

# Study on the Relationship Between School Belonging, Personality and Academic Performance

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**Abstract**—This study focuses on two aspects as follows: first is to find out the condition of school belonging and personality traits, second is to find the relationship among the school belonging, personality traits and the academic achievement. This study use the PSSM in Chinese and the middle school students personality factor questionnaire, and investigates 467 students from 2 middle schools in Xian yang, and 3 grades, 9 classes, the result is analyzed by correlation analysis, multivariate variance analysis and multivariate regression analysis.

**Keywords**—school belonging; personality traits of middle school students; academic achievement

## I. INTRODUCTION

### A. Problem Posing

Middle schools are a group that is much concerned by society and The Times. They shoulder two important tasks, one is their own psychological state and physical development, the other is their studies. However, in many schools nowadays, the requirements and concerns for academic performance have been far greater than the development of students' psychological conditions. Therefore, it is imperative to study the influence on academic performance from the perspective of psychological development.

### B. Research Significance

1) *Theoretical significance*: In this article, studies the three factors of school belonging, personality and academic performance, the conclusion can be used as a theoretical guidance in school education, not only to their aptitude, but also raises the student good school belonging, in normal

times "workbook" at the same time, through this method, also can achieve the result that improve academic performance.

2) *Practical significance*: Through the study of this paper, we know the distribution of school belonging of middle school students and the differences of school belonging of students with different academic achievements, combined with the research and analysis of personality traits, achieving the aim of improving student's academic performance. These conclusions can be applied in daily school education, and we can achieve our goal of teaching and educating people through different cultivation methods.

## II. TEXT

### A. Research Purpose

- To explore the relationship between school belonging, personality and academic performance;
- to find a way to guide and improve students' performance by changing students' understanding of the school and by treating students with different personality traits with different education methods by studying the relationship between school belonging, personality traits and academic performance.

### B. Subject Sampling

Two middle schools with the same teaching level were selected in Xianyang city, and a total of 9 classes were randomly selected. Classes were distributed in the first, second and third grades, and three classes in each grade. A total of 478 questionnaires were issued and 467 questionnaires were returned, with a recovery rate of 98%. The specific situation is shown in "Table I".

TABLE I. DISTRIBUTION OF SUBJECTS (N=467)

	Gender		Age (average)	Total number
	N	M		
Seventh grade		93	71	13
Eighth grade		80	70	14
Ninth grade		85	68	15
Total		258	209	467

### C. Research Tools

In this study, we use psychological tests; the selected scales include the School Sense Scale and the Five-Factor Questionnaire for Middle School Students' Personality, and collect test scores for the last final exam of the student's final exam, Chinese, math, foreign language.

### D. Data Collation and Statistics

All data were collected and analyzed by SPSS 16.0 for windows software.

### E. Research Result

1) *Overall situation of school belonging and personality traits:* The research on the characteristics of school belonging and personality traits of middle school students, first, statistical analysis was conducted on each dimension of school belonging and personality traits at the individual level of students. The mean value, standard deviation, maximum value and minimum value were shown in "Table II".

TABLE II. DESCRIPTIVE STATISTICS OF SCHOOL BELONGING AND PERSONALITY TRAITS

	N	Min	Max	M	Std
School belonging	467	23	108	75.04	13.472
Extroversion	467	13	50	37.85	6.969
Agreeableness	467	15	50	38.95	6.425
Emotional	467	10	50	28.95	7.682
Prudence	467	15	46	30.47	5.696
Openness	467	10	50	34.71	7.338

It can be seen from "Table II" that for school belonging, the average level indicates that it is basically maintained at the level of "basic consent" and is generally above the average level. For the five dimensions of personality traits, except that emotionality is slightly lower which is between 2-3, all the other dimensions are between 3-4, belonging to the middle and upper level, and the degree of divergence of emotionality and openness is greater than the other three dimensions.

2) *Differences in the demographic variables of school belonging:* With grade and gender as independent variables and school belonging as dependent variables, multivariate anova was used to study whether students of different genders and grades had differences in their sense of belonging. The results are shown in "Table III", "Table IV".

TABLE III. DISTRIBUTION OF SCHOOL BELONGINGS IN GRADE AND GENDER

	M		F		Total	
	M	SD	M	SD	M	SD
Seventhgrade	74.59	11.687	77.32	11.596	75.79	11.691
Eighth grade	75.16	14.739	75.20	13.557	75.18	14.152
Ninth grade	73.51	15.286	74.87	13.650	74.10	14.561
Total	74.41	13.888	75.82	12.930		

TABLE IV. VARIANCE ANALYSIS OF SCHOOL BELONGING AND GENDER AND GRADE

Sources of variation	Df	MS	F	P
Grade	2	121.681	0.688	0.513
Gender	1	217.775	1.195	0.275
Grade * Gender	2	70.543	0.387	0.679

As can be seen from "Table IV", the difference in grade and gender of school belonging is not significant, and the interaction between grade and gender is not significant.

3) *Differences in demographic variables in personality traits:* With grade and gender as independent variables and

personality traits as dependent variables, multivariate analysis of variance was used to study whether students of different genders and grades had differences in their personality traits. The results are shown in "Table V", "Table VI".

TABLE V. DISTRIBUTION OF PERSONALITY TRAITS IN GRADES AND GENDERS

		First grade		Second grade		Third grade		Total	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Extroversion	M	38.34	6.971	37.85	6.287	36.70	7.977	37.64	7.133
	F	40.01	6.748	38.33	6.194	35.81	6.776	38.10	6.769
	T	39.07	6.904	38.07	6.227	36.31	7.464	37.85	6.969
Agreeableness	M	37.63	7.123	37.38	6.689	38.12	6.602	37.71	6.799
	F	40.56	6.137	40.44	5.492	40.43	5.097	40.48	5.577
	T	38.91	6.845	38.81	6.328	39.13	6.081	38.95	6.425
Emotional	M	29.21	7.055	29.31	8.296	27.29	7.252	28.60	7.552
	F	28.31	7.922	30.46	7.366	29.43	8.173	29.39	7.836
	T	28.81	7.438	29.85	7.87	28.23	7.717	28.95	7.682
Prudence	M	31.41	6.008	30.91	5.533	29.73	5.928	30.70	5.858
	F	31.58	5.779	29.90	5.507	29.01	4.876	30.20	5.491
	T	31.49	5.891	30.44	5.525	29.42	5.486	30.47	5.696
Openness	M	35.04	7.168	35.43	6.891	35.16	8.125	35.20	7.393
	F	34.81	7.159	33.27	7.627	34.21	6.932	34.10	7.242
	T	34.94	7.143	34.42	7.299	34.75	7.616	34.71	7.338

TABLE VI. VARIANCE ANALYSIS OF PERSONALITY TRAITS, GENDER AND GRADE

	Grade		Gender		Grade * Gender		LSD
	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>p</i>	
Extroversion	7.137**	0.001	0.431	0.512	1.356	0.259	Grade7>Grade9,Grade8>Grade9
Agreeableness	0.126	0.882	22.240**	0.000	0.151	0.860	
Emotional	1.601	0.203	1.242	0.266	1.610	0.201	
Prudence	5.516**	0.004	0.976	0.324	0.466	0.628	Grade7>Grade9
Openness	0.240	0.786	2.657	0.104	0.670	0.512	

<sup>a</sup>. Note : \*  $p < 0.05$ , \*\*  $p < 0.01$

From this table can be seen that the personality trait of agreeableness significant differences on gender factors, and the girl on the agreeableness are significantly higher than boys, and personality traits of extroversion and caution in grade differences are significant, other dimensions and no significant grade differences, and through the LSD test, extraversion presented on the grade difference is the first and second day respectively with a significant grade differences in, there was no significant difference between the first and second day, and the first is greater than the second day of lunar calendar is greater than the third; In terms of grade prudence, only the difference between grade one and grade

three is significant, and grade one is larger than grade three, while there is no significant difference between the other two grades. And there was no significant difference in the interaction between personality traits 、gender and grade.

4) *The relationship between school belonging and academic achievement:* In this study, Pearson correlation coefficient was used to conduct a preliminary study on the relationship between school belonging and academic performance. The results are shown in “Table VII”.

TABLE VII. THE CORRELATION BETWEEN SCHOOL BELONGING AND ACADEMIC PERFORMANCE

	Academic performance
The sense of belonging	0.255**

<sup>a</sup>. Note : \*\*  $p < 0.01$

It can be seen from the above table that there is a significant positive correlation between school belonging and

academic performance, with a correlation coefficient of 0.255.

5) *The relationship between personality traits and academic performance:* In this study, Pearson correlation coefficient was used to conduct a preliminary study on the

relationship between personality traits and academic performance. The results are shown in “Table VIII”.

TABLE VIII. CORRELATION BETWEEN PERSONALITY TRAITS AND ACADEMIC PERFORMANCE

	Extroversion	Agreeableness	Emotional	Prudence	Openness	Academic performance
Extroversion	1					
Agreeableness	0.530**	1				
Emotional	-0.023	0.085	1			
Prudence	0.366**	0.482**	0.202**	1		
Openness	.605**	0.430**	0.015	0.403**	1	
Academicperformance	0.084	0.133**	-0.127**	0.079	0.100*	1

<sup>b</sup> Note : \* $p < 0.05$ , \*\*  $p < 0.01$

It can be seen from the table that academic achievement is significantly positively correlated with appropriateness and emotionality in personality traits at the level of  $P < 0.01$ , and significantly positively correlated with openness at the level of  $P < 0.05$ , but not with extraversion and caution.

emotionality were predictive of academic achievement. The lower emotional students are, the higher their academic performance is.

### III. CONCLUSION

- Middle school students have a good sense of school belonging. There is no significant difference in the grade and gender and the interaction between grade and gender.
- Middle school students' personality trait of agreeableness significant differences on gender factors, namely the agreeableness of boys and girls are very different, and the girls are significantly higher than boys, extraversion and exist significant differences on the grade of caution, other dimensions and no significant grade differences, and on the extraversion, the first and the second day, respectively, with significant grade differences, and the new moon is greater than the lunar calendar, lunar calendar is greater than the third, but the first and second day and there were no significant differences, shows that students in grade three in extroversion score is low; In the aspect of prudence, only the difference between the first day and the third day is significant, and the first day is larger than the third day, while there is no significant difference between the other two grades, indicating that the students of the first day and the third day are greatly different in the aspect of prudence. There was no significant difference in the interaction between personality traits and gender and grade.
- School belonging was positively correlated with academic achievement, and school belonging predicted academic achievement positively. That is to say, the higher the sense of belonging is, the higher their academic performance is.
- In personality traits, agreeableness, emotionality and openness were significantly correlated with academic achievement, in which agreeableness and

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