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Impacts of collaborative learning on student engagement.

A Project Presented to the Graduate Faculty of Minnesota State University Moorhead

By

Jessica Youngren

In Partial Fulfillment of the Requirements for the Degree of Master of Science in Curriculum and
Instruction

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ABSTRACT

The purpose of the study conducted in this paper was to see if small collaborative group work impacts student engagement. Student engagement is a huge component to learning and has shown a correlation to higher academic achievements in those students who are more engaged. The researcher used a combination of reflection journals and surveys to identify the results. What was found is that students identified as being more engaged when working in small collaborative groups to accomplish a task rather than working independently. Instructors also witnessed this playing out when observing the classroom. The somewhat limited amount of literature on this topic demonstrates a need for this type of research. The current literature does tend to agree with the overall findings of the study.

CHAPTER 1

INTRODUCTION

Introduction

Many teachers have goals of having their students achieve high engagement while in their classrooms. Teachers strive to find instructional strategies, activities and lessons while creating an environment where students can achieve that high engagement. Finding ways to promote high engagement for all learners has been a major push in research. “This issue is of relevance because student engagement is a prerequisite for acquiring knowledge and skills and is also a mediator of achievement and important life outcomes” (Pino-James, 2017, p. 456). After sorting through all the factors that impact student engagement, it's my goal with this research to see if student engagement is impacted when students are working in small groups and doing collaborative learning.

In education today, student engagement is a constant topic of conversation. The importance of student engagement is acknowledged by many people, educators, researchers, policy makers, but along with that, they've also acknowledged the continuing problem of low engagement in schools. (Griffin, et al., 2017). Knowing that when students are more engaged, their academic success is higher, finding ways to increase student engagement is the hot ticket question. While student engagement is a very broad, diversely defined term, it is diversely argued how student engagement should be measured. However, three dimensions of engagement are consistent across most research, behavioral, emotional and cognitive. (Louwrens & Hartnett, 2015). Through exploration of these three dimensions of engagement, I started to find a healthy combination of factors that can impact behavioral, emotional or cognitive engagement, but only half being within a teacher's control. Pino-James (2017) states that many aspects that affect student engagement are outside of a teacher's control. Some of these factors are personal

characteristics or family background. However, focusing on the classroom environment and using learning activities that foster engagement is where teachers should turn their attention. Focusing on what a teacher can control within the factors of student engagement, how would collaborative learning impact student engagement? In a 21st century classroom, collaborative work is very present (Laal & Ghodsi, 2012). In the research, collaborative learning has been proven to be effective towards building peer relationships and to create better work (Pahomov, 2018). The gap within the research is looking at collaborative learning and finding out if it has an impact on student engagement.

Statement of the Problem

Teachers often strive to increase student engagement in their classrooms. However, defining student engagement is not easy. Even though the definitions can vary, a commonality amongst most is that student engagement is made up of three parts, cognitive, emotional and behavioral. Each part is critical in helping students achieve high engagement levels. Scholars believe that the lack of student engagement leads to students' academic failure (Olivier et al., 2020). With student engagement playing a significant role in the school environment, finding solutions to increase student engagement would only assist in the goal of having students achieve high academics.

Purpose of the Study

In many classrooms, student engagement has been an area of focus. The goal is always to find ways to increase student engagement. With three broad components of student engagement, behavioral, cognitive and emotional, teachers can narrow down their focus by looking at factors that impact them and compare that to factors that are within a teacher's control. With these many factors that can influence student engagement, it can become overwhelming. That is why, specifically, this research will be looking at collaborative learning and if it increases or decreases

student engagement. It will look at students' perceptions of their engagement level and a journal reflection from the instructor when working independently and in a collaborative group.

Research Question

What impact does small collaborative group work have on student engagement?

Definition of Variables

The following are variables of study:

- **Independent Variable:** The independent variable for this study will be independent work versus small collaborative group work. I will have students do both throughout the data collective range.
- **Dependent Variable:** The dependent variable in this study will be the Student Exit Ticket Survey and the Instructor Self-Reflection Journal. These will both be filled out after either group or individual work during class.

Significance of study

Student engagement is an important aspect to any classroom. High engagement increases academic success for students. With the recent data showing that around 50% of secondary level students show indications of disengagement, research on how to increase student engagement is crucial (Pino-James, 2017). Finding ways to increase student engagement is a focus that teachers have and combining that with collaborative learning, which is popular in most classrooms, is a great place to focus. Identifying areas where student engagement can increase in the classroom is key in order to help teachers continue to strive to achieve their student engagement goals.

Research Ethics

Permission and IRB Approval. To conduct this study, the researcher sought MSUM's Institutional Review Board (IRB) approval to ensure the ethical conduct of research involving

human subjects (Mills & Gay, 2019). Likewise, authorization to conduct this study was sought from the school district where the research project took place (See appendix D and E).

Informed Consent Letter. Protection of human subjects participating in research was assured. Participant minors were informed of the purpose of the study via the Method of Assent (See appendix C) that the researcher read to participants prior to beginning the study.

Participants were aware that this study was conducted as part of the researcher's master's degree Program and that it will benefit her teaching practice. Informed consent means that the parents of participants have been fully informed of the purpose and procedures of the study for which consent is sought and that parents understand and agree, in writing, to their child participating in the study (Rothstein & Johnson, 2014). Confidentiality was protected through the use of pseudonyms (e.g., Student 1) without the utilization of any identifying information. The choice to participate or withdraw at any time was outlined both verbally and in writing.

Limitations. The limitations of this study are the age group of students participating. It solely focused on a sampling group of 52 students in an eighth-grade middle school classroom. Another limitation was that this research study was being conducted and analyzed through an Instructor Self-Reflection survey which could add some bias. To eliminate the majority of bias, a series of predetermined questions were answered by the Instructor during the reflection, but additional comments that were made had the potential of including bias.

CHAPTER 2

LITERATURE REVIEW

Introduction

Motivation within classroom walls has been a topic of conversation for decades. Recent data of the United States showed that in secondary school children around 50% of them showed signs of low engagement in school (Pino-James, 2020). Finding ways to engage students in curriculum-based activities in a variety of contents is constantly being discovered. Lei et al, (2018) stated that an important and consistent outcome of student engagement is academic achievement (Lei, Cui, & Zhou, 2018). Having high achievement ensures that the students educational path continues and that they are equipped to handle it, so focusing on a goal for all your students to be highly engaged as an educator is necessary. One of the challenges found through research was how to define student engagement. By being able to know how to define student engagement allows for a process to begin on how to achieve it. In the research, there is no clear definition on how students should be measured to judge their engagement level (Louwrens & Hartnett, 2015). Definitions are varied, which makes measuring student engagement that much more challenging. However, a common thread in the variety of definitions was how student engagement can be broken down into three parts; behavioral, cognitive and emotional engagement (Griffin et al., 2017; Lei et al., 2018; Li & Lerner, 2012; Pino-James, 2017). Each breakdown relates to a different set of skills students need to develop to become highly engaged. Once students do that, they can be active participants in their own learning. (Li & Lerner, 2012). School engagement without question is a multi-layered set up for students. (Li & Lerner, 2012). With educators trying to create ways for student engagement levels to be high, my research question points me to finding out if small group work (collaborative learning) will impact student engagement?

Body of Review

Small Group Work

Students working in groups and completing classroom projects is not a new trend. In the past 40 years of research, there has been evidence to show that group collaboration has assisted in individual knowledge and understanding. (Howe & Zachariou, 2019). “Collaborative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product” (Laal & Ghodsi, 2012, p. 486). Collaboration between students and their peers did not only help students achieve greater projects, but also developed stronger relationships and they learned about their strengths and weaknesses (Pahomov, 2018). Like stated above, collaborative learning has been proven effective, however questions still remain about which areas collaborative learning is most effective. Collaborative learning has social, psychological and academic benefits. In the area of social benefit, support systems for learners are developed. Psychological benefits include self-esteem and creating positive cooperation between peers, whereas the academic benefits include encouraging critical thinking skills. (Laal & Ghodsi, 2012). According to Laal and Ghodsi (2012), “Collaboration is a promising mode of human engagement that has become a twenty-first-century trend” (Laal & Ghodsi, 2012, p. 487). Even so, there is a gap in the research on how small group collaborative work impacts student engagement.

Student Engagement

Student engagement is a critical aspect of a classroom setting as it has been connected to having positive results in the long run with areas in higher education, future jobs and just your personal satisfaction (Pino-James, 2017). Even though student engagement is vastly defined, most definitions indicate breaking down engagement through three lenses, behavioral, emotional and cognitive. Specifically, in a 2017 journal, it stated “behavioral engagement refers to positive

academic and social conduct in the learning activity, emotional engagement relates to positive emotional reactions to the learning activity and cognitive engagement refers to psychological investment in the learning activity” (Pino-James, 2017, p. 458). Having student engagement broken down in these three areas shows not only how diverse engagement is, but also how these different types of engagement impact each other.

Behavioral Engagement: When looking at behavioral engagement my research showed that it is important to see the level of participation that they are having in their learning. (Lei et al., 2018). Ways that educators can see that engagement is through body language, showing resiliency and effort and expanding learning further without being directed to. (Sinatra, et al., 2015). Creating an environment within your classroom to promote these behaviors is a crucial part. Students feeling that they have a place in the classroom is a pivotal piece. Another crucial part is having students who are healthy with their behavior issues. Educators cannot ignore or continue to put a band-aid on behavior problems, but to find out how to solve them. “Scholars and school practitioners all agree that students externalizing, and internalizing behavior problems cause a threat to their active engagement in school” (Olivier et al., 2020, p. 2333).

Emotional Engagement: Another aspect of student engagement is emotional. “The emotional aspect of school engagement refers to students’ affective reactions in the classroom and toward school” (Li & Lerner, 2012, p. 21). This emotional engagement ranges from the student’s feelings about teachers, other students and their learning along with pairing it to their “sense of belonging, value and identity, as well as their level of interest, boredom, happiness, sadness, anxiety and other emotions” (Lei et al., 2018, p. 519).

Cognitive Engagement: The last part of student engagement is the cognitive piece. “The cognitive dimension of school engagement pertains to a student’s ‘thoughts’ in relation to learning and education” (Li & Lerner, 2012, p. 21). The research shows this as being the self-monitoring strategies that students use (Lei et al., 2018). In turn, all three of the aspects of student engagement, behavioral, emotional and cognitive are optimistically attached to middle and high school student’s academic achievement (Griffin et al., 2017).

Role of the Teacher

The final component of the research encompassed the role teachers played in relation to student engagement levels. Much of the research that has been conducted, along with educators and policy makers' opinions, agree that low student engagement is an abrupt and continuing issue, especially for secondary students. (Griffin et al., 2017). “Student disengagement in school is among the main mechanisms leading to student academic failure and dropout throughout schooling and even more strongly for youth with internalizing or externalizing behaviors” (Olivier et al., 2020, p. 2327). According to Li and Lerner, “Active participation, with great concentration and effort, positive emotions, or feelings of excitement and sense of connectedness and cognitive processes such as commitment and values are all necessary ingredients for students’ engagement with school” (Li & Lerner, 2012, p. 21). If those are the ‘ingredients’ to achieve high student engagement, the question remains as to what role teachers had due to many of the factors that impact student engagement are beyond a teacher’s control. “Teachers play a decisive role in creating environments conducive to student engagement. In fact, the type of learning activities that teachers conduct seems to be particularly central to fostering engaging learning environments” (Pino-James, 2017, p. 457). “For most students, the fit between their school setting and their own needs as developing individuals is satisfying enough for them to

maintain adequate engagement levels, leading to academic success” (Olivier et al., 2020, p. 2329). When focused on the other factor a lot of research indicated that “pedagogical solutions that guide teachers on how to engineer engaging learning activities in secondary school settings are scarce” (Pino-James, 2017, p. 457) along with “pedagogy and curriculum that foster higher student engagement were often challenging for some teachers to employ” (Krei & Shoulders, 2015, p. 51).

Theoretical Framework

In Maslow’s Hierarchy of Needs theory, it showcases the ideas of what students need in order to reach their potential. Maslow’s Hierarchy of Needs theory is a model made up of 5 tiers that indicate the different levels of human needs (McLeod, 2018). The five levels of this theory include physiological, safety, belongingness, and esteem needs along with self-actualization (Poston, 2009). With Maslow’s five-stage model growing to include cognitive, aesthetic and transcendence needs, the framework aligns with this study in connecting student’s need to increase their engagement (McLeod, 2018). This theory has made huge offerings to schools. It is within Maslow’s theory that he suggested students cannot reach their full potential until they are accepted in the classroom while feeling emotionally and physically safe. “Maslow suggests students must be shown that they are valued and respected in the classroom and the teacher should create a supportive environment” (McLeod, 2018, p. 12). Student engagement is impacted by student’s needs. Using this theory led to finding out ways to increase student engagement levels.

Conclusion

Overall, student engagement is a crucial piece to a student’s academic success. Understanding the dimensions of student engagement along with the role teachers play in

creating an environment and learning activities that achieve that academic success can ultimately lead to high student engagement. Moreover, the research will focus on how implementation of collaborative group work impacts student engagement levels. In the upcoming chapter, the researcher will lay out the outline for how the research was conducted and the reasoning for the process they chose.

CHAPTER 3 METHODOLOGY

Introduction

Student engagement is an area in education that teachers strive to bring their students to high levels. Research states that students having an increased level of engagement allows for higher academic achievement (Lei et al., 2018). However, student engagement is a complex topic. With that said, student engagement can be divided into three domains, behavioral, cognitive and emotional. Focusing individually on these three domains and judging the engagement level gave a more specific focus when reflecting on the results that were found. Looking at the results and being able to find solutions to areas where engagement levels are low is one reason why I, as the researcher, wanted to conduct this study. The researcher is a teacher in an eighth-grade classroom where the study will be conducted. The same activities will be completed in two classes with the same activities being done either individually or in small collaborative group work. In this study, the researcher wanted to find out if small collaborative group work increased student engagement levels compared to independent work. By using an ethnographic study, the researcher will compile data from the instructor perspective, as well as the student perspective.

Research Question(s)

What impact does small collaborative group work have on student engagement?

Research Design

The research design for this project was an ethnographic study. In an ethnographic study the focus is to document the everyday experiences of the participants (Fraenkel, Wallen & Hyun, 2019). This study can be challenging due to the goal of “obtain(ing) as holistic a picture as possible of a particular society, group, institution, setting, or situation” (Fraenkel et al., 2019, p. 505). Choosing this methodology was specific in wanting to observe the impacts that small

collaborative group work had on student engagement levels. Student engagement is a very difficult concept to not only define, but to measure. When looking at the engagement levels of the students in the classroom, an ethnographic approach seemed to be the best fit. The researcher will use qualitative data to find answers to the research question. With the combination of an Instructor Self Reflection Journal and Student Exit Ticket Survey, the researcher had a wide variety of perspectives to look at the research question with.

Through looking at previous studies done and digging into the history of researching student engagement, the results have given the researcher a better understanding of the different domains of student engagement. This knowledge was used when the researcher created the Instructor Self Reflection Journal questions. By utilizing the self-reflection journaling technique, the researcher was able to reflect back on what they noticed with their students and their engagement level when working independently versus small collaborative groups each day. Room for extra comments in the journal will be given while reflecting on questions relating to the different domains of student engagement. Finally, the last perspective that will help ensure that this question is answered and looked at from all angles is the student survey. By having student feedback on their feelings about the level of engagement they experienced throughout the analyzing stage is crucial in completing the analysis circle. Through this triangulation, I as the researcher have validity of all perspectives. Moreover, by also using the two methods of journaling and survey check ins I was also able to pull direct information from the results to share in what I discovered. This has allowed me to bring life to the research and apply direct quotes/thoughts from the people involved.

Setting

The study took place in the north eastern region of Minnesota. The study was conducted in a middle school social studies classroom. This middle school is one of the four schools within the district. In all four schools there are just under 3,000 students. Of those 3,000 students, just over 70% are white, while around 11% are Native America, leaving just over 13% as multiracial. Finally, 43.2% of the student population receive free and reduced lunch. (Alum & Senior, 2019).

Participants

The group of students the researcher used was pulled from the group of 52 eighth grade students, 38.5% of them are males, while 61.5% are females. The ethnicity of this group of students is 65.4% White, 23.1% Native, 9.6% Multiracial and 1.9% Asian. There also are 5 written IEPs along with 3 additional 504 plans. Of those 52 students, 18 students chose to participate.

Sampling. The sampling of students is a convenience sample. The students are from two classes that the researcher has.

Instrumentation

There were a couple different instruments used when collecting data for this study. Student Exit Ticket Survey (Appendix A) was given to the students via Qualtrics. Secondly, the other instrument used was the Instructor Self Reflection Journal (Appendix B). There were questions for the instructor to reflect on each day but also provided space for comments to be made about each area. These questions were also focused on student engagement and each of its domains.

Data Collection. There are a few things, as the researcher, that were done to help ensure an unbiased approach throughout the process. First, in the Instructor Self Reflection Journal there

were areas of focus relating back to student engagement that helped keep a commonality across different reflection days and made them easier to compare to one another. Secondly, by having two different lenses, this helped ensure an unbiased approach because the data collected and analyzed was from the view of the student participants and the instructor. Finally, with the Student Exit Ticket Surveys the students answered honestly and provided feedback from the other lens within the classroom also focusing on student engagement domains. They provided feedback that allowed for a common ground to be found and not one eyed centered. Both of these instruments can be found in Appendix A and B.

Data Analysis. Data that has been collected over the timeframe of the study will be compared in four different ways. Each of these ways will not only look at the teacher versus student perspectives in the classroom, but then compare the instructor reflection and the student survey in a small collaborative group work to the large collaborative group work. The ways are broken down in detail below.

1. Student Survey (small group) compared with Instructor Self-Reflection Journal (small group)
2. Student Survey (independent) compared with Instructor Self-Reflection Journal (independent)
3. Student Survey (small group) compared with Student Survey (independent)
4. Instructor Self--Reflection Journal (small group) compared with Instructor Self-Reflection Journal (independent)

Procedures

From Monday, February 8, 2021 until Friday, February 12, 2021 the study will be conducted. Classes were in a block schedule (Day A; Day B). The focus of the study was on the two classes (Period 1; Period 4) that were conducted on Day A. In the allotted time frame the study was conducted on a total of 3 days. On each of those three days, for both class periods, the same activities were used. However, in the Period 1 class, small collaborative group work was

used to complete the activity while in Period 4 class, large collaborative group work was used to complete the activity. At the end of each class period, time was allotted for students to complete the Student Exit Ticket Survey and the instructor to complete the Instructor Self-Reflection Journal.

Ethical Considerations

In efforts to protect the wellbeing of all participants, all efforts in being a part of this study were volunteer based. Another way to protect the wellbeing of the participants was that all the student's identities were kept confidential throughout the study. This was done by keeping all Student Exit Ticket Surveys anonymous and referring to data as a whole class, versus individuals.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

Description of Data

The purpose of my research was to see if collaborative learning had an impact on student engagement levels. I used a Student Exit Ticket Survey along with an Instructor Self Reflection Journal to collect the data to analyze. Eighteen students participated in the study. Data was collected over the course of two weeks which resulted in four class periods that were ninety minutes each.

At the end of each class period, the participants took the Student Exit Ticket Survey to evaluate their engagement level for the class period as well as the instructor filled out the Self Reflection Journal to show the engagement level they witnessed during the class period. The two class periods the first week that the data was collected was in relation to students working in small collaborative groups. The other two class periods the second week that the data was collected was in relation to students working independently. Between the two forms of data collection, the results received were very informative towards the research question, what impact does small collaborative group work have on student engagement?

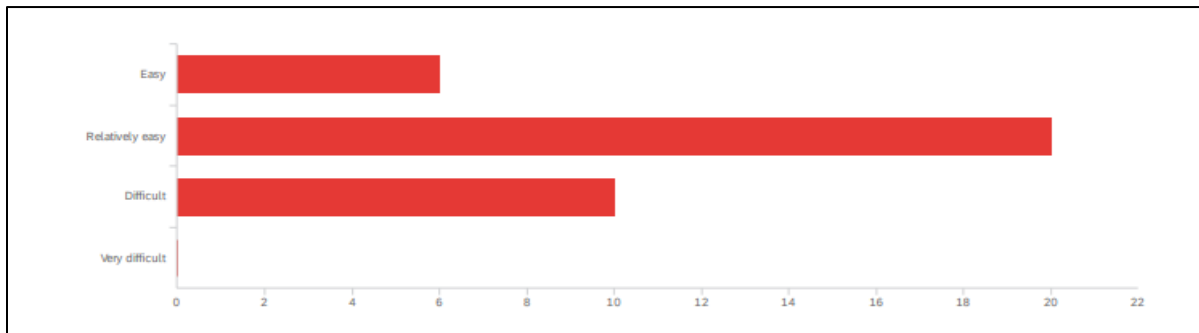
Results

During the first week, students were completing a task within a small collaborative group and the data was collected from the Student Exit Ticket Survey as well as the Instructor Self-Reflection Journal. A sample of both of those data collection tools can be found in Appendix A and B.

Data Set One

Table 1: Data Set One (Small Collaborative Group)
Today's course work was _____.

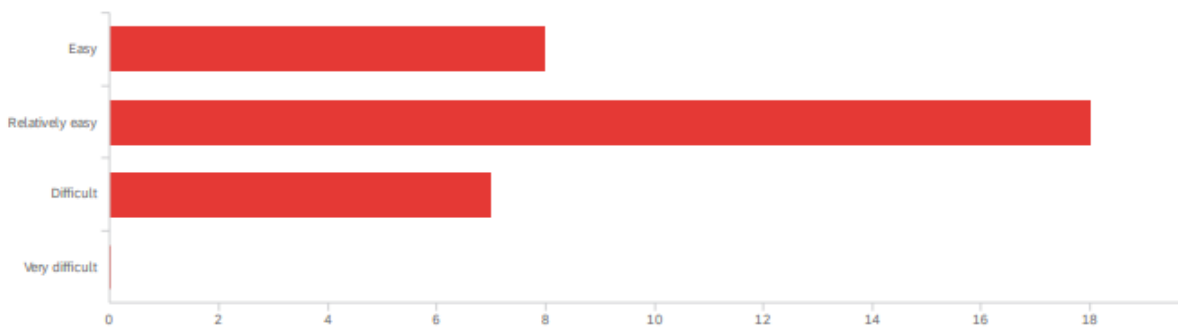
1	Easy	16.67%	6
2	Relatively easy	55.56%	20
3	Difficult	27.78%	10
4	Very difficult	0.00%	0



Note. The information above indicates the level of difficulty that the participants identified when they were working in small collaborative groups to complete their task.

Table 2: Data Set One (Independent)
Today's course work was _____.

1	Easy	24.24%	8
2	Relatively easy	54.55%	18
3	Difficult	21.21%	7
4	Very difficult	0.00%	0



Note. The information above indicates the level of difficulty that the participants identified when they were working independently to complete their task.

The first set of data shown above in Table 1 and Table 2 indicated the level of difficulty the students felt the task had. As you can see, the two data sets are comparable which shows that the independent variable of independent work and small collaborative group work didn't impact the challenge that students felt with the task they were given to complete.

Data Set Two

Table 3: Data Set Two (Small Collaborative Group)
Check all the ways that you participated in class today



Note. The information above indicates the ways the participants identified that they participated while completing their task when working in a small collaborative group.

Table 4: Data Set Two (Independent)
Check all the ways that you participated in class today.



Note. The information above indicates the ways the participants identified that they participated while completing their task when working independently.

Data Set Two includes Table 3 and Table 4. These two collections of data show what students identified as ways they participated in the class that day. In Table 3, students were

working in small collaborative groups and the data shows high levels of engagement (Behavioral, cognitive, and emotional), whereas in Table 4 students were working independently, and the data shows lower levels of engagement. These two data sets correlated to the data found in the Instructor Self-Reflection Journals. Those journals indicated that in the area of behavioral engagement, students worked and accomplished the given task in both variables, however in the other areas of engagement, cognitive and emotional, those areas were lacking. Either those areas were lacking due to the inability to assess with the way work was being accomplished or the opportunity wasn't given in the independent work format for them to participate in the other areas as easily as when they were working in collaborative groups. In addition, when students stated in the survey what went well in class and what they struggled with. During small collaborative work, overwhelming students indicated positives stemming from the ability to work with other people. One student stated, "Working with others made things easier to understand" while another student stated that "We worked well together, and everyone had great discussions that helped with understanding." Similarly, the participants when working independently in week two stated that some things they struggled with was completing tasks independently. One student wrote, "I found the work and the article to be very overwhelming when I had to do it alone" while another student stated, "I kept getting distracted and wanted to start doing other things."

Research Questions

After taking some time to evaluate the data collected over the course of two weeks, I reflect to my research question, what impact does small collaborative group work have on student engagement? I have concluded that I feel that my data did prove that collaborative group work impact student engagement in a positive way. The data showed the engagement level was

increases due to the independent variable of independent work compared with collaborative group work.

Conclusion

Student engagement is always an area of focus in my classroom. Trying to find ways that will engage students is a goal because of the research that states how engagement in academics leads to academic success and other positives towards individual students. Reviewing the student exit ticket survey data allowed me to see the level of engagement change with the different group models. However, it was actually in the Instructor Self Reflection Journals that showed the true change. When answering the different sections of the journal focused on behavior, cognitive and emotional engagement I saw a significant decrease when working students were working independently versus in small groups which correlated to the Student Exit Ticket Survey data. The work completion, however, did not change from changing independent variable, however, the deeper level of effort, persistence and interest changed.

CHAPTER FIVE

ACTION PLAN AND PLAN FOR SHARING

Plan for Taking Action

After reviewing the results from the action research that was conducted, I plan to continue to use different level groups when student engagement is needed. It has shown to be successful at achieving higher engagement in students than when working alone. I feel that this research has shown the success collaborative groups can have, but teachers always need to strive to achieve a balance with group and independent work. I feel that my next step would be to go through my curriculum and identify areas where I can input structured small collaborative groups to help increase student engagement. The other part that I appreciated that this action research showed was how simple of a task it takes to increase student engagement. Creating the structure of collaborative group work is a skill that I can input early in the beginning of the year and can pull and reuse throughout the rest of the year in different parts of my curriculum. I think one area I would like more focus in is how the collaborative group work impacted my students on Independent Learning Plans for my room and if they found their engagement increased as well.

Furthermore, I found great value in the action research I conducted. Student engagement was not only a goal of mine, but also a goal of my school district so finding more ways to increase engagement is a passion and focus of mine. I would love to continue to discover more on the topic of student engagement through classes and more research and along with that to share that knowledge with my colleagues to help our school district reach our engagement goals.

Plan for Sharing

With the knowledge that was gained from this action research, I plan to share the information with my eighth-grade team. Our eighth-grade team goal always incorporates increasing student engagement so seeing the survey data from the students can provide some

insight in what helps them become more engaged in the three engagement areas as well as the reflection that was done by the instructor to correlate to engagement level that was viewed. Not only sharing this information and the data I received from the students, but also to discuss some of the questions that came about because of the survey could move our team in a direction to achieving even higher levels of engagement from more of our students.

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Appendix A: Student Exit Ticket Survey



MINNESOTA STATE UNIVERSITY
MOORHEAD.

How excited were you about going to class today?

Today's course load was...

Easy

Relatively easy

Difficult

Very difficult

Below, check all of the ways that you participated in class today...

Raised my hand in class to share

Asked a question to my teacher

Commented on someone else's answer/question

Discussed my thoughts with a classmate

Asked a question to my classmate

Worked on the task that was assigned

Contributed to my groups success on achieving learning goal

What went well in class today?

What did you struggle with in class today?

I found value in what we learned in today's class

Yes

No

Appendix B: Instructor Self Reflection Journal

Behavioral: the quality of students' participation in the classroom and school community

	Questions	Comments...
	Effort	
	Persistence	
	Participation	
	Compliance of school structure	
	Homework/task completion	

Emotional: The quality of students' interactions in the classroom and school community

	Questions	Comments...
	Feelings of interest	
	Feelings of happiness	
	Feelings of anxiety	
	Feelings of anger	
	Students feel like they belong	
	Connected to teachers, peers, and school	

Cognitive: The quality of students' psychological engagement in academic tasks including their interest, ownership, and strategies for learning.

	Questions	Comments...

	How students feel about themselves	
	How students feel about their work	
	Focused on understanding and mastery	

Appendix C: Method of Assent

I will explain to the student's that their parents have given consent to have them participate in a research project that I am leading, but ultimately, they have the choice on whether or not they want to participate. I will inform them that there will be no consequence to your grade in this classroom in regard to if you participate or not, mentioning again that this is all voluntary. Finally, I will tell them that the only effect of this study is to see what group size students feel the most engaged in the classroom. Again, showing that ultimately if they chose to participate, class will be conducted as per usual, and only those students participating will be asked to complete a short survey after the class time has been completed to reflect on the activity that was just conducted in class. Then I would make sure to give them time to ask any questions that they might have and field them as needed.

Appendix D: IRB Approval

Institutional Review Board



DATE: March 9, 2021

TO: Aaron Peterson, Principal Investigator
Jessica Youngren, Co-Investigator

FROM: Lisa Karch, Chair
Minnesota State University Moorhead IRB *Lisa J Karch*

ACTION: **DETERMINATION OF EXEMPT STATUS**

PROJECT TITLE: [1709264-1] Impacts of collaborative learning on student engagement

SUBMISSION TYPE: New Project

DECISION DATE: February 11, 2021

Thank you for submitting the modification for this project. The Minnesota State University Moorhead IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations under 45 CFR 46.104.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact the [Minnesota State University Moorhead IRB](#). Please include your project title and reference number in all correspondence with this committee.

This letter has been issued in accordance with all applicable regulations, and a copy is retained within Minnesota State University Moorhead's records.