

# Influence of Teacher-Student Relationship on Junior High Students' Academic Achievements: Mediating Role of Self-esteem

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**Abstract**—In order to study the prediction role of teacher-student relationship on the academic achievements of junior high students as well as the mediating role of self-esteem, 294 students of junior high school participate in the study as the samples and questionnaire survey is conducted. The results are as follows: (1) self-deprecation negatively predicts the academic achievement; (2) conflicts in teacher-student relationship negatively predict the academic achievement; (3) self-deprecation partially mediates the relationship between satisfaction of teacher-student relationship and academic achievements. That is, the satisfaction negatively predicts the self-deprecation, while the self-deprecation further negatively predicts the academic achievements. Through empirical study, the research proves the system in which good teacher-student relationship influences the academic achievements, and shows enlightenment for enhancing the academic achievements of junior high students.

**Keywords**—Teacher-student relationship; Academic achievements; Self-esteem; Mediating role

## I. INTRODUCTION

Junior high students are in a special period of accelerated physical and mental development, and are faced with many internal and external conflicts. Studies have shown that the academic achievements and the self-esteem as an important part of the self-system are related to the teacher-student relationship [1-3].

The self-esteem is the individual's judgement, evaluation and emotional experience of self-value and self-ability in the process of socialization [4]. The self-esteem can be divided into two dimensions, i.e. positive esteem and self-deprecation [5]. Studies have shown that positive esteem usually specifically connected with sense of high value, while self-deprecation is associated with loneliness. The teacher-student relationship is a relationship between teachers and students in aspects such as cognitive affection, and is established through the interpersonal communication in the process of education and teaching [6]. The teacher-student relationship is the most basic interpersonal relationship in school, and is significantly related to the academic emotions and academic achievements [7]. High-quality teacher-student relationship is of significance

for children's motivation that is grown continuously, high attendance, and academic achievements [8].

## II. METHOD AND PROCEDURE

### A. Participants

Cluster random sampling is adopted. Wherein, 301 junior high students from six classes in one junior high school of a city in Shandong Province are selected as participants. A total of 301 questionnaires are distributed, and 301 questionnaires are collected in which 294 are valid. Among the participants, 159 of them are boys with ages of  $13.35 \pm 1.03$ ; 135 are girls with ages of  $13.38 \pm 1.02$ . 97 of them are in sixth grade with ages of  $12.12 \pm 0.45$ ; 92 are in seventh grade with ages of  $13.50 \pm 0.40$ ; 105 are in eighth grade with ages of  $14.38 \pm 0.39$ . The ages of all participants are within the range of  $13.36 \pm 1.03$ .

### B. Research Tools

#### 1) Self-esteem Scale (SES)

The SES of Rosenberg [9] is adopted to measure the overall feelings of adolescents regarding self-value and self-acceptance. The questionnaire consists of 10 items and 2 dimensions, including the dimension of positive esteem represented by items 1, 2, 4, 6, 7 and 8 as well as the dimension of self-deprecation represented by items 3, 5, 9 and 10. The internal consistency reliabilities of the two dimensions are 0.71 and 0.78. The questionnaire adopts four-point scoring, ranging from 1, "not agree at all", to 4, "totally agree". It requires students to tick the description that best fits their situations.

#### 2) Teacher-student Relationship Scale (TS)

The questionnaire of teacher-student relationship translated and revised by QU Zhiyong [10] is adopted herein. The questionnaire consists of 23 items and 4 dimensions. The dimension of intimacy includes items 1, 5, 13, 17, 18, 21, and 23; the dimension of supports includes items 3, 7, 9, and 16; the dimension of satisfaction includes items 4, 8, 10, 11 and 20; the dimension of conflicts includes items 2, 6, 12, 14, 15, 19, and 22. The internal consistency reliabilities of the four dimensions are 0.68, 0.74, 0.68, and 0.82. The questionnaire uses four-point scoring as well, ranging from 1, "not agree at

all", to 4, "totally agree". It requires the students to tick the description that best fits their situation. Conflicts reflect the negative relationship between teachers and students; the higher the score, the more negative the teacher-student relationship tends to be. The other three dimensions reflect the positive teacher-student relationship; the higher the score, the more positive the teacher-student relationship tends to be.

### 3) Academic Achievements

From the academic affairs office, the research group obtains the students' final exam results of Chinese, mathematics, and English of last semester. Since the participants are from different grades and classes, the scores of each subject are standardized within every class so as to obtain the scores  $Z_s$  of Chinese, mathematics, and English. The sum of the scores  $Z_s$  of three subjects of one student are taken as the student's academic achievements.

### C. Procedure

The experimenters of this research are the authors and students majored in psychology. In the on-site testing, overall measurement is adopted. Two experimenters are responsible for participants of one class. The students complete the questionnaires independently within 30 minutes, and the questionnaires are then collected on the spot. SPSS16.0 is used for statistical analysis of the data.

## III. RESEARCH RESULTS

### A. Collection of Description of Self-esteem, Teacher-student Relationship and Academic Achievements

TABLE I. CORRELATION MATRIX OF SELF-ESTEEM, TEACHER-STUDENT RELATIONSHIP AND ACADEMIC ACHIEVEMENTS

Variables	1	2	3	4	5	6	7	8	9
1 Gender	1								
2 Grade	-.31	1							
3 Positive Esteem	.17**	-.05	1						
4 Self-deprecation	-.11	.16**	-.58**	1					
5 Conflicts	-.01	.18**	-.26**	.42**	1				
6. Intimacy	.04	.03	.27**	-.26**	-.52**	1			
7 Supports	-.02	-.60	.28**	-.26**	-.61**	.60**	1		
8 Satisfaction	.68	.05	.28**	-.25**	-.59**	.68**	.64**	1	
9Academic Achievements	-.08	-.02	.15*	-.21**	-.25**	.08	.10	.23**	1
M	.54	7.02	3.10	1.96	2.19	2.83	3.73	3.61	.02
SD	.50	.83	.47	.66	.80	.87	.87	.77	2.64

Table 1 presents the correlation matrix for self-esteem, teacher-student relationship, and academic achievements. The correlation analysis shows that gender is significantly positively correlated with positive esteem ( $r = 0.17$ ,  $p < 0.01$ ), suggesting that the boys' positive esteem is higher than that of the girls. There is no significant correlation between gender and self-deprecation, the teacher-student relationship's conflicts, intimacy, supports, satisfaction, and academic achievements. Grade is significantly correlated with self-deprecation ( $r = 0.16$ ,  $p < 0.01$ ) and conflicts ( $r = 0.18$ ,  $p < 0.01$ ), indicating that the higher the grade, the more self-deprecation and conflicts with teachers are present. The positive esteem is negatively correlated with self-deprecation and conflicts, while it is positively correlated with intimacy, supports, and satisfaction. There is a significant positive correlation between self-deprecation and conflicts, and a significant negative correlation between self-deprecation and intimacy, supports, satisfaction and academic achievements. Conflicts are significantly negatively correlated to intimacy, supports, and satisfaction. Intimacy is positively correlated with supports and satisfaction. Supports and satisfaction are significantly positively correlated. Satisfaction and academic achievements are significantly positively correlated.

<sup>a</sup> Note: a0 stands for girl, while 1 stands for boy; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ , the same below

Based on the above results, there are four possible types of mediating relationship among self-esteem, teacher-student relationship, and academic performance: firstly, conflicts affect academic achievement through the mediation of positive esteem; secondly, conflicts affects academic performance through the mediation of self-deprecation; thirdly, satisfaction affects academic achievements through the mediation of positive esteem; fourthly, satisfaction affects academic achievements through the mediation of self-deprecation. This study only discusses the fourth type of mediating relationship, that is, satisfaction affects academic achievements through the mediation of self-deprecation.

### B. Regression Analysis of Self-esteem, Teacher-student Relationship and Academic Performance

With reference to the mediating role testing procedure [11], this study adopts regression analysis to examine the mediating role of self-deprecation. It can be seen from Table 1 that any

two of satisfaction, self-deprecation, and academic achievements are significantly correlated. Therefore, we can further examine the mediating role of self-deprecation in satisfaction and academic achievements. The results are shown in Table 2.

TABLE II. Validation on Mediating Role of Self-Deprecation for Satisfaction and Academic Achievements

Path	B (SE)	$\beta$
Mediating Role of Self-Deprecation for Satisfaction—Academic Achievements		
C	0.78 (0.20)	0.23***
a	-0.22 (0.74)	-0.25***
b	-0.46 (0.16)	-0.17***
c'	0.64 (0.20)	0.19**

<sup>b</sup> Note: B represents unstandardized regression coefficients of each path, SE is the standard error corresponding to each path, and  $\beta$  is the standardised regression coefficients of each path

Table 2 shows that self-deprecation plays a mediating role between satisfaction and academic performance partially. According to the formula  $ab/c$  for mediating effect, a mediating effect of 0.04 is obtained and the mediating effect counts for 18.5% of the total effect.

## IV. ANALYSIS AND DISCUSSIONS

### A. Relationship between Self-esteem and Academic Achievements

The meta-analysis of self-esteem shows that high self-esteem is conducive to individual academic performance [12], while self-deprecation is negatively correlated with academic performance significantly. The self-degrading students believe that they are useless, worthless, and insufficient in ability, and their academic performance usually is very poor. For these students, parents and teachers should promptly discover their advantages and encourage them, so as to increase their self-confidence and allow them to achieve better academic performance.

### B. Relationship between Teacher-student Relationship and Academic Achievements

The above results show that conflicts are negatively correlated to academic achievements significantly. Clearly, conflicts and confrontation with teachers affect students' academic achievements. This conclusion is consistent with the results of previous studies [13]. The satisfaction of the teacher-student relationship is positively correlated with the academic achievements. This is consistent with the research of WANG Maohua [14], which again proves the important role of good teacher-student relationship in individual learning. After students enter schools, teachers become a major source of influence on student development. The attitude and behaviour of teachers towards students is an important factor for students to experience self-value and assess their own level of development, and it affects the development of students' self-

esteem. Those students who sense the teachers' high expectations can lower their self-deprecation. This change has further affected students' academic achievements.

### C. Self-deprecation Being the Important Path Influencing Satisfaction

The study shows that the satisfaction of teacher-student relationship not only directly promotes academic achievements, but also indirectly promotes academic achievements through the mediating role of self-deprecating. The self-deprecation can reduce the connection between individuals and the society, producing experience of depression and loneliness and thus harming academic achievements. The satisfaction of the teacher-student relationship helps to reduce the self-deprecation of students, and enable them to see advantages and disadvantages, to avoid weaknesses, to change the status, to buffer the negative consequences of academic failure [15], which is conducive to improving academic achievements.

## V. SUGGESTIONS FOR TEACHERS

### A. Proposing Reasonably High Expectations for Students to Facilitate Their Development

Since junior high students are going through rapid physiological and psychological changes, teachers should propose moderately high expectations for each student based on his or her self-esteem characteristics and gender, use flexible and diverse teaching methods in accordance with their aptitude, and promote the each student's development of academic achievements and personality.

### B. Praising Students According to the Theory of Multiple Intelligences

The backwardness in academic achievements leads to students' sense of inferiority as well as descending of their self-esteem. According to Gardner's theory of multiple intelligences, teachers can use means of multiple-dimensional dynamic development to evaluate students and protect students' self-esteem. For example, when evaluating a student with poor academic achievements but are outstanding in physical education, teachers can praise his/her hard-working spirits, and encourage him/her to learn hard so as to achieve comprehensive development.

### C. Paying More Attention to Underachieved Students

At present, the assessment of teachers is often linked to students' academic achievements. Therefore, teachers usually pay more attention to the overachieved students, which seriously hurt the self-esteem of the underachieved students. Teachers should pay attention to the advantages and potentials of underachieved students, increase their motivation for learning, and improve their academic achievements through advantage transference.

## VI. CONCLUSIONS

(1)Self-deprecation negatively predicts the academic achievements.

(2)Conflicts negative predict the academic performance.

(3)Self-deprecation partially mediates the satisfaction and the academic achievements.

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