attitudes for all student populations including students with special needs, gifted, and mainstream students (Editors, 2014).

Many instructors and researchers utilize cooperative learning in a variety of ways, but a popular cooperative learning researcher, Spencer Kagan, created definitive cooperative learning structures to efficiently produce engagement, interactions, and achievement when utilized effectively. One effective Kagan strategy noted is “Think-Pair-Share,” in this structure, students are asked a question from the instructor where they will initially think independently about the question, forming ideas of their own, pair up with a partner to discuss their thoughts, and then discuss their ideas to the entire class (Kagan, 2014). When students utilize the Think-Pair-Share structure, they can increase the kinds of personal communications necessary for students to

internally process, organize, and retain ideas (Raba, 2017). Another strategy that is utilized is called “RoundTable” this occurs when each student writes one answer as a paper and pencil are passed around the circle answering questions from the instructor. It is beneficial as it aids with practicing skills, recalling information, and working together as teams to ensure all members of the group understand the concepts (Kagan, 1989). As students utilize these cooperative structures, there has been student growth and increase in achievement if used effectively.

Achievement in Accounting with the Cooperative Learning Model

Studies done by Felder and Brent (1994) have shown that students who have been in a cooperative learning environment exhibit higher academic achievement, better understanding of course material, greater follow through to graduation, and have lower levels of anxiety and stress in a variety of classroom content areas (Felder & Brent, 1994). There has been much research comparing a collaborative learning model where students are able to work together to solve real-world problems in small teams. Along with research done at a secondary institution in Nigeria focused on the difference in achievement when students are placed in a collaborative learning setting versus a conventional learning setting. Students were placed in two random groups, one with cooperative learning and one with conventional learning, and were given a pre-test on accounting concepts, which did not show hardly any variation in the knowledge of accounting conceptual understanding (Inuwa, Abdullah, & Hassan, 2017). However, after the experiment was taken place on the 120 students, there was a twenty percent increase in post-assessment score when students were exposed to the collaborative learning approach (Inuwa et al., 2017).

Comparing both studies suggests and support that there is a significant influence when students can collaborate and problem solve as teams. Students in the Inuwa, Abdullah, and Hassan study were taught the concepts one day, and then had two days to work in their teams of

four students on the problems that were given by the instructor. Researchers found that the cooperative learning model "promoted learning interest and interactive environment which allows students to connect their ideas in solving the problems and to reason immensely about the problems" (Inuwa et al., 2017). However, with utilizing the cooperative learning model, there has been findings about changes in student attitudes. As some students find more success, there has also been a level of struggle from others when working with the cooperative learning methodology (Inuwa et al., 2017).

Attitudes and Motivation within Accounting Education

As there has been findings of the many benefits of collaborative learning, instructors have also found students are resisting the change (Burke, 2011) of incorporating cooperative learning in the classroom. Depending on the student's personality, external factors, and previous negative experiences with collaborative learning in the classroom, collaborative learning may not be the best approach for all students. Internal forces also play a role in the resistance to collaborative learning. Their resistance to cognitive development and metacognitive skills play a large role in their resistance attempts to the learning strategy. Faculty have struggled to engage students in the cooperative learning when they have low levels of self-awareness and if their perception of education and knowledge for themselves is low, they will resist the cooperative learning strategies (Tolman & Kremling, 2017).

Research done at Wageningen University in the Netherlands focused on the student perceptions of hands-on simulations in the vocational oriented setting (Khaled, Gulikers, Biemans, & Mulder, 2015). This study examined the constructivist principles of the hands-on simulations and compared the teachers rating and student perceptions of the value, authenticity, and self-directedness, along with competence development of the twenty-three simulations

presented. Analysis of the research provided results that showed the student perceptions of perceived value, authenticity and choice of how to perform the tasks were the main predictors of competence development in the simulations. Although other analysis from the students' perceptions was that instructors need to continue with the simulated learning environment because it promotes competence development (Khaled et al., 2015).

Although there was little research on collaborative or simulation-based learning in the accounting classroom and the teachers' perspectives on it, there was great research on the overall perceptions of teachers when implementing collaborative learning. A study implemented in Vietnamese classrooms identified the perceptions of both the teachers and students when collaborative learning was incorporated into the classroom. Teachers were told to get rid of the teacher-centered approach and incorporate a student-centered approach when they were learning. Out of the 40 students and teachers who were in the study overall responded positively to the collaborative model. According to the research, "40 percent of the teachers and 35 percent of the students agreed that collaborative learning was effective", while the remaining percentage did not see collaborative learning as better than the teacher-centered methods that were previously utilized, however, the majority of teachers and students did agree that collaborative learning did help in interpersonal skills (Tanh, 2011, p. 5).

Simulated Accounting Learning Environments

Research conducted by Springer and Borthick focused on introductory accounting courses and the cooperative learning approach. Students were given a hypothetical business case and were asked to work in teams to complete the "Safe Night Out" simulation. There were eight episodes that aligned with the different accounting related learning objectives from the course but in a simulated environment. Students needed to make decisions for the "Safe Night Out"

business based on the content they had learned in their course previously. The learning objectives "began with the planning phases of the business cycle… progressing to operating phases…and evaluating the results of the operations" (Springer & Borthick, 2004, p. 278). After the simulation, students responded positively to the new critical thinking skills they had obtained through the simulation. Students found they had developed higher-order thinking skills while "generating interest in the accounting major and increasing the usefulness of accounting in the minds of nonmajors" (Springer & Borthick, 2004, p. 277).

Collaborative Learning in Career and Technical Education

As one of the major components of the study was learning about the effectiveness of collaborative learning and student achievement and attitudes, it was critical to understand how other research has performed when looking at a variety of collaborative learning models in career and technical education. Research conducted by Ralston, Tretter, and Kendall-Brown (2017) focused on implementing collaborative learning in the engineering classroom. The study's primary goal was to show faculty at the University of Louisville how impactful collaborative learning was to student success (Ralston, Tretter, & Kendall-Brown, 2017). Through multiple studies in a variety of engineering courses, faculty expressed, in all cases, "overall satisfaction with the course enhanced with the student collaborative techniques…faculty noted benefits for the students as well as for themselves" (Ralston et al., 2017, p. 94).

Summary

There had been frequent findings about the positive impacts cooperative learning had on student achievement, motivation, and cognitive development in the general classroom setting, and how the social constructivist theory provides students with the opportunity to gain the skills required in the workforce. There had been little focus on how specifically students in a business

or accounting classroom will perceive the cooperative learning methods. Research had also not looked at overall student attitudes of the cooperative learning as it relates to financial statements and other accounting principles. As classrooms become more diverse with a mix of introverted and extroverted students, there needed to be more research done on how those students' attitudes toward cooperative learning and how they perceive their achievements in that type of classroom structure. Specific cooperative structures had not been researched on the most effective toward student attitudes, which was addressed in this research study.

Chapter III: Methodology

Blaine High School has initiated utilizing collaborative learning in all classrooms. It is important that students work together and develop soft skills that will be utilized in the working world. This study focused on implementing collaborative learning and the changes in students' attitudes and student engagement in the Accounting classroom through the lens of individual student perceptions. This study attempted to answer the following research questions:

1. To what extent did the use of cooperative learning techniques lead to changes with student attitudes towards learning Accounting?
2. How did the use of cooperative learning techniques facilitate and sustain student perceptions of engagement with the accounting classroom?

This chapter will include how the study will be designed, information about the sample, the data collection procedures and how data will be analyzed to aid in answering the research questions.

Design of Study

This action research study used a descriptive quantitative research design to analyze students' perceptions of their engagement and attitudes after utilizing cooperative learning strategies. Researcher developed surveys was utilized to gather students' attitudes, engagement, conceptual understanding, and skill development. A pre and post implementation survey occurred. In addition, immediately prior to and after each cooperative learning strategy on the following three topics the survey was administered: income statement, creating a balance sheet, and analyzing and interpreting financial statements.

Subject Selection and Description

The sample in this study was all students that are enrolled in the Accounting I class during trimester two for the 2018-2019 academic school year at Blaine High School, a

convenience sample as all students are already enrolled in the course. The results of the study applied to the accessible population of students that will take the Accounting I course at Blaine High School once the cooperative learning model is implemented for future trimesters. The class meets for sixty-seven minutes, five days per week. There are thirty-one students enrolled with four (12.9%) being female and twenty-seven (87.1%) male.

Instrumentation

Data collection occurred through research developed survey and the surveys were distributed through the Google Forms application to gather information regarding the students' perceptions of their engagement and attitudes before and after utilizing the cooperative learning strategies. Students were given a survey after the instructional lecture is complete on their attitudes and engagement with creating balance sheets (Appendix C), income statements (Appendix B), and interpreting the financial statements (Appendix D). The pre-cooperative learning survey consisted of selected-response questions as it created a baseline of information on each students' perceptions before the cooperative activity. Utilizing a rating of one through five-point rating scale, with one being the lowest and five being the highest allowed the subjects to analyze and respond separately pertaining to each topics (Wiersma & Jurs, Research Methods in Education, 2009). After the cooperative leaning activity was implemented, students were also be given a survey regarding the same concepts as the pre-survey. There was open-ended items included to which provided the researcher with more feedback on the effectiveness of the cooperative activities (Wiersma & Jurgs, Research Methods in Education, 2009) (see Appendix B).

Data Collection Procedures

After approval of the Institutional Review Board (IRB) at UW-Stout and students and guardians completed the informed consent documentation in order to utilize their survey responses, students began the unit on financial statements and the cooperative learning activities associated (see Appendix E). For all information to remain confidential during the study, each student was given a student number that they used as an identifier to record their survey results. After all survey results were submitted, the instructor reviewed their data and open-ended questions to gain a better understanding of the effectiveness of the cooperative learning in the Accounting classroom and provide additional guidance for students who still had not mastered the learning outcomes.

After the lecture on balance sheets, students were given a pre-cooperative learning survey based on their perceptions and attitudes toward the learning outcomes (Appendix B). This allowed to check similarities within subjects and get a baseline of where students were assessing themselves. Students then work in collaborative teams of four students which groups were assigned by the instructor. The instructor gave students financial information where students worked in their teams to complete a balance sheet. Utilizing the "Round-Robin" structure (Appendix A), each student in their group filled out a line of the balance sheet and reported out to their groups. After the balance sheets are created for each individual group, the instructor went through the balance sheet and students were able to assess the effectiveness of their group's work. Students then were given another post-cooperative learning activity survey where they answered selected-response and open-ended questions based on their perceptions and attitudes toward the cooperative structure.

Students were given a lecture on creating and interpreting income statements for a sole proprietorship. They took a similar pre-cooperative learning survey on their attitudes and perceptions about creating an income statement in Google Forms. Students were placed in their same collaborative team and utilized the "Round-Robin" cooperative structure again (Appendix A) to create their income statement. After the income statements were created for all groups, the instructor went through the income statement together where students were able to assess the effectiveness of their group's work. Students then were given a post-cooperative learning activity survey where there were both open-ended and selected-response questions for them to share their attitudes and perceptions about the activity.

During both the balance sheet and income statement lectures, students were provided with information on how to analyze and interpret both financial statements. Students were given a pre-cooperative learning survey based on their attitudes about financial statement analysis, and then did the "Think-Pair-Share" structure as they individually analyzed financial statements, partnered up, and shared ideas of how the business could be more effective (see Appendix A). The students analyzed the financial statements they completed and provided suggestions and feedback based on the information obtained. After each partnership discussed their ideas with themselves, they discussed their analysis with their group of four students. After discussion time was complete, the instructor ran a whole-class discussion on the effectiveness of the business. After the whole-class discussion, students were given a post-cooperative learning strategy which focused on the students' perceptions of the effectiveness on the cooperative activity (see Appendix C). Once all results were obtained from the participants, the instructor thanked them for completing the study and the data analysis will begin.

Data Analysis

The surveys were completed utilizing a Google Form, which was submitted into an Excel spreadsheet where data was analyzed using descriptive statistics, focusing on the paired t-test to aid in measuring the relationship between the previous student perceptions before and after the cooperative learning activities. In addition, open ended questions were analyzed by the instructor reviewing the students' opinions on the effectiveness of cooperative learning strategies for future courses by taking the students' feedback on improvements. This research was done in the auspice of action research, the instructor reflected on the experience and wrote about the overall impact of the cooperative learning to guide their own practice based on the evidence obtained from the questionnaire results and observation.

Limitations

The following limitations may affect the results of the research study:

1. The variety of academic achievement levels of the students. If students had not mastered the beginning concepts in the Accounting course, they may not be able to effectively create financial statements.
2. The small sample size of students in the Accounting I classroom.
3. The researcher developed survey was not pilot tested.

Summary

This action research study collected data on the students' perspectives and attitudes toward the Accounting course before and after the completion of cooperative learning activities. Data was collected utilizing Google Forms and analyzed utilizing a paired t-test in Microsoft Excel. The data was analyzed to evaluate the relationship between student perspectives during each of the unit lectures.

Chapter IV: Results

Chapter 4 presents the results and findings of this research study. The purpose of this study was to gain the perceptions of students' attitudes towards accounting during and after the instruction where cooperative learning strategies were implemented. The following specific research questions were used to focus the data analysis:

1. To what extent did the use of cooperative learning techniques lead to changes with student attitudes towards learning Accounting?
2. How did the use of cooperative learning techniques facilitate and sustain student perceptions of engagement with the accounting classroom?

To obtain information on the research questions being studied, students were given a pre and post survey to analyze their student perceptions on their engagement and attitudes after utilizing the cooperative learning activities in class. There were three lessons that students participated in which involved utilizing cooperative learning; creating an income statement; creating a balance sheet; and analyzing and interpreting financial statements. Student data was analyzed by comparing the pre-survey and the post-survey on students own perceptions of how the cooperative learning activity impacted their overall engagement and attitudes toward the learning objectives.

Demographics

The subjects for this study were high school students enrolled in the Accounting I course at Blaine High School during the second trimester of the 2018-2019 school year. A total of 31 students were enrolled in the 9-12 grade course. Four female and twenty-seven male students made up the population; however, the sample of 26 students that participated in the study are described in the table below:

Table 1

Grade, Gender, Business Courses Taken of Respondents

Response	Frequency	Percentage
Gender		
Male	22	84.62%
Female	4	15.38%
Year In School		
9	7	26.92%
10	3	11.54%
11	10	38.46%
12	6	23.08%
Business Course Frequency		
1	8	30.77%
2	6	23.08%
3	6	23.08%
4	2	7.69%
5	2	7.69%
6	0	0.00%
7	0	0.00%
8+	2	7.69%

Cooperative Learning and Student Attitudes toward Accounting

The first research objective sought to identify if the cooperative learning techniques led to changes in student attitudes toward Accounting. To answer this question, the researcher

administered a pre-cooperative learning survey after the formal instruction of completing an income statement, but before the cooperative learning activity took place. During the lesson, students were given formal instruction on how to create an income statement and worked through problems with the instructor on how to complete the financial statement. Students then were given the pre-survey, and were asked questions about their confidence of creating an income statement, with the responses shown below:

Table 2

Student Engagement and Income Statement Creation Pre-Survey

Item		Frequency	Percentage
I feel confident in creating an income statement when given the necessary information.			
5	Very Confident	14	53.85%
4		8	30.77%
3		3	11.54%
2		1	3.85%
1	Not Confident At All	0	0.00%

After the pre-survey was given, students were placed in groups to complete their cooperative learning activity "Round Robin" (see Appendix A). This activity included work on completing an income statement as a group where students worked line by line to complete the income statement as a team, reviewing and correcting each other's work before they began their task. Students were able to ask questions to their team as they were completing the income statement to ensure understanding of the learning targets. A paired-sample t-test was conducted

to compare the student perceptions of confidence before and after the cooperative learning activity as described below:

Table 3

Results of Paired t-test of Pre- and Post-Survey Results | Income Statements

	Pre-Survey		Post-Survey			95% CI of the Mean Difference			
Outcome	M	SD	M	SD	n	Lower	Upper	t	df
	3.96	0.92	4.04	1.20	26	0.3725	0.4852	2.0555	25

*p<0.7308.

The relationship between the pre-test and post-test scores for the Income Statement unit were investigated utilizing Microsoft Excel and a paired two-sample t-test was conducted to evaluate the impact of the cooperative learning activity on the students' confidence. There was not significant difference in the pre-survey (M=3.96, SD=0.92) and the post-survey (M=4.04, SD=1.20) results; $t(25)$=2.0555, p<0.7308. These results suggest that students had a slight increase on confidence after the cooperative learning took place. One point to note is the already high mean score of students before the cooperative learning activity took place indicates a higher level of knowledge of the fundamental Accounting concepts of creating an income statement.

Students were also asked if they believe the cooperative learning activity helped them prepare income statements more accurately, Table 4 describes their responses:

Table 4

Post-Survey: Cooperative Learning and Preparing Income Statements

Response	Frequency	Percentage
5 (Strongly Agree)	10	55.56%
4	8	44.44%
3	4	22.22%
2	3	16.67%
1 (Strongly Disagree)	2	11.11%

As the table suggests, over half of the students believed that the cooperative learning activity helped them create income states more accurately, while only two students believed it did not help them.

The next lesson focused on creating an accurate balance sheet where students were given formal instruction on the components of a balance sheet and the calculations necessary to create an accurate financial statement. Students then completed a "Work Together" activity with the instructor and were given the pre-survey on their confidence in creating an accurate balance sheet when given the necessary information. Table 5 describes the pre-survey results:

Table 5

Balance Sheet Creation Pre-Survey

Item		Frequency	Percentage
I feel confident in creating a balance sheet when given the necessary information.			
5	Very Confident	13	50.00%
4		8	30.77%
3		2	7.69%
2		3	11.54%
1	Not Confident At All	0	0.00%

After the pre-survey was given, students were placed in their cooperative learning groups to complete their "Round Robin" (Appendix A) activity where students were working together to create a balance sheet as a group. Students worked line by line to complete the balance sheet, reviewing and correcting each other's work before they began their task. Like the cooperative learning activity of creating an income statement, students could ask questions to their team as they were completing the balance sheet to ensure understanding of the learning targets. A paired-sample t-test was conducted to compare the student perceptions of confidence before and after the cooperative learning activity as described below:

Table 6

Results of Paired t-test of Pre- and Post-Survey Results | Balance Sheets

	Pre-Survey		Post-Survey			95% CI of the Mean Difference			
Outcome	M	SD	M	SD	n	Lower	Upper	t	df
	4.00	1.18	4.23	1.01	26	0.4752	0.4084	2.059	25

*p<0.397

The relationship between the pre-test and post-test scores for the Balance Sheet unit were investigated utilizing Microsoft Excel and a paired two-sample t-test was conducted to evaluate the impact of the cooperative learning activity on the students' confidence. There was not significant difference in the pre-survey (M=4.00, SD=1.18) and the post-survey (M=4.23, SD=1.01) results; $t(25)=2.059$, $p<0.397$. This information suggests that there was a slight increase in student confidence after the cooperative learning activities took place. Students were also asked if they believe the cooperative learning activity helped them create balance sheets more accurately. Table 7 review the results of that survey:

Table 7

Post-Survey: Cooperative Learning and Preparing Balance Sheets

Response	Frequency	Percentage
5 (Strongly Agree)	10	41.67%
4	4	16.67%
3	6	25.00%
2	3	12.50%
1 (Strongly Disagree)	2	8.33%

These findings suggest that over 50 percent of students agreed or strongly agreed that the cooperative learning activities allowed them to create balance sheets more accurately and aided in the mastery of learning targets.

The last lesson for the research study focused on analyzing and interpreting financial statements. After formal instruction on key "look-fors" when interpreting financial statements, students were given a pre-survey on analyzing and interpreting financial statements. Table 8 describes the results of the survey:

Table 8

Analyzing and Interpreting Financial Statements Pre-Survey

Item		Frequency	Percentage
I feel confident analyzing and interpreting financial statements when given the necessary information			
5	Very Confident	6	23.08%
4		8	30.77%
3		7	26.92%
2		4	15.38%
1	Not Confident At All	1	3.85%

Overall, students felt moderately confident in analyzing and interpreting financial statements with over 63 percent of students responding at the 4 (30.77%) or 5 (23.08%) level of confidence.

Students then continued to work in their collaborative teams where they were given both an income statement and balance sheet for a failing business. Utilizing the "Think-Pair-Share" cooperative learning activity, students individually analyzed the financial statements and

collected their thoughts, then paired up with one other student in their team to discuss their ideas on how the business could be more effective. After, students then discussed their ideas in their collaborate team of three to four students. The class came together at the end to reflect on the ideas of how to increase profits for the entire business. A paired-samples t-test was conducted to compare the student perceptions of confidence before and after the cooperative learning activity as described below:

Table 9

Results of Paired t-test of Pre- and Post-Survey Results | Financial Statement

	Pre-Survey		Post-Survey			95% CI of the Mean Difference			
Outcome	M	SD	M	SD	n	Lower	Upper	t	df
	3.56	1.09	4.26	0.88	27	0.4403	0.3571	-4.208	26

*p<0.0002

The relationship between the pre-test and post-test scores for the Analyzing and Interpreting Financial Statements unit were investigated utilizing Microsoft Excel and a paired two-sample t-test was conducted to evaluate the impact of the cooperative learning activity on the students' confidence. There was a significant difference in the pre-survey (M=3.56, SD=1.09) and the post-survey (M=4.26, SD=0.88) results; $t(25)$=-4.208, p<0.0002. This information suggests that there was an increase in student confidence after the cooperative learning activities took place.

Cooperative Learning and Student Perceptions of Engagement

The second research question focused on how the use of cooperative learning techniques facilitated and sustained student perceptions of engagement with the accounting classroom.

Students were asked questions about their engagement level in accounting before and after the cooperative learning activities with the results in Table 10 describing their responses:

Table 10

Pre-Cooperative Learning Student Engagement

Item			Frequency	Percentage
I am engaged in the content of the Accounting I Class thus far.				
	5	Very Engaged	10	38.46%
	4		10	38.46%
	3		4	15.38%
	2		2	7.69%
	1	Not Engaged At All	0	0.00%

After the cooperative learning activities took place, students were asked about their engagement again, and paired-samples t-test was conducted to compare the student perceptions of confidence before and after the cooperative learning activity as described below:

Table 11

Results of Paired t-test of Pre- and Post-Survey Results | Engagement

	Pre-Survey		Post-Survey			95% CI of the Mean Difference			
Outcome	M	SD	M	SD	n	Lower	Upper	t	df
	4.08	0.91	4.25	0.72	27	0.3672	0.2915	2.06866	26

*p<0.2566

The relationship between the pre-test and post-test scores for the engagement in Accounting perceptions were investigated utilizing Microsoft Excel and a paired two-sample t-test was conducted to evaluate the impact of the cooperative learning activity on the students' overall engagement. There was an increase in the pre-survey (M=4.08, SD=0.91) and the post-survey (M=4.25, SD=0.72) engagement levels; $t(25)$=-2.06866, p<0.2566. This information suggests that students became more engaged in the course when cooperative learning took place.

Students also were given the opportunity to respond with open ended answers after each cooperative learning activity. When reflecting on the income statement cooperative learning activity, there were common themes with student responses on both the benefits and difficulties of the cooperative learning activity that students participated in. Table 11 gives examples of responses to exemplify the themes from the Income Statement "Round Robin" activity:

Table 12

Benefits and Difficulties of Cooperative Learning – Income Statement

Question	Response
As a group member, what were the benefits of the cooperative learning activity?	"Helping each other."
	"It's more fun talking within a group and you can mitigate mistakes."
	"Work as a team and ask questions to classmates."
	"That if you have any questions someone in your group can help you."
As a group member, what were the difficulties of the cooperative learning activity?	
	"If someone has the part that you don't understand, then you aren't practicing that part."
	"Some students weren't fully engaged."
	"Struggling to keep people on task. When they were done with their part they went on their phones."

As shown above, the general theme of the benefits of cooperative learning aligned with how students were able to ask questions to their group and how working together as a group can help in the work being more fun and engaging as students are working together to solve a problem. Themes of the difficulties aligned with how some students did not remain fully engaged during the activity after they had completed their task, also that if there was a segment that a student did not understand, they were not able to practice that part to increase competency of the learning targets.

Similar to the responses after the Income Statement cooperative learning activity, students provided responses about the benefits and difficulties of the cooperative learning

activity as they were creating a Balance Sheet. Table 12 gives examples of responses to exemplify the themes from the Balance Sheet "Round Robin" activity:

Table 13

Benefits and Difficulties of Cooperative Learning – Balance Sheet

Question	Response
As a group member, what were the benefits of the cooperative learning activity?	"Learning from others around you."
	"I was able to get help."
	"To gain knowledge from your partners and exceed your learning abilities."
As a group member, what were the difficulties of the cooperative learning activity?	
	"Keeping people on task."
	"Only learning the little bit that I had."
	"Not being able to do the whole problem by yourself."

Overall, students were positive about how beneficial it is to work in their groups and gain knowledge from the partners in their teams and to get help from their peers when they needed additional guidance. When students reflected on the difficulties of the activity, they, again, noted that they were only able to practice a small part of the balance sheet creation process, along with keeping their peers on task to complete the activity effectively.

After the "Think-Pair-Share" cooperative learning activity where students were interpreting and analyzing financial statements, they provided open ended responses regarding the benefits and difficulties of the cooperative learning activity. Table 14 gives examples of

responses to exemplify the themes from the financial statement analysis "Think-Pair-Share" activity:

Table 14

Benefits and Difficulties of Cooperative Learning – Financial Statement

Question	Response
As a group member, what were the benefits of the cooperative learning activity?	"Being able to think by myself and then learn about other people's thoughts."
	"Having a conversation with my group member on the business."
	"Discussing everything as a class and learning about what other people think."
As a group member, what were the difficulties of the cooperative learning activity?	
	"Not understanding how to analyze the statement."
	"My partner wasn't engaged in the activity and did not provide many recommendations for the business."
	"My partner didn't share much information with me."

Themes that aligned with the benefits of the cooperative learning was being able to converse with their classmates and learn from their ideas on how to provide recommendations for the business. Students also enjoyed when the class brought all ideas together to have a conversation and learn from other students that were not in their group. Difficulties that students had was based on engagement and their partner's communication when asked to discuss the business as a pair. Some students did not feel that the engagement level of their partner was high enough to have a meaningful conversation about the failing business.

Chapter V: Summary, Conclusions, and Recommendations

The purpose of this study was to gain the perceptions of students' attitudes towards accounting during and after the instruction where cooperative learning strategies were implemented. More specifically, the study examined the student attitudes and engagement levels before and after cooperative learning took place, and if there were any changes in engagement and attitudes.

The basic design for this investigation involved a pre-survey and post-survey model to collect data on student attitudes and engagement toward accounting. The subjects of the study were Blaine High School students enrolled in the Accounting I course. A total of 26 students, 22 male, and 4 females participated in the study, which was conducted during the second trimester of the 2018-2019 school year.

Students completed three units in class where they created an income statement; created a balance sheet; and analyzed and interpreted financial statements and then participated in cooperative learning activities to answer the research questions that were asked. Students completed the pre-survey before the cooperative learning took place, participated in the activity, and then took a post-survey to reflect on their engagement and attitudes toward Accounting after each cooperative learning took place. The results were used to identify the student attitude and engagement levels in Accounting based on the cooperative learning activities.

Findings and Discussion

The inclusion of the cooperative learning activities provided a moderate benefit to student's engagement and attitudes toward the Accounting course. After most of the cooperative learning activities, students felt more confident in creating the necessary financial statements or interpreting the information after the cooperative learning activity took place. The increase in

confidence aligns with the literature findings on cooperative learning and the benefits it has on student confidence and success (Gillies, 2016). Students generally had a high level of understanding of the material before the cooperative learning, which lead to a high mean response for student's confidence in creating and interpreting the financial statements before the cooperative learning.

Student attitudes and engagement were recorded as well, and as suggested by previous research, students increased their engagement in the class after the cooperative learning activities (Marks, 2008). General themes of engagement were provided by students as they found benefits to the cooperative learning since they were able to ask each other for help and provide guidance to one another. Also, themes of difficulties were reflected on as students noted the challenges to keep all students engaged in the cooperative learning activities. Students with lower levels of understanding had comments that resisted cooperative learning as suggested by previous research (Tolman & Kremling, 2017). The class felt the cooperative learning added value to the course as students were given the opportunity to work together to ask more questions in their groups to understand the learning targets.

Conclusions

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

- Student confidence increased after most of the cooperative learning activities, however, students had a high level of confidence in financial statement creation before the cooperative learning took place.
- Students believed the benefits of the cooperative learning activities included being able to work together and ask questions to their teammates if they did not understand a portion of their cooperative learning task.

- Cooperative learning difficulties aligned with student engagement during the activities. Students reported that once some teammates were done with their task they did not engage with others as they were completing the activity.
- Students also were not able to practice creating the entire statement, so if they did not work on the specific part they had trouble with, it did not aid in understanding of the learning targets.
- Student engagement increases when cooperative learning structures are implemented in the Accounting I classroom.

Recommendations

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

- To maximize student confidence and attitudes in the Accounting I classroom, cooperative learning structures should be implemented when students are being introduced to new concepts throughout the entire trimester.
- Instructors need to give students specific tasks after they are done with their part of the cooperative learning to retain engagement to ensure active involvement during the activity.
- Reinforce that technological devices should not be utilized when participating in cooperative learning.
- Additional practice should be administered for students so they can practice creating the entire financial statement to ensure they understand all components.
- Increase classroom discussion topics so students are able to engage and learn from other classmates opinions about a variety of Accounting I concepts.

- Study and compare the assessment results from courses after cooperative learning has occurred.

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Appendix A: Cooperative Learning Strategies

1. RoundRobin Structure:

Exercise

- **Work Together (7-1) (7-2)**
- Cooperative Learning:
    - Students will be given information for a company where they will need to work in their groups to effectively create an income statement and balance sheets.
    - As the instructor, pose the problem (shown below), and have students work line-by-line to complete the income statement and balance sheets.
    - Review answer key at the end of the activity.

2. Think-Pair-Share

After students look at the financial statements for the business:

- **Think-Pair-Share Structure**: Allow students to think individual for 7 minutes to gather ideas for the business.
- After individual think time is complete, have students discuss with their partner for 2 minutes each on ideas for improving the business.
- After work time is complete: call on 3-5 groups to give their ideas to the whole class.
    - Look-fors:
        - Cutting expenses (advertising, salary – downsizing staff →Office Manager?)?
        - Cutting office space – they have 3 utility vans with the equipment in there?
        - Working on receiving money from Accounts Receivable?
        - Selling some equipment for more cash?
        - Any other applicable ideas..

Appendix B: Surveys

Income Statement: Pre-Cooperative Learning Survey

Directions: This survey will ask you to reflect on your attitudes and engagement in the Accounting I class thus far. Your cooperation for this study is greatly appreciated and all your answers will be anonymous. Please read the following statements carefully and answer the question using the scale provided below.

Student Number: _____

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

1. I enjoy the Accounting I course at Blaine High School thus far.

5 **4** **3** **2** **1**

2. I am engaged in the content of the Accounting I class thus far.

5 **4** **3** **2** **1**

3. What is your gender? (circle one)

Male Female Prefer not to say

4. What is your grade? (circle one)

9 10 11 12

5. How many businesses courses have you taken at Blaine High School?

1 2 3 4 5 6 7 8+

Directions: A part of this study focuses on the overall improvement in meeting the learning outcomes when participating in cooperative learning. Please read the following statements very carefully and answer the question using the scale provided below.

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

1. I feel confident in creating an income statement when given the necessary information.

5 **4** **3** **2** **1**

Strongly Agree Strongly Disagree

Income Statement: Post-Cooperative Learning Survey

Student Number: _____

Directions: A part of this study focuses on the overall improvement in meeting the learning outcomes when participating in cooperative learning. Please read the following statements very carefully and answer the question using the scale provided below.

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

1. I feel confident in creating an income statement when given the necessary information.

5 **4** **3** **2** **1**

2. The cooperative learning helped me prepare income statements more accurately

5 **4** **3** **2** **1**

3. As a group member, what were the benefits of the cooperative learning activity?

4. As a group member, what were the difficulties of the cooperative learning activity?

Balance Sheet: Pre-Cooperative Learning Survey

Student Number: _____

Directions: A part of this study focuses on the overall improvement in meeting the learning outcomes when participating in cooperative learning. Please read the following statements very carefully and answer the question using the scale provided below.

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

2. I feel confident in creating a balance sheet when given the necessary information.

5 4 3 2 1

Balance Sheet: Post-Cooperative Learning Survey

Student Number: _____

Directions: A part of this study focuses on the overall improvement in meeting the learning outcomes when participating in cooperative learning. Please read the following statements very carefully and answer the question using the scale provided below.

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

5. I feel confident in creating a balance sheet after given the necessary information.

6 4 3 2 1

6. The cooperative learning helped me prepare balance sheets more accurately

5 4 3 2 1

7. As a group member, what were the benefits of the cooperative learning activity?

8. As a group member, what were the difficulties of the cooperative learning activity?

Financial Statement Analysis: Pre-Cooperative Learning Survey

Student Number: _____

Directions: A part of this study focuses on the overall improvement in meeting the learning outcomes when participating in cooperative learning. Please read the following statements very carefully and answer the question using the scale provided below.

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

3. Rate your overall confidence in analyzing and interpreting financial statements when given the necessary information.

5	**4**	**3**	**2**	**1**
Very Confident				Not Confident at All

Financial Statement Analysis: Post-Cooperative Learning Survey

Student Number: _____

Directions: A part of this study focuses on the overall improvement in meeting the learning outcomes when participating in cooperative learning. Please read the following statements very carefully and answer the question using the scale provided below.

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

9. I feel confident in analyzing and interpreting financial statements when given the necessary information.

5	**4**	**3**	**2**	**1**

10. The cooperative learning helped me analyze and interpret financial statements more accurately

5	**4**	**3**	**2**	**1**

11. At this point in time, how would you rate your overall engagement in the course?

5	**4**	**3**	**2**	**1**
Extremely Engaged				Not Engaged at All

11. As a group member, what were the benefits of the cooperative learning activity?
12. As a group member, what were the difficulties of the cooperative learning activity?
13. What recommendations do you have for the instructor for implementing cooperative learning activities in future units?

Appendix C: Cooperative Learning Flowchart