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Student-Teacher Relationships:
The Effect of Support and Conflict on Academic Performance

Jordan Johnson

Mr. Jason Scott
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Abstract

The purpose of this study was to determine if conflict and support have a significant impact on a student-teacher relationship when it comes to a student's academic achievement or missing homework totals. Previous research has investigated how support and conflict play a role in student outcomes. We hypothesized that support would positively impact the student's academic achievement; on the other hand, we hypothesized that conflict would be the opposite and would negatively impact a student's academic achievement. Information about students' teacher-student relationships was collected from 55 students from the TNA for 4 of their teachers and matched to the students' grades and missing homework totals. We found that support has a significant positive relationship with a student's academic achievement, while conflict had no significant relationship. Our data suggest that conflict between a student-teacher and a teacher won't impact a student's grades to any significant degree, whether that's negative or positive, however, support impacts a student positively, which means there is a benefit for a student to have a positive relationship with their teacher. The results for conflict are identical to prior research at TNA, suggesting that teachers at TNA grade fairly.

Introduction

Many factors impact academic performance; however, student-teacher relationships are central because teachers are with the students throughout the school day. High school students report that only 22% of teachers attempt to form relationships with their students outside the classroom (1). This is important because teachers and students should be informed if forming these relationships would benefit the students in any way. Previous researchers have studied conflict and closeness in student-teacher relationships using state test scores, academic self-concept, and reading and math grades (1). Our study is important because it compares multiple teachers and multiple subjects. We gave students and teachers a survey measuring their relationship with their teachers to find the relationship between the student and the teacher. Then, we researched the students' missing homework assignments and grades to find a correlation between them.

A positive student-teacher relationship leads to more effective learning (2). Teachers and students can gain insight from each other, and the teacher gains teaching skills and experience to make lessons more interesting. In contrast, students can learn by effectively receiving the lesson. According to Lee, a strong student-teacher relationship has four main elements (2). First, consistent communication is key. Teachers must interact with students and be willing to change their style to meet students' needs. Secondly, an emotionally safe learning space is vital. Giving students a safe place where they're free to learn and make mistakes without teachers and other students being judgmental toward them allows students to connect with the teacher and the class material. Third, mutual trust and feedback are needed for students' academic and life success. What builds relationships is the process of helping each other while building trust. Lastly, true equity is important to keep students engaged without resentment. True equity means treating all students equally despite their academic and behavioral differences. A good relationship is independent of how the student acts in class (2). These elements are important to our project because they show what elements can build a positive relationship between students and teachers, and if relationships with these elements mean students have higher grades.

Secondly, the relationship between student-teacher interactions and the academic self-concept of African American male high school students (3). Hargrave hypothesized that positive or negative interactions with teachers can influence how these students perceive their academic self-concept. Academic self-concept describes how a person thinks or feels about their academic ability. This experiment had 154 African American male high school students who completed surveys measuring their perceptions of student-teacher interactions and their academic self-concept. The survey instruments used were the Student-Professor Interaction Scale and the Academic Self-Concept Scale. The hypothesis was supported, and findings showed that student-teacher interactions are associated with African American males' academic self-concept. Most noticeably, negative experiences were predictive of academic self-concept. The final takeaway is that the better the students' academic self-concept and the more teachers engage with students negatively, the lower their academic self-concept is reported (3). This connects to our paper because my experiment proposal is essentially the same thing, except it's

not based on how students perceive teachers and more on how teachers perceive students. However, the source suggests that negative interactions will harm the student academically.

In a similar study at The Neighborhood Academy, the effect of student-teacher relationships on academic achievement was considered (4). Hargrove and Scott examined the effect of student-teacher relationships on student academic achievement for 9th and 10th-grade students in one course. Hargrove and Scott used 25 10th-graders and 30 9th-grade TNA students. The survey was taken using the Network of Relationships Questionnaire and the supportive and negative interactions subscales. Throughout his experiment and research, Hargrove found that students who felt supported tended to have higher grades in the class. Students who tended to see the relationship as full of conflict and disagreement tended to have similar grades as those who didn't, which means that the relationship did not affect the students' academic performance, suggesting that the teacher grades fairly. He argues that teachers should attempt to build a positive relationship with their students outside the classroom. He believes that this type of relationship increases academic success.

In the next study, Mason et al. tested if conflict and closeness between student-teachers and academic skills predict an elementary student's future success (5). Mason et al. hypothesized that students with greater academic competence at school entry benefit from improved teacher-student relationship quality. They conducted their experiments with 1,133 kids using survey instruments, a 15-item closeness and conflict subscales from the student-teacher relationship scale (STRS). Their methods were to follow kids over 5 years and to see if a student's grade affected the student-teacher relationship or if the student-teacher relationship affected the grade. They found that their hypothesis was supported. Students who were closer to their teacher and had a better student-teacher relationship tended to perform better in class. However, this success doesn't assure their future success, though it can signify it. Importantly, these scores were based on standardized tests, not grades in class. The takeaway was that teacher-rated conflict had a small but significant impact on later math achievement but did not predict future reading scores. However, they found that closeness did not predict the students' future reading or math success (5). This connects to my paper by including ways in which a student-teacher relationship can impact the student's GPA or even vice versa, and how conflict can remain unchanged in a student's scores.

The topic of the next source is the relationship between African American boys' attitudes toward their teacher-student relationship and their mathematical achievement on state tests (6). Bullock hypothesizes that there is a relationship between fourth and fifth-grade African American boys' attitudes toward teacher-student relationships and their mathematics achievement. The participants were 4th-grade African American boys (2,478) and 27,39 5th-grade African American boys. The survey instruments are the Tripod 7 Cs and mathematics scores from state tests. The Tripod 7 C's are care, control, clarity, challenge, captivate, confer, and consolidate. These measures are what the students think the teachers do in the classroom to help the students. They examined teacher qualities that African American boys perceive to impact their mathematics achievement. Bullock's major findings revealed that positive relationships characterized by teacher control and clarity were positively associated with math

achievement, while there was a negative relationship between consolidation and math scores. Control refers to the teacher's ability to manage the classroom, while clarity is how well they explain. Consolidation is helping students make connections to why we learn. The negative relationship with consolidation might mean a teacher is moving too fast, and students haven't mastered the topic before they are asked to consolidate. This might mean a less-than-ideal relationship with the teacher. The final takeaway is that there was indeed a relationship between fourth- and fifth-grade American boys' attitudes toward the student-teacher relationship and their math achievement. Better relationships tended to mean higher scores (6). This connects to our paper because I'll essentially be doing the same thing; instead, it's less about test scores and more about the amount of missing homework a student has or how they do in class.

Overall, the research says that student-teacher relationships contribute to the success of a student's academic achievement (6). This study contributes to understanding how a teacher influences or motivates students, which could improve or worsen a student's academic performance. Our study replicates these experiments; however, our study is different because, unlike the other experiments, we're going to be based on the homework assignments in addition to grades and test scores. Our study's homework data and grades came from The Neighborhood Academy, a private college-preparatory high school.

We hypothesize there is a positive relationship between student-teacher closeness and homework assignments and grades. This is true because research suggests that the more the teachers engage positively with the students, the better the students' academic achievement (2, 4). We also hypothesize that there is a negative relationship between student-teacher conflict and missing homework and grades. While no prior research has investigated homework, we expect the patterns will be similar for grades and homework, as the two are generally related.

Materials and Methods

A total of 55 high school students and 4 high school teachers from the neighborhood academy participated in the study. All students identified as African American or biracial, - teachers identified as white.

	Teacher A	Teacher B	Teacher C	Teacher E
Gender	Male	Female	Male	Male
Average Grade in Class	79.9	80.6	84.0	80.5
Grades Used in Project	11, 12	10th	9th	9th
Number of Students	18	7	15	15

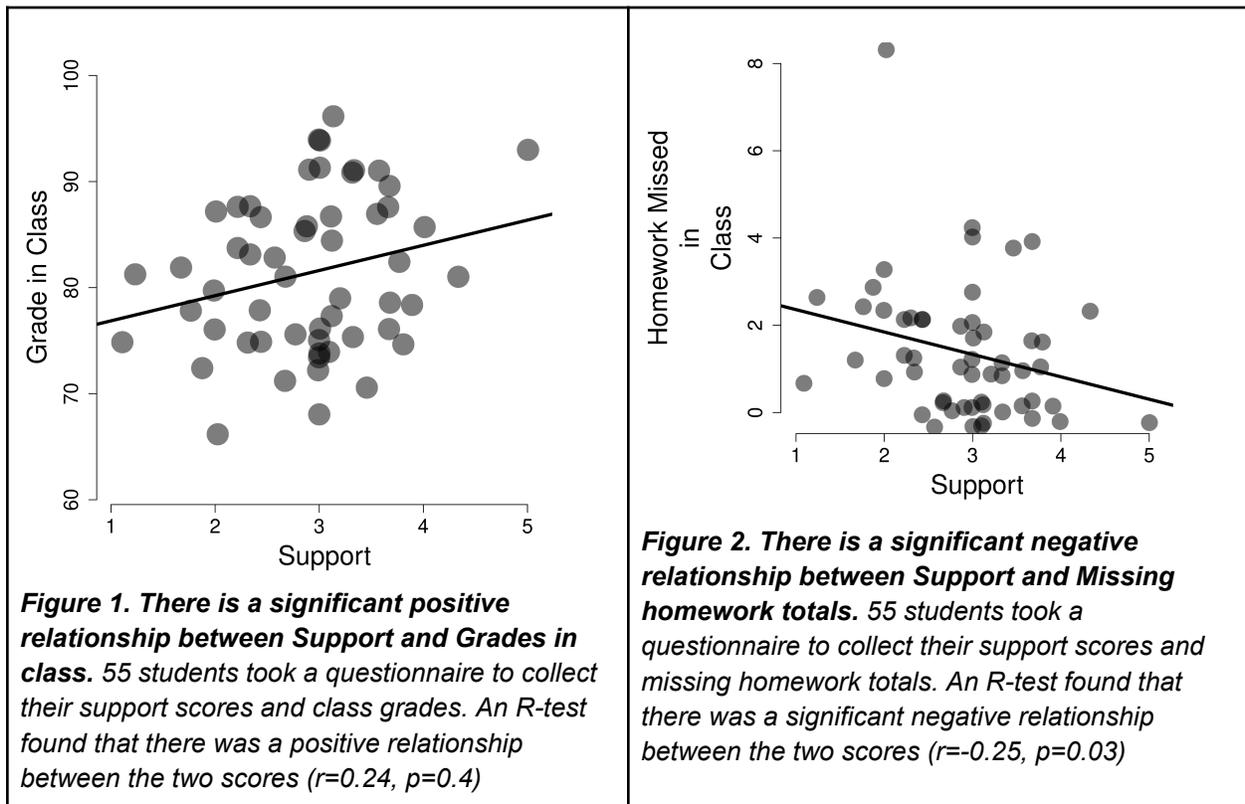
The participants were given a survey known as the NRI-RQV, which stands for Network of Relationships-Relationship Quality Version (7). The survey originally had 13 questions spread across 10 scales, We chose to leave three of those scales due to their lack of relevance to student-teacher relationships; those scales were intimate disclosure, dominance, and lastly, companionship. The scoring comes with two factors: closeness and discord. Closeness is emotional support, approval, and satisfaction. Discord is conflict, criticism, pressure, and exclusion. For each question, the participants chose numbers 1-5, where 1 is "Never or hardly at all" and 5 is "Always or Extremely much, where a higher number means you are closer to your teacher and a higher number means more conflict with your teacher. The NRI-RQV was previously used to measure student-teacher relationships in The Neighborhood Academy (4).

I chose various teachers and classes based on how much a teacher was liked or disliked, the difficulty of their class, and lastly, based on availability. I chose these so there would be a variety in students' academic performance, so I can find if there is a difference, a positive or negative relationship, because if I had a group of students that all excelled at a class, there wouldn't be any variation in the data. First, I approached these teachers to request if I could have this survey during their class period. Afterward, I explained to the participants what the study was about so they could fill out the consent form, The teacher has a choice if they wish to step out or not. Then, the students fill out the questionnaire. Later, a school administrator pulled the students' grades and missed homework records attached to the survey and removed the participants' names to keep their records confidential. A correlation coefficient r-test calculates relationships in closeness, discord, homework, and grades. All tests were calculated using vassarstats.net with a 0.05 significance threshold.

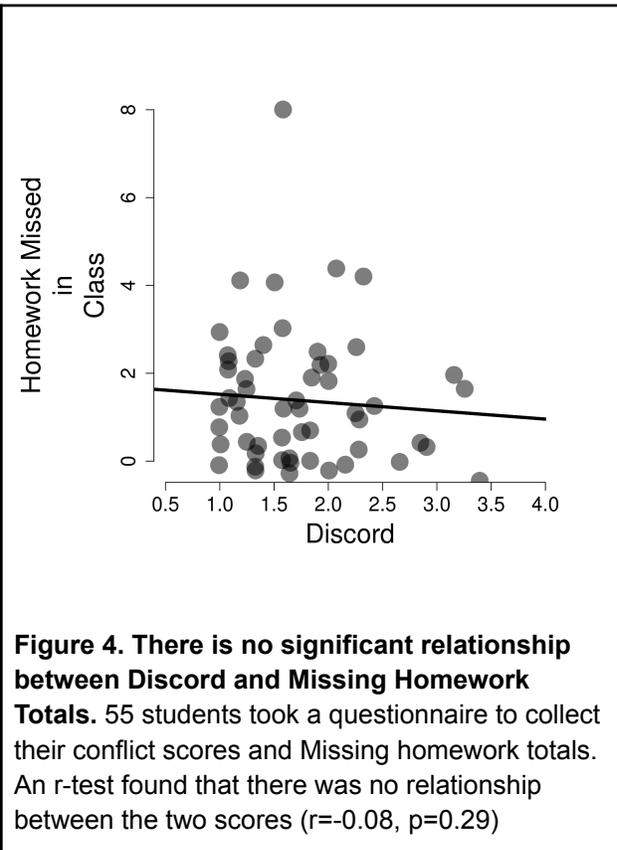
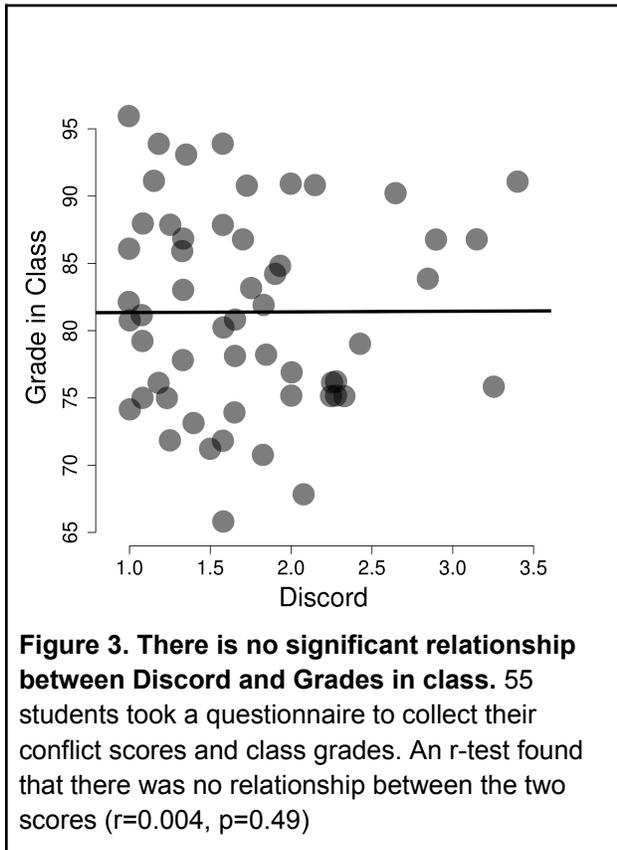
Results

The purpose of my study was to investigate whether the student-teacher relationship impacts a student's homework completion and academic achievement. We went into four high school teachers' classrooms and asked students to take the NRI-RQV questionnaire, which measures the closeness and discord between a student and a teacher. We also gathered the student participants' semester one grades and missing homework totals. The average missing homework from the 55 students was 1.4 and ranged from 0-8, and the average grade in the classes was 84.1 and ranged from 66-96.

Our first hypothesis was that the amount of support a student felt from their teacher would positively influence the amount of missing homework and academic achievement. The support scores were taken from the averages of the satisfaction, emotional support, and approval subscales from the NRI-RQV. The number of missed homework was the total of missed homework from the class in terms one and two. Academic achievement was measured by grades from semester one. A correlation coefficient R-test found a significant negative relationship between the support a teacher provides to students and the number of missed homework ($r = -0.25$, $p = 0.03$). We also found a significant positive relationship between the support a teacher provides and a student's academic achievement ($r = 0.24$, $p = 0.04$).



Our second hypothesis was that the amount of discord a student felt in their student-teacher relationship would negatively influence their amount of missing homework and academic achievement. The discord scores were taken from the averages of the conflict, criticism, pressure, and exclusion subscales from the NRI-RQV. A correlation r-test found no significant relationship between the discord between a teacher and student and the number of missed homework ($r = -0.08$, $p = 0.29$). We also found no significant relationship between the discord in the relationship in a student's academic achievement ($r = 0.004$, $p = 0.49$)



Discussion

In this study, our first hypothesis was that the amount of support a student felt from their teacher would positively influence the amount of missing homework and academic achievement (**Figure 1**). This hypothesis was supported because there was a significant positive relationship between academic achievement and teacher support, and for homework, there was a significant negative relationship between missing homework and teacher support (**Figure 2**). The better the relationship, the higher the grade and the lower the missed homework count. Our second hypothesis was that the amount of discord a student felt in their student-teacher relationship would negatively influence their amount of missing homework and academic achievement. This hypothesis was not supported because neither missing homework nor academic achievement had any significant relationship with the discord in the student-teacher relationship (**Figures 3 & 4**).

Our results are consistent with other studies by Hargrove and Scott. They found that academic achievement and teacher support have a positive relationship. Our study found identical data that there is a significant positive relationship between achievement and teacher support. These studies strengthen the claim that with teacher support, a student performs better academically. This makes sense for a couple of reasons. First, having a supportive relationship means a student would like to have communication with a teacher, which allows for greater understanding of an assignment. Secondly, when students have a better relationship with their teacher, the more likely they are to give you a better grade on an assignment. This doesn't mean the teacher is intentionally biased or trying to be unfair; however, when they have those positive experiences with the student, they are more likely to give them the benefit of the doubt.

Our results are at odds with the other studies by Hargrave. Hargrave found that negative experiences with their teacher would score lower on their academic self-concepts, which means they'd be more likely to have a lower grade in the class (3). Though our study design doesn't align directly with Hargrave, we still agree with the overall argument about the different roles of conflict in student-teacher relationships. Although our data shows differently, we still believe that conflict is a negative thing that may not impact a student's grade directly, but it can still affect a person's inner self. For example, although the grade may not be lowered, a student could dislike the class or have negative feelings and experiences in the class.

We had the unique opportunity to have nearly identical findings as Hargrove and Scott, likely due to us having surveyed the same population at the same place (4). With our identical findings, we believe we could say that TNA, as a school, doesn't grade based on conflict and negative experiences between student-teacher relationships. This means that teachers are likely to grade fairly.

Our study had some limitations. Our first limitation was that we weren't able to test every student in the school; we weren't able to test every student in the school due to time constraints. Our recommendation for future researchers could be to bring in more students for testing. Another limitation was our teacher participants; we could only test four. There are limited

differences in personalities among the four teachers, so it could make the data less scattered than it could've been. Our suggestion would be to get more teacher participants with different personalities, as the overall level of conflict was fairly low

A future improvement could be to experiment with grades and missing homework totals closer to the end of the term. This may boost the effectiveness of the accuracy of the grades and homework totals. Additionally, future research could investigate if long-term relationships impact homework totals and academic achievement differently than a short-term relationship. Expanding the participant totals to include teachers with different teaching styles and personalities could impact a student's educational success.

According to our research, student-teacher support and closeness are likely effective in boosting academic achievement and decreasing missing homework totals. However, discord and conflict have little effect on academic achievement or missing homework totals. This suggests that there is a benefit in seeking a positive student-teacher relationship because a student will benefit from it academically, however, conflict doesn't affect a student's academic performance, and suggests that even though there is conflict, teachers generally grade fairly at TNA.

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