

## TEACHER-STUDENT INTERACTIONS AND ACADEMIC PERFORMANCE OF STUDENTS

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*Key words:* Teacher-student interaction, Teacher-student relationship and Academic performance

### Abstract

The main goal of this study was to investigate the influence of teacher-student interaction on academic performance of the students. Hundred participants (50 teachers and 50 students) were selected through purposive sampling technique to conduct this research. Teacher and student feedback were measured by using the Questionnaire on Teacher Interaction (QTI) as well as students' academic performance was calculated by using last year grade point average (GPA) of each student. Pearson product moment correlation was used which indicated a positive significant correlation ( $r = 0.70$ ,  $p < 0.05$ ) between teacher-student interaction and academic performance of the students. The findings indicated the importance of teacher-student relationships to attain academic success of the students. The results suggest providing appropriate academic resources and aids for the teachers to meet the individual needs of their students.

### Introduction

The learning environment plays a significant role in maintaining interest and engagement of the students. When students feel a sense of control and security in the classroom, they are more engaged and become active in their own education<sup>(1-2)</sup>. By building and maintaining positive teacher-student relationships, a student become more academically motivated and engaged and thus successful. Several studies have identified the teachers as important social agents who influence on academic motivation, school commitment and/or disengagement of the students<sup>(3-5)</sup>. Studies also acknowledge that expectation of the teachers is considered as one of the strong and reliable predictors for elementary, middle, and high school students<sup>(6-7)</sup>. Further, evidence shows the significance of teacher-student interactions and relationships in terms of better performance in the classroom<sup>(8)</sup> and essential to the motivational process<sup>(6)</sup>. According to Stipek<sup>(9)</sup>, the children who are not doing well in study, they also have poor relationships with their teachers. Students are guided by perceptions of the teachers, that is, fairness, competence,

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caring and support as well as the nature of the teacher-student relationship<sup>(9)</sup>. In opposite, teachers are likely to have more negative interactions with students who are less successful in academics, less behaviorally competent, and/or already rejected by their peers<sup>(10)</sup>.

The significance of teacher-student interpersonal relationships has been widely recognized in research addressing kindergarten, primary and secondary education<sup>(11)</sup>. Both positive and negative factors influence the abilities of a child to stay motivated in school and hold academic success. Children who are living in high poverty, they face challenges to attain desirable success in school<sup>(12)</sup>. Positive teacher-student interaction enhances positive attitude towards teachers and achieves positive academic outcomes<sup>(13)</sup>. Studies reveal that students who have positive relationships with their teachers are less likely to avoid schools<sup>(14)</sup> and more likely to develop a sense of belongingness towards school<sup>(10)</sup>. On contrary, conflicted teacher-student relationships increase poor academic grades<sup>(13-15)</sup> and show disobedience towards school system and build mistrust towards teachers<sup>(16)</sup>.

Moreover, all students should have a respectful, caring, and positive learning atmosphere enhancing their joy of learning. Taking time to build positive relationships with students have profound effects on their school experiences—both within and outside of the classroom. Creating a climate of warmth, caring, and supporting autonomy would help students to feel a sense of control<sup>(1,2)</sup>. The nature of the classroom environment has a powerful influence on how well students achieve educational outcomes<sup>(17)</sup>.

The rationale of this study was founded to determine the nature of teacher-student interaction and their relationships. As early mentioned, literature strongly noted the importance of healthy and strong teacher-student interaction that played a significant role in improving the student's academic performance. In fact, the school management pay attention to aspects of social relationships in school, especially the interaction between teachers and students. This can be proved with many of the behavioral problems in school, such as disputes, fights, bullying, and others. Thus, the teacher-student interaction should be taken seriously by the school management in the behavioral impact on academic performance of students. This is because good academic behavior would result in better academic performance. Overall, teacher-student interaction has an important construct in educational research within school and pre-school settings but remains largely neglected in Bangladesh context. This study has shown that teacher-student interaction should be regarded as a relevant construct in school education as well as it clearly affects students successful study progress, including factors such as course satisfaction, retention, learning approaches and achievement. The findings of this study help educational psychologist to understand the teachers and students' perception by exploring teacher-student interaction. Finally, this study is

designed to add to the body of knowledge of how teacher-student interactions can improve students' academic performance. The objectives of this study were:

1. To examine the relationship between teacher-student interactions and students' academic performance.
2. To find out the difference in the perception of teacher-student interactions between students and teachers.

### Materials and Methods

Fifty teachers and 50 students (N=100) were purposively selected from four secondary schools under the South Dhaka City Corporation. The students were chosen from grade IX and grade X. The age of the student and teacher respondents ranged from 13 to 15 and 30 to 52, respectively. Table 1 shows the participants' detail distribution of this study. The teachers who participated in this study were completed their post-graduation and taught the students of grade IX and grade X.

**Table 1. Distribution of participants.**

Schools	Teachers (n=50)	Students (n=50)			
		9th Grade		10th Grade	
		Boys	Girls	Boys	Girls
1st	15	4	3	4	4
2 <sup>nd</sup>	15	4	5	3	3
3 <sup>rd</sup>	10	2	3	3	2
4 <sup>th</sup>	10	2	2	3	3

The present study was conducted following cross-sectional survey design. This design indicates that all data were collected at a single point in time. The following measuring instruments were used for this study:

*Questionnaire on Teacher Interaction (QTI)*: Teachers and students' feedback were measured and analyzed using the Questionnaire on Teacher Interaction (QTI) which developed by Wubbels, Brekelmans, den Brok, and Tartwijk in 2006<sup>(18)</sup>. The QTI is used to chart teacher behavior. The QTI version being utilized for this study is the 48-item questionnaire. It has eight categories and is based on the Leary Model, which is two-dimensional. QTI is a five-point Likert scale from "never" (1) to "always" (5). The highest score is 240 which indicates high or positive interaction, and the lowest score is 48 which indicates low or negative interaction between teachers and students. Numerous studies have been conducted on the reliability and validity of the QTI, the latest of which was the 2003 study conducted by den Brok, Fisher, Richards, Wubbels, Levy and Waldrup, the reliability and validity of the instrument in all of these studies were considered agreeable<sup>(19)</sup>. Internal consistency of this scale was .80. This version has been further modified, with

permission, to include demographics. The Bangla version of QTI was translated by Pervin and Munni<sup>(20)</sup>. The internal consistency of Bangla QTI was  $\alpha = 0.74$ . The test-retest reliability for this Bangla version was found to be .77 and the content validity was measured for this study.

*Academic achievement:* Each student's grade point average (GPA) of Junior School Certificate (JSC) examination was collected for this study.

Standard data collection procedure was followed in the present study. Before administering the questionnaire, participants were informed about the general purpose of the study and their response to the questionnaire would be kept confidential. Necessary rapport was also established. Based on the consent of the teachers and students, the questionnaire was administered individually. The participants were individually asked to go carefully through the instruction that would be given them. Each teacher and student were allowed to ask questions freely if they had faced any difficulties in completing the questionnaire. After completing their task, they were given thanks for their sincere co-operation. Next the researcher scored all responses accordingly and made the necessary coding for data analysis. Data entry and all necessary analysis were done using SPSS programmed (20.0 version) for windows package.

## Results and Discussion

The main goal of the present study was to identify the relationship between teacher-student interaction and academic performance of students. To find out this significant relationship, Pearson's product moment correlation was used. The result as follows.

**Table 2. Teacher-student interactions and student academic performance (GPA).**

Measures	QTI score	GPA
QTI score	-	-
GPA	0.70*	-

\*Correlation significant at  $p < 0.05$  (2-tailed).

The value  $r = 0.70$  was positively significant, as QTI scores increase representing which students perceived as positive interactions to their teachers and their overall GPA also moved in positive direction indicating higher level of academic performance. This result indicated that there is a statistically significant ( $p < .05$ ) relationship between teacher-student interactions and student's academic performance.

In addition, the second objective was to find out the differences in the perception of teacher-student interaction between students and teachers. The t-test was used to check the difference in perceptions. The result is showed in the following table.

The result of t-test showed that a statistically significant difference in mean scores for teachers and students. This finding indicated that there is a significant difference in perceptions of teacher-student interactions between teacher and student.

**Table 3. The perception of teacher-student interactions between teachers and students.**

Group	N	Mean	SD	t	df	Sig (2-tailed)
Students	50	170.4800	14.47763	2.07998	98	0.04
Teachers	50	165.1200	11.07422			

According to the results regarding first objectives, student-teachers interaction and academic achievement were significantly positively correlated,  $r(98) = 0.70$ ,  $p < 0.05$  at the 95% of confidence level. This indicates that academic performance is significantly positively affected by their level of interaction with their teachers. This result implies that the level of interaction increases or become high, the academic performance of students increases. The findings of this study are related with previous study reported that students who have strong beliefs towards their teachers as well as positive relationship with their teachers tend to be more self-regulated and persistent in their learning, more motivated to learn and to be successful in their learning, experience less stress and good participation in class, and as a consequence have higher academic performance and better perform in college than their counterparts who are low interaction with their teachers<sup>(21-23)</sup>.

According to the t-test result regarding second objective, there was a significant difference in how students and teachers perceived their interactions. It is noted that those teachers perceived that they were more supportive or available than what their students reported. This difference indicates that students' perceptions of their teachers, directly impact their academic performance<sup>(24)</sup>. This result suggests that congruence between teachers' and students' perceptions of a learning environment is of central importance for an optimal teaching-learning process. Students' perceptions of a learning environment influence their study behavior and determine the nature and quality of academic performance whereas teachers' perceptions are related to their teaching behavior. Differences between teachers' and students' perceptions thus imply that their behaviors are likely to be incongruent and not directed at the same goals<sup>(25)</sup>. A teacher might have the intention to be clear about learning goals, but if students do not pick-up relevant signals from the teacher this will not have the intended effect. It is important that teachers have to ensure that they are meeting student needs, both academically and emotionally which can motivate students to channel their energies and desires to reach their goals<sup>(24)</sup>.

Overall findings of this study indicated that there is indeed a statistically significant relationship between teacher-student interactions and academic performance. This supports the need for more research to bridge the gap between motivating students and identifying the influential variables that influence their academic performance.

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