

I Hate My Teacher And He Hates Me: The Effect Of Student-Teacher Relationships On Academic Achievement

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Abstract.

Previous research has suggested a correlation exists between student academic performance and student-teacher relationships. The purpose of this study was to extend previous research on whether a correlation exists between good and bad student-teacher relationships and students' ability to achieve academic success. In particular, the relationship components of support and negative interaction were investigated. One teacher and his students from the 9th and 10th grades all took surveys to define their relationships using the Network of Relationships Questionnaire. For the support component, we found a correlation between both students who felt supported and the teacher's view of the support and their grades being positively affected. In the negative interactions aspects of the relationship, we found no correlation to better or worse grades from either the student's or teacher's perspective. This suggests that student academics benefit from supportive teacher relationships.

Introduction

Across the USA, we constantly talk about academic achievement and the effect that Covid has had on graders. For example, an article talks about it here: “Even more concerning, test-score gaps between students in low-poverty and high-poverty elementary schools grew by approximately 20% in math.” (1). Multiple things may explain this, like Covid and learning over computers, waning student interest in school. One thing we have not looked at enough is student-teacher relationships and the effect it has on student achievement. Student-teacher relationships are an integral part of the ability for students to achieve highly because of the effects of conflict and relationships with teachership. To put students and teachers in the best position, we must look at student-teacher relationships and their effects on learning. In this study, we had teachers and students rate their relationships with each other, and compared grades to that rating.

In education, it can be difficult to differentiate whether poor student-teacher relationships lead to bad grades or bad grades lead to poor student-teacher relationships (2). Mason et al. studied 1,364 students over five years (1st, 3rd, and 5th-grade) in the United States and had teachers rate the quality of their relationships and reported student standardized test scores. They found that math grades correlated to future relationships and predicted future reading and math scores. Also, high-achieving students tended to remain high achieving and were mostly immune from poor teacher relationships (2). They also found the same effect where good relationships earlier on lead to good grades and good grades lead to future good grades. This is important to the current study, as it suggests early relationships affect the ability to learn, and could also be true for older students as well.

There can be many reasons why a student has a conflictual or bad relationship with a teacher. Split and Hughes studied 657 students from 1st through 5th grade, 350 boys and 307 girls. They collected peer ratings of aggression and prosocial behavior and measured inhibitory control, cognitive ability, socioeconomic status, and ethnicity to calculate teacher-student conflict trajectories. A student conflict trajectory is the likelihood a student will have a conflict with a teacher that changes over time (3). In Figure 1, for example, boys' low stable trajectory starts low and stays low. The trajectory describes the pattern they have as students in conflict with teachers. The researchers repeated their study every spring for the students from 1st-5th grade. They found that the main predictor of conflictual student-teacher trajectories relationships was race. This started all the way in 1st grade. African American boys were 2.36 times to be in low-increasing vs. low-stable conflict trajectories and were 6.89 times as likely to enter school high-stable compared to low-stable (3). African American students with poor literacy were especially vulnerable to conflictual trajectories. However, cognitive ability and socioeconomic status did not predict conflictual trajectories (3). This is important to the current study because the study will be on an all black school, and this study says that black boys are more likely to have conflictual trajectories. So that means we may see that within the results of this study.

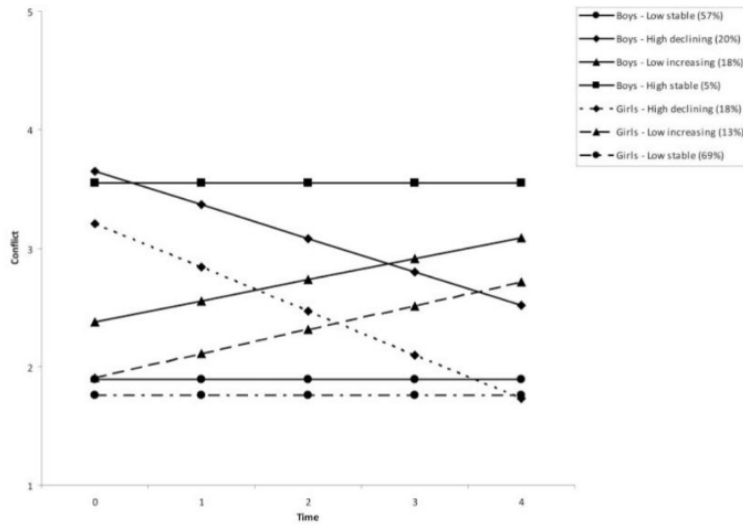


Figure 1. Examples of Conflict Trajectories. The trajectory describes the pattern they have as students in conflict with teachers. The researchers repeated their study every spring for the students from 1st-5th grade. This figure was taken from source (3).

When considering student-teacher relationships, there are two different types of positive caring relationships: caring as a virtue and caring as a relation. Cooper and Minness surveyed 1,000 people, interviewed 65, and analyzed 33. They found in their results that students had a preference for teachers who cared for them as learners and as individual people. They also found many students were hesitant to open up and have relationships with their teachers. In their research, they deduced that there are three kinds of relationships. No care, this is where students felt frustration and dislike for the teacher. This was 15% of students (4). Caring as a virtue, which is when the student had no relationship with the teacher yet felt the teacher was caring because the teacher gave surface-level signals of care (4). This was 43% of the student-teacher relationships. And lastly caring as a relation, when the student felt the teacher was caring because of actions the teacher did; they felt a genuine connection (4). For example, teachers who cared in relation would help with homework, get to know the students, and have conversations with them about their out-of-school lives; 42% of students felt this. This was the best relationship since students felt known as learners and people (4). They also found that most black students felt either caring as a relation or no relation. In contrast, white students rarely ever felt no-caring relations at all (4). So they recommended that teachers should make more effort for one on one interactions, and make connections beyond the classroom. This will result in more students seeing their teacher's conduct as caring as a virtue. Then, students might be more willing to form a relationship where the caring can be in relation (4). This source was important because this shows that many students either have good relationships with teachers or no relationships with a teacher.

When looking at student-teacher relationships there are two aspects to observe: how students are affected and how teachers are affected. Split, Koomen, and Thijs studied the effects student-teacher relationships have on teachers by reviewing other studies. They first found that teachers have a basic need for relationships with their students. They also found that students learn better when having a relationship with teachers. Lastly, they found that teachers with bad relationships, are more likely to have more continual negative interactions down the road. Teachers can have a bad interaction and not truly deal with

it and internalize it. This can lead to even worse interactions and relationships down the road (5). This is important because we also observed the teacher side of teacher-student relationships as well to see if it has more or less of an effect on student achievement compared to the student's relationship with the teacher.

When measuring student-teacher relationships in younger children (aged 2-12), researchers typically use the Students-Teacher Relationship Scale (STRS) (6). We did not use that in this research since it is on people in high school aged 14 and higher. The STRS uses the concepts of conflict and closeness as key factors in a relationship. Conflict is when a teacher has a relationship with a student that is seen as negative and draining for that teacher (6). Closeness is when a teacher feels like they are close with a student, have great communication with them and can teach them well (7). The measurement for older kids is the Network of Relationships Questionnaire (NRQ) (7). The NRQ has two concepts they use that are similar to conflict and closeness: support and negative interaction (7). Support is a multitude of questions composed into one factor. An example of a question that measures your support is "How much free time do you spend with this person?". Negative interaction is the same and an example of this is "How much do you and this person get mad or frustrated with each other" (7). Other researchers have also used the NRQ to successfully measure student-teacher relationships in high school (8).

Overall, the research on student-teacher relationships suggests they have a significant impact on student achievement. Research also shows that race was a main predictor of student-teacher relationship quality. Research also showed the importance of these student-teacher relationships for minority race groups. This study is on a majority black school which is not typically looked at. Also, this is on high school students, but research is typically done on elementary students. We had a teacher rate their relationship with their students and vice versa. Then we compared that to their grades and their opinion on their achievement in class.

We hypothesized that the better the students' view of relationships, the better their grades in the class. Second, the better the teachers' view of the relationship, the better the grades in the class. This is because research says that student-teacher relationships are the main predictors of academic achievement (2). Lastly, we hypothesized there will be a difference in grades between students with a positive differential relationship score (student - teacher) compared to those with a negative differential. This is because research says that students' view of their teachers is important to their success (4) and may affect the students' behavior and academic choices negatively. This is because research says conflictual behaviors and student-teacher relationships have a cumulative effect on each other (3).

Method

We decided to study the 9th and 10th graders of TNA (The Neighborhood Academy). We chose these grades because of their wide range of opinions on the teacher being studied. Also, these two grade levels had the most wide-ranging grades. Both classes are 100% African American or Black-Biracial. Overall there were 55 students surveyed (25 in 10th grade and 30 in 9th grade). The class being studied was a Religion class. The 9th grade religion class is named World Religions and the 10th-grade class is named Ethics. The average grade of 9th grade is 75%. The average grade of 10th grade is 83%. The teacher chosen to study is a white male with 5 years of experience teaching. From anecdotal evidence, many see him as rigid, and by the book, therefore we were interested in his relationships with students. We expected there to be varying feelings about him overall, based on our personal observations before the project.

For our experiment, we decided to use the Network of Relationships Questionnaire (NRQ) because it was most similar to STRS. The STRS is for younger students and uses conflict and closeness (6). The NRQ uses negative interactions and support and is for older students. In the NRQ we used the short form of negative interactions and support subscales (6). These short forms were made to measure negative interactions and supportive interactions. An example of a question from the short form NRQ for support is “ How much does [teacher] treat you like you are admired and respected?” So questions like these are used for the support short form. For the negative interaction, an example of a question is “ How often do you and the student get annoyed with each other?” so the person taking the survey would give a score from 1-5 on how much the person asked about this behavior. The items for each scale were added to give scores. We also calculated differences in relationship scores by subtracting the teacher’s score from the students’ scores.

So first the primary researcher gave the survey to the students for them to fill out. Following that, participating teacher filled out surveys for each student in 9th and 10th grade. These were matched with the students’ grades in class and students' names were removed afterward to keep data anonymous. The data was looked at and compared between the grades, student survey score, and teacher-student survey score. After that, we followed up with observations of classes.

Results

We decided to do our project on student-teacher relationships and the effect that they have on students' ability to achieve academically. So we expect that the student’s view of the relationship will affect on their grades. Also, we hypothesize that the teachers' view of the relationship will affect the grades. Lastly, we hypothesize that the difference in the view of relationships affects the grade. So we used the NRQ to make surveys for both the teachers and students. We then gave them out and had them filled out by 9th and 10th graders. Lastly, we compared the data and did personal questioning for anecdotal evidence of these relationships. Descriptive data for students’ grades in the class under investigation are summarized in Figure 2.

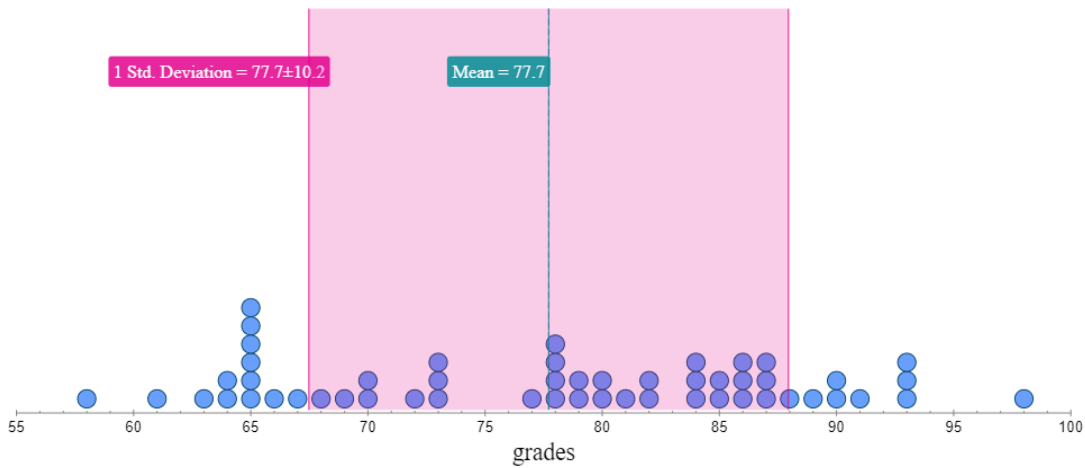


Figure 2. Semester grades for students in 9th and 10th grade. This group of students' data is symmetrical for the most part. It is centered on a mean of 77.7 percent. The standard deviation is 10.2 so most kids are getting a grade between 67 and 87. So there is a healthy variation of grades in the classrooms.

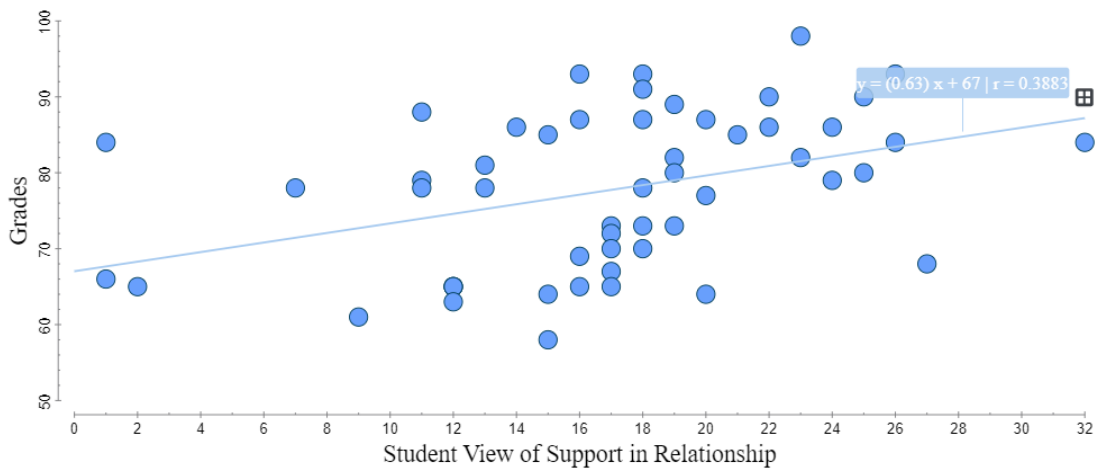


Figure 3. Students' view of support in relationships relative to their grades. This group of data is describing the students' grades in the class and compared the support they feel from the teacher. These two variables do have a positive effect on each other.

We hypothesize that students' views on their relationships with their teacher would affect their grades. Support scores and negative interaction scores were taken from students' responses on the NRQ. A correlation coefficient r-test found a strong, positive, and significant relationship between support in the relationship and class grades ($r(51) = 0.45$, $p = 0.00042$). Students who tend to see their relationship with their teacher as supportive tend to have better grades in the class. However, we did not find a correlation

between negative interaction and grades ($r(51) = 0.14, p = 0.46$). Students who tended to see the relationship as full of conflict and disagreement tend to have similar grades as those who do not.

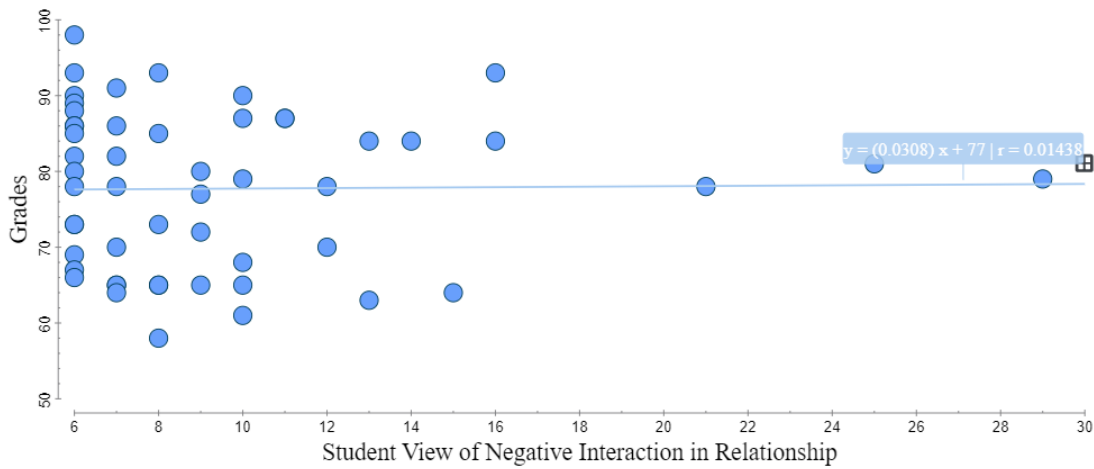


Figure 4. Students' view of negative interactions with the teacher and grades in that class. The student's thoughts were taken on what they felt about their interactions with their teacher. This was then put in a graph and compared to their grades in that class. The two variables had no correlation with each other at all.

Next, we hypothesize that the teacher's views on their relationships with their students would affect the students' grades. Support scores and negative interaction scores were taken from the teacher's responses on the NRQ. A correlation coefficient r-test found a strong, positive, and significant relationship between support in the relationship and class grades ($r(51) = 0.60, p = 0.0001$). When the teacher sees their relationship with their student as supportive, those students tend to have better grades in the class. However, we did not find a correlation between negative interaction and grades ($r(51) = -0.044, p = 0.38$). When the teacher saw the relationship as full of conflict and disagreement, grades were not affected by this thought.

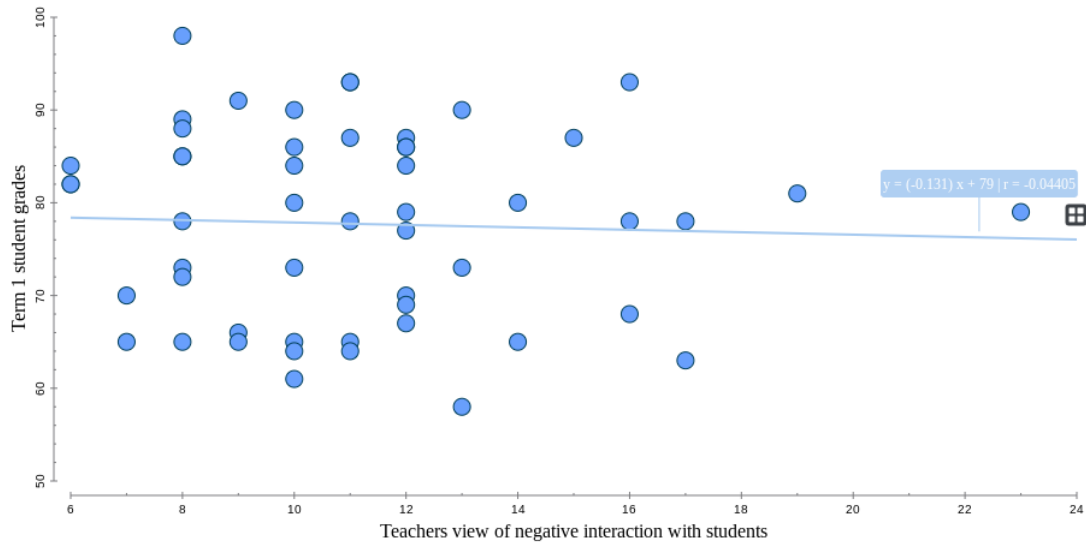


Figure 5. Relationship between the teacher’s view of the negative interactions and the students’ grades. The horizontal axis is how the teacher views the amount of negative in the student-teacher relationship, while the vertical axis is the students’ grades. There was no correlation found ($p < .38$).

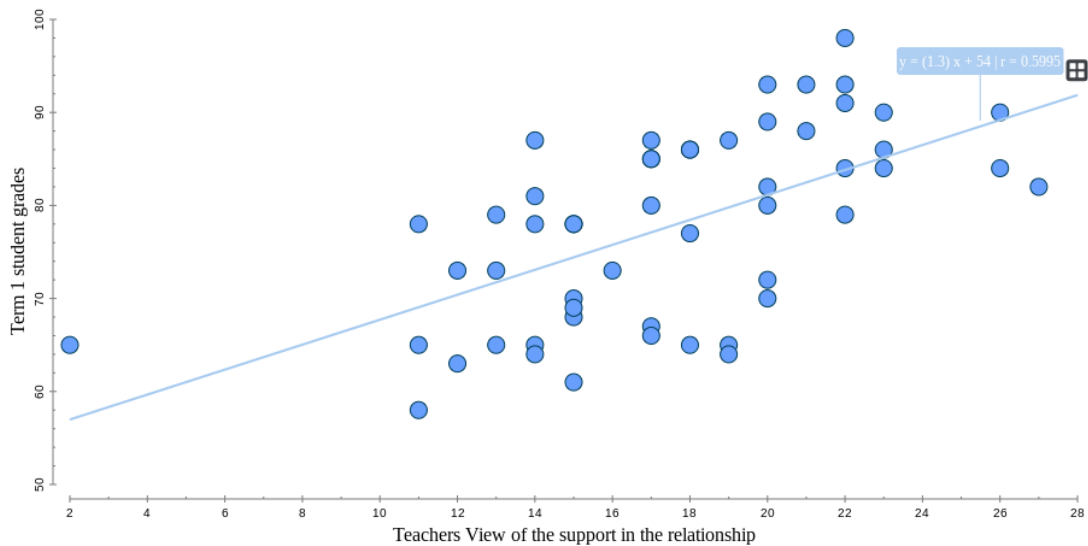


Figure 6. Relationship between teacher’s view of the support and student grades. The horizontal axis is how the teacher views the amount of support in the student-teacher relationship, while the vertical axis is the students’ grades. There was a strong positive correlation ($p < 0.05$).

Last, we hypothesized that the difference in student and teacher views for both support and negative interactions would have an effect on grades. Support and negative interaction differences were calculated as the difference between the teacher's score and the students' scores. So we took both differences and grades and put them in a correlation test and got the results of $(r(51) = -0.02, p=0.43, \text{Support})$, and $(r(51) = 0.06, p=0.33, \text{Negative Interaction})$. These results tell us that even when there is a difference between the support and negative scores between the teacher and the student there is still no effect on grades. This suggests no matter how different students and their teacher perceived the relationship between them, the students' grades did not seem to be affected.

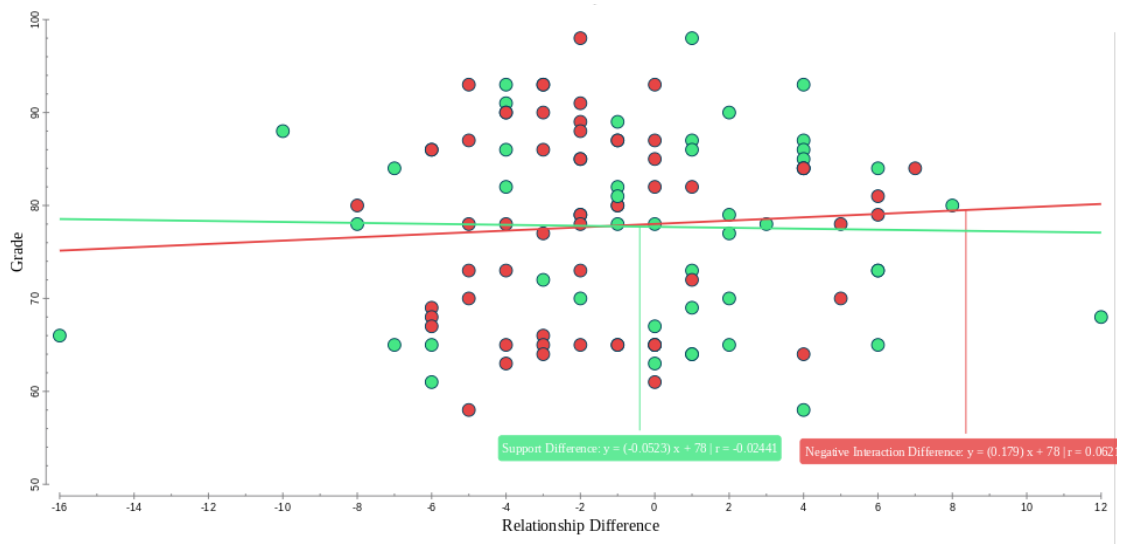


Figure 7. Negative and support scores compared with grades. This graph shows us that there is no significance between differences in perception of the relationship from either side and grades. Students to the right of 0 on the horizontal axis viewed the teacher better than he viewed them, while students to the left viewed him worse.

Discussion

In this study, we were looking to find that student-teacher relationships had a significant effect on the student's ability to learn and achieve highly. This was supported by our findings because the students' and teacher view of each other's relationships were found to have an effect on the student's grades (Figure 3). Our second hypothesis was that the difference between students' views and teachers' views on the relationship would affect the grades, but this was not supported at all. The graph showed that there was no relationship between the two variables. (Figure 5).

Previous research on students' views on the relationship found that caring as a virtue and caring as a relation were both integral to student achievement academically (3). We also found that support in a student-teacher relationship helps students to achieve highly. Yet we also found that negative interaction did not have an effect at all. These two flow together because Cooper and Minness found that when students felt their teacher was willing to or did support them, they had caring relationships. So since they did not have these negative interactions they did not get a chance for it to affect them. Also, we found

that when the students had high support scores they also achieved higher. So we can infer our students had mostly caring as a virtue or a relation type relationships. So, they would not have these negative interactions. Even with the few students that felt they had negative interactions, it did not seem to affect their grades. This is important because this tells us that there is likely a correlation between good relationships between students and teachers and high academic achievement.

Mason et al. found in previous research on elementary students, that good grades in math class lead to future good relationships, and then that would lead to more good grades. They also found that good relationships early on lead to good grades in the future. We found that our high school teacher's support score would also follow a trend of being related to higher grades for that student. This is important because this shows that teachers' and students' relationships have an effect on their grades. This is especially true when it comes to the teacher's view of students since they are the one's grading, due to the power differential in the relationship. The more good relationships and good interactions a student have with a teacher, the more likely a student is to succeed in that field of academics. Teachers have a clear responsibility to be as supportive as possible, even when the relationship is poor or negative, due to the power they have in the relationship, to help students succeed.

Split and Hughes found in their study that a main predictor of conflictual relationships was race. They even found that African American students were 2.36 times more likely to have low- increasing conflictual relationships vs low- stable conflictual relationships. From these discoveries, they also concluded these African American students with poor relationships would be affected poorly in their future academics. We found in our study that some students would have negative relationships with the teacher, but there was no overall relationship between this negativity and grades. So this is important because it shows that even when a student may have a poor relationship with a teacher they can and should still be given a fair shot at achieving highly in the classroom given the right environment and high level of support.

Throughout the research, we found different limitations. We only experimented with one teacher, which is due to time constraints. Because of this, our results only apply to that one place and not necessarily to everyone. Also since everyone knew the research was about a particular teacher the study was not blinded. So it was very clear and out in the open that the teacher was the one being chosen and that could have skewed the data, and invited students or the teacher to be more extreme in their views. I recommend for future research to do multiple classes within the same grade. So the researcher has a variety of teachers and classes. Also, I recommend having the students as blind as possible for the best results and to lessen bias.

In conclusion, our research suggests that student-teacher relationships do have an effect on students' ability to achieve academically. Also, we found that some teachers are capable of not allowing negative interactions to affect their grading. We recommend that teachers should be open to building relationships with their students and be mindful of their negative interactions with their students. Students should be open to building a relationship with teachers through true and meaningful interactions with them inside and outside the classroom. Not just for academic purposes, but to truly build a relationship. We believe the gain of this type of relationship is increased academic success.

Works Cited

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