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RESEARCH PAPER

Teacher-students Interaction and Students' Academic Achievement: A Correlational Study at University Level

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ABSTRACT

This study was planned to find out correlation between teacher-student interaction and students' academic achievement at university level. Objectives of the current study to find out students' perceptions about teacher-student interaction and correlation between teacher-student interaction and students' academic achievement at university level. The study was co relational in nature. Students of University of Gujrat were the population of the study. Cluster random sampling technique was used to select 305 students from different departments of university of Gujrat. Questionnaire on teacher-student interaction (QTI) with four domains i.e., dominance, submission, opposition, and collaboration was adapted for data collection. Mean, standard deviation and Pearson correlation test were used for data analysis. The results indicated that the students who perceive that teacher-student interaction is of high level are less in numbers followed by the students with perception of low and medium level. Moreover, insignificant and weak relationship was found between teacher-student interaction and student's academic achievement.

| **KEYWORDS** | Collaboration, Dominance, Opposition, Students' Achievement, Submission, Teacher-Student Interaction |

Introduction

'The teacher-student relationships are extremely noteworthy for children. Students spend 5 to 7 hours a day with teachers round about 10 months. For students' academic growth, their relationships with teachers have great importance. The value of teacher-student relations will be resulted in a superior extent of learning in classroom (Downey, 2008). Building social relations can critically crash efficient instruction and learning process in a classroom. Students learn through different ways they learn through their society, friends, peers and teachers and build relationship with them. Their relationship with them affects their academic performance (Cazden, 2001).

The significance of structuring student-teacher relationship is that it promotes student interest to gain knowledge, and teach students cooperation, enhances student success and motivates the students. In calculation, teachers should decrease negative emotion among the students such as annoyance, unhappiness, disappointment, boredom, horror, and should constantly encourage, optimistic emotions such as self-confidence, enjoyment, valued and protected (Ilias & Nor, 2012). A good relation with students is a requirement for useful teaching and it helps the teachers to control and stimulate student's behavior and learning attitude. These encouraging teacher-student relations might ultimately manipulate teachers' feelings of efficacy, competency, and action (Pianta et al., 2012).

It is estimated that teacher must create a bond with students because the establishment and protection of encouraging classroom atmosphere acts as essential in representing effectively and efficiently both teaching learning processes. Teachers should make confident about that they meet students' needs both rationally and psychologically. They have to create the classroom environment in such a way which encourage optimistic cultures with strong interactions so that a student becomes motivated to learn more. Positive expectations that the teacher have to their students are linked with elevated educational achievement or educational objectives; while negative expectations will reduce the academic achievement (Bolter, Kipp, & Johnson, 2018). Teacher-student relations play an important role in students education and worth of teaching (Raptis, 2012). Powerful teacher-student liaison may possibly one of the most essential ecological factor in shifting student instructive way (Baker, 2006). Efficient teacher-student relationships may possibly be the keystones which allow the other elements to do well (Marzano, 2003).

As a result relations between teachers and students have great importance in students' academic success, but some teachers does not interact with their students they only convey lecture to their students and go away but this is not the best way teachers should interact more and more with their students so that students feel easy and can explain their problems related to their study and get success. Students' teacher contact has great importance in effective education. This is why the researcher wants to investigate that how much teachers interact with students and how much there is association between teacher-student interaction and students' academic achievement.

Literature Review

Teachers are the most essential and first peak of contact in the life of their students. Regardless of immeasurable reform, learning activity, and program that are implemented for the improvement of instruction, no further aspect can be as deep except human being aspect. He urges, "That's the citizens, not the program". A main variable in the class is not learner, but the teacher. Grand teachers have high hopes for themselves and also for their students. They are conscious about the significance of their connection which they have with their students', they knows that influencing the minds of their students' is impossible if they are not connected with them emotionally (Burdette & Whitaker, 2005). "Excellent teachers place snag in the canal of kids, and over time, they readdress hundreds of life… There is some purity which make map to grip people collectively …" (Bolman & Deal, 2018). Teacher-Student interaction is very essential for instruction and learning procedure. It promotes involvement, enhance student learning and motivates them. It makes the environment from teacher centered to student centered although maintain a teacher lead activity (Anum, 2018).

Teachers who had positive relationships with their students' reports that our students are less expected to live absent from the school, appear more self-sufficient, extra loyal and active to learn (Skinner & Pitzer, 2012). Teacher-student interactions have a contact with classroom supervision and affect the knowledge and development. According to development point of view, development of positive teacher-student relationships assist the student cognitive, societal and expressive growth and enhance students' psychological health (Brazelton, Greenspan, & Flourish, 2000). Teacher-student relations are the foundation for classroom administration and also the input for enhancing students' academic success (Deniels, 2014). Teacher-student interaction looks very different, and it differs on the base of three most important components crosswise situations: quality, quantity, and content. The quality of relations between teachers and

students maybe the generally unreliable of the three most important components, and too biased. Procedures of quality are based on the perceptions of students and the satisfaction level of interaction with their teachers.

Anaya & Cole (2001) examine the student approval by asking students to categorize their perception of their teachers from isolated, disappointing, and insensitive with accessible, appreciative, and promote, and they initiate that educational achievement of the students was definitely interrelated with quality of the relations they have with their teachers. Moreover, a research which examine quality, quantity, and temperament of teacher-student relations, the stronger interpreter of educational objectives for students was the quality of relations (Lundberg & Schreiner, 2004). That institution where teachers support good learning acts in-class and out-of-class through positive interactions then students were expected to contribute in these instructive actions (Umbach & Wawrzynski, 2005).

Quantity is the second key element of teacher-student relationships**.** Tyson (2017) showed that rates of teacher-student relations were completely connected with a range of students' objectives. This research shows a positive correlation between rate of teachers' interaction and academic and social outcomes, this relationship was somewhat stronger for educational objectives. The content of teacher-student relationship differs from one student to the other student, but patterns are emerging in the bulk of relationships. Anaya & Cole (2001) initiate that the content of teacher-student relationships tend to exist extra focused on educational topic than personal ones, other than approximately all type of relations have a noteworthy optimistic contact on grades of the students.

There are some key strategies which promote encouraging relationships between teachers and students and those strategies are: teachers active listening, facial expressions of teachers that match with the verbal cues, teachers understanding with upset or worried students, artistic approachable relations used by teachers (Zhang et al., 2001). Teacher and student should give equal importance of their participation. The students should have to consider sensible and valued and teachers should be aware of that he/she have a good effect on their students. Some researchers refers to this as "teacher efficacy" and communicate that the more the teachers believe in it, the more they will become the source of it to happen (Wiseman & Hunt, 2013).

Atmosphere of school and classroom customs will allow or control classrooms instruction and students wisdom, because students get familiarized to their atmosphere. If educators build such traditions where students are predictable to get success, many often do the accepted thing (Stewart, 2007). Some researcher propose that efficient organizational way of life can improve academic performance and show the way by which we can decrease the students drop out and failure rates, efficient discipline and ordinary discipline (Nugent, 2009). Positive teacher-student relations are associated to extra nearness and harmful teacher-student relations are associated to extra reliance (Hughes, 2011).

Control of classroom and management of classroom by the teachers are the areas through which teacher-student relations are constructed and which was essential in the victory of the classroom. Effective teacher-student rapport in the classroom was characterized by the different factors: strong guidance in educational and behavioral problems provided by the teachers, control against the liberalism in classroom by teachers, teachers' ability to work with students cooperatively. it helps the teachers to be

aware of the different needs of the learners and the awareness to address the needs of the learners (Audley & Ginsburg, 2019).

Downey (2008) conducted a research by incorporating the educational research on such factors which have an effect on educational attainment. Observance of the classroom practices were the basis for the research which make the distinction for the all learners but especially for the learners who are at risk of educational breakdown. The recommendation of Downey analysis was that "teachers should make well-built relations with learners, focus on the strengths of the learners and should maintain good and reasonable hopes for the achievement of the learners". These relations must base on esteem, reliance, love and rapines. One important product of a strong teacher-student relationship is a feeling of association which is significant for the achievement of learners in school. Downey concludes by saying this "daily teacher-student relations in the classrooms have great importance". Moreover, Amjad et al. (2023) concluded the most frequently used psychological bases for teacher-students interaction in classroom.

Materials and Methods

The study was co-relational, and numerical data was collected to conduct the study. The focus of this study was to investigate the correlation between teacher-student interaction and students' attainment. The nature of both variables was continuous and design of the study was co-relational.
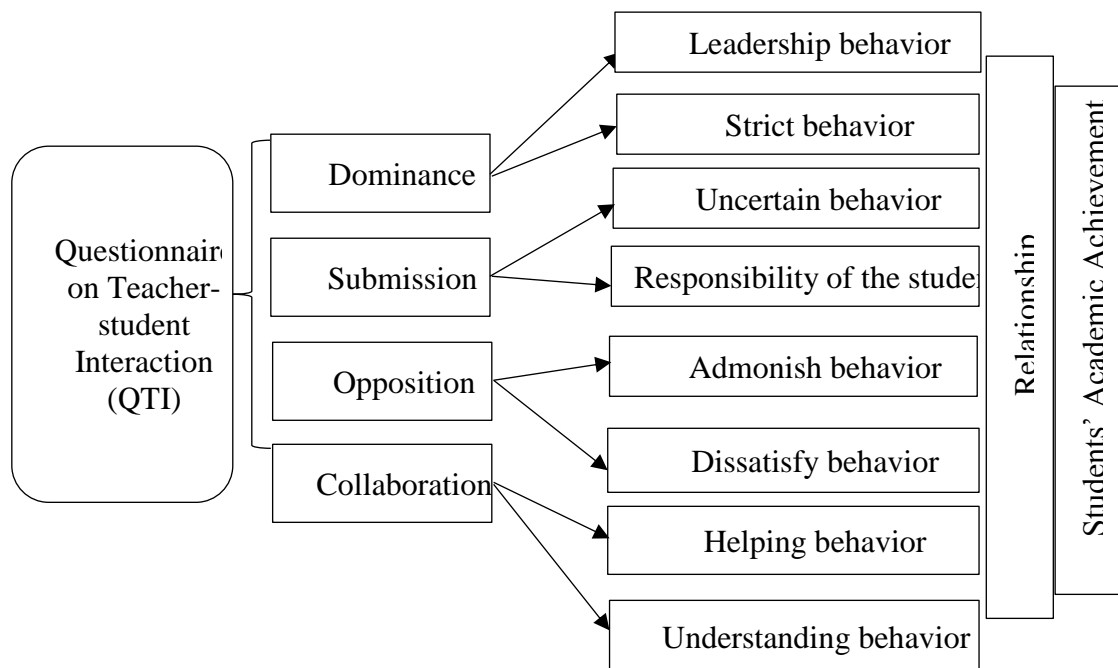

Figure1 Conceptual framework of the study

All the students of different departments studying course Functional English in university of Gujrat (UOG) Hafiz Hayat campus were the population of the study. Moreover, cluster random sampling technique was applied for sample selection. The course Functional English was being taught in total sixty eight classes of spring 2022 in various departments of UOG. The researcher selected 20% classes (13 classes) as the clusters to select sample. The sample selected clusters (classes) were from departments

of Economics, Mathematics, Physics, Geography, BBA, Management and sciences, Zoology, International relations, Education, Computer science, Psychology and Fine arts. All the students of selected classes were the sample of the study. Total sample size was consisted of 305 students.

Instrumentation

Teacher-student interaction (QTI) constructed by Wubbels & Levy (2005) was adapted to collect information about teacher-student interaction. QTI was consisted of 48 statements (Australian version). It was requested to the students to rate their responses on five points Likert scale ranging from 'almost never' to 'almost always'. Moreover, students' academic achievement was measured by their score obtained in functional English course. The Questionnaire on Teacher Interaction (QTI) has four domains including dominance (leadership behavior, strict behavior), Submission (uncertain behavior, responsibility of the student), Opposition (admonish behavior, dissatisfy behavior), Cooperation (helping/friendly behavior, understanding behavior).

Validity of the Instrument in Local Context

Validity of QTI in local context was ensured through expert opinion from nine experts. Ishaque and Zaman (2022) explained the criteria of acceptance of item with nine experts, CVI > .75. The instrument was modified in the light of opinion given by the experts. Researcher followed the formula of Lawshe (1975) for calculating content validity of the questionnaire and it was found 0.80. Moreover, reliability of the QTI was ensured through pilot testing and Cronbach's Alpha coefficient was calculated as .79 which was acceptable according to the reliability criteria (DeVellis, 2012).

Final draft of QTI was distributed to the selected students through personal visits of the departments after getting permission from chairpersons for the availability of students and final the schedule. Research ethics were followed throughout the study. Second variable was students' academic achievement and there was a space on QTI for the students to mention their marks. Moreover, these scores were verified with results available in department office.

Data Analysis

The nature of data collected from respondents was quantitative. The collected data was entered in SPSS. Screening of the data was ensured to identify and remove the outliers. After screening of data, frequency, percentage, and Pearson correlation coefficient were used to interpret the results of the data.

First research question was about students' perceptions regarding their interaction with teachers at university level. The range of the responses was calculated and found as 139. On the basis of the range, three levels ranges from: 91-137 as low; 138-184 as moderate; 185-230 as high was formulated. Results of the analysis are presented in the following table.

Table 1
Students' Perception about their Interaction with Teacher

Levels of perception	Frequency	Percentage
Low	119	39
Moderate	173	56

| High | 13 | 5 |
| Total | 305 | 100 |

Table 1 represents that 39% students perceived that they have low level of interaction with their teachers. Moreover, 56% of the students reported that they have moderate interaction with their teachers while only 5% students were of the view that they have high level of interaction with their teachers. These findings clearly demonstrated that majority of the students reported that they have moderate level of interaction with their teachers.

Different authors suggested different interpretations of correlation. Findings of this study are interpreted in the light of criteria suggested by Cohen (1988) as correlation is weak when coefficient value ranges from .10 to .29 and moderate when it ranges from .30 to .49 and strong .50 to 1.0.

Second research question was about correlation of teachers' leadership behavior with the academic achievement of the university level students. To find out the results, Pearson correlation was applied and the results are demonstrated in the subsequent table.

Table 2
Relationship between Teachers' Leadership Behavior and Students' Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.11
Teachers' Leadership Behavior	Sig. (2-tailed)	0.06
	N	305

Table 2 depicts that there is positive correlation between teachers' leadership behavior and students' academic attainment (N = 305; r = .11). Moreover, this relationship was found insignificant as p = 0.06 ≥ 0.05. The magnitude of relationship was found weak as per criteria suggested by Cohen (1988). Due to weak relationship between these two variables it is not of practical use for decision making or policy matters. Next research question was about the correlation of teachers' strict behavior and their students' academic attainment at university level. The detail of results is given in the subsequent table.

Table 3
Correlation between Teachers' Strict Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	-.01
Teachers' Strict Behavior	Sig. (2-tailed)	0.79
	N	305

Table 3 describes that there is relationship between teachers' strict behavior and students' academic achievement but the dimension of this relationship was found negative as r = -.01. Moreover, magnitude of this relationship was found negligibly small which has no practical implications for further policy decisions. Furthermore, the relationship was found insignificant as p = 0.79 ≥ 0.05. Fourth research question was about the relationship between teachers' uncertain behavior and their students' academic performance. Results are presented in the subsequent table.

Table 4
Correlation between Teachers' Uncertain Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.04
Teachers' Uncertain Behavior	Sig. (2-tailed)	0.52
	N	305

Table 4 demonstrates that there exists positive relationship between teachers' uncertain behavior and their students' achievement as $r = 0.04$ but the magnitude of this relationship is very small which may not be useful for further educational implications. Moreover, the relationship was found insignificant as $p = 0.52 \geq 0.05$. Subsequent research question was related to the correlation of teachers' freedom behavior and their students' performance at university level. Results of Pearson correlation are presented in the following table.

Table 5
Correlation between Teachers' Freedom Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.05
Teachers' Freedom Behavior	Sig. (2-tailed)	0.30
	N	305

Table 5 displays that there exists positive relationship between teachers' freedom behavior and their students' achievement as $r = 0.05$ but this relationship was found weak. Moreover, the relationship was found insignificant as $p = 0.30 \geq 0.05$ which is not of any practical worth. The next research question was related to the correlation of teachers' admonish behavior and students' academic achievement. Results of Pearson correlation are presented in the following table.

Table 6
Correlation between Teachers' Admonish Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.04
Teachers' Admonish Behavior	Sig. (2-tailed)	0.46
	N	305

Table 6 displays that there was found positive correlation between teachers' admonish behavior and their students' performance as $r = 0.04$ but magnitude of this relationship was found weak. Moreover, this relationship was found insignificant as $p = 0.46 \geq 0.05$ which is not of any practical worth. The next research question was related to the correlation between teachers' dissatisfied behavior and their students' performance. Results of Pearson correlation are presented in the following table.

Table 7
Correlation between Teachers' Dissatisfied Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	-0.18
Teachers' dissatisfied Behavior	Sig. (2-tailed)	0.75
	N	305

Table 7 describes that there is relationship between teachers' dissatisfied behavior and their students' achievement as *r* = - 0.18. The negative sign shows that the direction of this relationship is negative. Teachers' dissatisfied behavior negatively effects students' academic achievement. Moreover, magnitude of this relationship was found moderate. Furthermore, statistically this relationship was found insignificant as p = 0.75 ≥ 0.05. The subsequent research question was about the correlation between teachers' helping/friendly behavior and their students' academic attainment. Results of are presented in the following table.

Table 8
Correlation between Teachers' Helping/friendly Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.56
Teachers' Helping/friendly Behavior	Sig. (2-tailed)	0.05
	N	305

The results indicates that there is positive correlation between helping/friendly behavior of teachers and students' academic achievement. Moreover, the magnitude of this relationship was found strong. Teachers' helping/friendly behavior strongly effect the academic achievement of the students. Furthermore, this relationship was also found statistically significant as p = 0.05 is equal to α = 0.05. The second last research question was about the relationship of teachers' understanding behavior and students' academic achievement. The results are offered in the table 9.

Table 9
Correlation between Teachers' Understanding Behavior and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.14
Teachers' Understanding Behavior	Sig. (2-tailed)	0.01
	N	305

The results shows that there is positive correlation between teachers' understanding behavior and their students' performance. Moreover, the strength of this relationship was found moderate. Teachers' understanding behavior moderately effect the academic achievement of the students. Furthermore, this relationship was also found statistically significant as p = 0.01 ≤ α = 0.05. The last research question was related to the correlation between overall teacher-student interaction and students' performance. Following table presents the results of Pearson correlation to answer the last research question.

Table 10
Correlation between Teacher-Students Interaction and Students' Academic Achievement

Variable	Academic Achievement	
	Pearson Correlation	0.14
Teachers-student Interaction	Sig. (2-tailed)	0.06
	N	305

Table 10 describes that there exists correlation between teacher-students interaction and students' academic attainment at university level. The direction of this relationship was found positive and the magnitude was found moderate which shows that teacher-students interaction has positive moderate effect on students' academic

achievement. Moreover, this relationship was found statistically insignificant as p = 0.06 ≥ 0.05.

Discussion

The current study was planned to investigate correlation of teacher-student interaction and students' academic achievement. Results of the study illustrated positive moderate correlation between both the variables. The results of the study were sustained by the study piloted by Roorda et al. (2011). Results of the study are also aligned with the study conducted by Ahmad (2018) that teacher-student interaction leads towards lifelong learning of the students. Moreover, results of the study showed that teachers' helping and understanding behavior positively effect on students' academic achievement. Furthermore teachers' dissatisfied behavior negatively effects students' performance because negative correlation was found through this study. There may be different reasons behind teachers' dissatisfied behavior that may be explored through a further research. One of the reason behind their dissatisfied behavior might be their job satisfaction level.

Conclusions

On the basis of results following conclusions were drawn.
1. It was concluded that majority of the students have moderate and low perceptions about teacher-student interaction and few of the students have high perceptions about teacher-student interaction at university level.
2. It was concluded that there is weak but positive and insignificant correlation between leadership behavior of teachers and students' academic achievement at university level.
3. It was concluded that there is negligibly small, weak, negative and insignificant correlation between strict behavior of teachers and students' academic achievement at university level.
4. It was concluded that there is weak positive and insignificant correlation between uncertain behavior of teachers and students' academic achievement at university level.
5. It was concluded that there is weak positive and insignificant correlation between freedom behavior of teachers and students' academic achievement at university level.
6. It was concluded that there is insignificant, weak but positive correlation between admonishing behavior of teachers and students' academic achievement at university level.
7. It was concluded that that there is negative but insignificant correlation between dissatisfy behavior of teachers and students' academic achievement at university level. Moreover, magnitude of relationship was found moderate. It clearly shows that when teachers are not satisfied then their dissatisfaction reflects in their students' achievements.
8. It was concluded that there is strong positive correlation between helping/friendly behavior of teachers and students' academic achievement at university level. Moreover, it was found significant which shows that if teachers behave friendly with their students then the students perform well.
9. It was concluded that there is positive and significant correlation between teacher student understanding behavior of teachers and students' academic achievement at university level. Moreover, magnitude of correlation was found moderate.

10. It was concluded that there is insignificant but moderate positive correlation between teacher-student interaction and students' academic achievement.

Recommendations

It was concluded that teachers' strict and dissatisfied behavior negatively effects students' academic achievement. On the basis of the conclusion, it was recommended that teachers may understand the Psychology of the students and treat tem accordingly instead of behaving strictly with them. Moreover, job satisfaction may be the reason behind teachers' dissatisfied behavior. So, the administration may take the steps to enhance teachers' satisfaction level. it was also concluded that teachers' understanding and friendly behavior has positive effect on students' performance so teachers may adopt friendly behavior through understanding student' problems for better outcomes. Moderate correlation between teacher-student interaction and students' academic achievement was found. So, it is recommended that teachers may adopt some strategies to enhance teacher-students relationship building trust on each other.

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