



## Social Support and Academic Satisfaction in Calligraphy Learning: Evidence from Upper Primary School Students in the Context of Double Reduction Policy

Zhe Dong<sup>1</sup>, Kou Heung<sup>2</sup>, Zhongzhi Pan<sup>3</sup>, Dong Wang<sup>4</sup>, Jingjing Wang<sup>5</sup>

### Abstract

In the context of China's "double reduction" policy, calligraphy education has gained increasing attention as an essential medium for preserving and transmitting traditional Chinese culture at the primary education level. Despite this growing emphasis, the implementation of calligraphy instruction in elementary schools still faces several challenges, including low student motivation, limited engagement in classroom activities, unsatisfactory learning experiences, and relatively low academic satisfaction. These issues indicate that instructional methods do not solely influence students' learning success, but are also influenced by external environmental factors, particularly social support. Nevertheless, empirical studies examining the relationship between social support and academic satisfaction in primary school calligraphy education remain limited. Therefore, this study aims to analyze the influence of social support on the academic satisfaction of upper-grade primary school students participating in calligraphy learning. The study employed a quantitative survey design involving 518 fifth- and sixth-grade students from five primary schools in X City, China. Data were collected via questionnaires and analyzed using SPSS version 25.0. The findings revealed that students generally perceived social support at an above-average level and demonstrated high levels of academic satisfaction. Furthermore, the analysis indicated a significant positive correlation between social support and academic satisfaction. Social support was also found to significantly predict students' academic satisfaction. These findings suggest that support from families, schools, and peers plays a crucial role in enhancing students' learning experiences and overall satisfaction in calligraphy education. The study implies the importance of establishing a collaborative family-school-community support system to create a more positive and supportive learning environment, thereby improving students' academic satisfaction and the overall quality of calligraphy education.

**Keywords:** *Academic Satisfaction, Calligraphy Education, Social Support.*

### A. Introduction

The strategic advancement of national cultural confidence, coupled with ongoing reforms in basic education curricula, has elevated Chinese calligraphy education to a critical component of aesthetic and traditional culture instruction in primary and secondary schools. In recent years, a series of national policies—including the "Double Reduction" policy implemented in 2021—have not only mandated the strengthening of education on China's excellent traditional culture

<sup>1</sup>Department of Education, Graduate School of Sehan University, Jeollanam-do 58447, Korea. [562208801@qq.com](mailto:562208801@qq.com)

<sup>2</sup>Department of Education, Graduate School of Sehan University, Jeollanam-do 58447, Korea

<sup>3</sup>Department of Education, Graduate School of Sehan University, Jeollanam-do 58447, Korea

<sup>4</sup>Department of Education, Graduate School of Sehan University, Jeollanam-do 58447, Korea

<sup>5</sup>Department of Education, Graduate School of Sehan University, Jeollanam-do 58447, Korea

but have also provided students with expanded opportunities for holistic development and interest cultivation (Cheng, 2024; Zeng, 2025). While calligraphy learning has been theoretically posited to foster students' concentration, patience, and cultural identity (Chen et al., 2024; Chen et al., 2017), empirical evidence reveals a striking and paradoxical phenomenon: despite robust policy support, primary school calligraphy teaching practices continue to suffer from low student interest, poor learning experiences, and suboptimal academic satisfaction. Research has shown that schools face insufficient funding and facilities for calligraphy education, while parents and local communities demonstrate low willingness to participate in calligraphy activities (Chen, 2025). Additionally, calligraphy teachers report significant challenges in interdisciplinary teaching integration, leading to increased workload and difficulty in maintaining student engagement (Liu & Saong, 2025). This disconnect between macro-level policy endorsement and micro-level pedagogical outcomes presents a compelling empirical puzzle that demands systematic scholarly attention.

Despite the recognized importance of calligraphy education, existing literature remains markedly limited in addressing the psycho-social mechanisms underlying students' learning experiences in this domain. Current research has predominantly focused on curriculum design, instructional methodologies, and the cultural value of calligraphy pedagogy (Kong, 2023; Li-Tsang et al., 2022). While recent studies have examined the relationship between Chinese calligraphic handwriting education and student academic emotions, demonstrating that calligraphy education is associated with higher levels of positive low-arousal academic emotions among primary school students (Chen et al., 2024), these investigations have primarily concentrated on emotional outcomes rather than on academic satisfaction as a multidimensional construct. Furthermore, although social support theory has been extensively applied in general educational contexts, studies examining the role of family, teacher, and peer support in art education have shown that different sources of support differentially predict learning adaptation outcomes (Chen, 2016). However, to date, no empirical study has systematically examined the role of social support in predicting academic satisfaction specifically within the context of primary school calligraphy education. Scholars have noted that visual art education in China, even as extracurricular activity research, remains significantly understudied compared to music, sport, and STEM-oriented activities, with fewer than five relevant studies identified in systematic reviews (Jindal-Snape et al., as cited in *Frontiers in Psychology*, 2022). Thus, a significant research gap exists concerning the relationship between social support resources and student satisfaction in traditional arts education.

Within the context of the "Double Reduction" policy, normal universities and teacher training institutions face challenges in calligraphy teacher preparation, curriculum resources, and the integration of information technology teaching methods (Cheng, 2024). Research on the implementation of calligraphy education from the perspective of the United Nations Sustainable Development Goals (SDG4 - Quality Education) has revealed that while schools demonstrate strong administrative and teacher coordination, they continue to struggle with insufficient funding and low community participation (Chen, 2025). To address these limitations, this study offers a novel quantitative correlational approach that explicitly investigates the relationship between social support (as an exogenous variable) and academic satisfaction (as an endogenous variable) among upper primary school students engaged in calligraphy learning. Specifically, this research targets students in grades, a developmental period characterized by heightened cognitive and socio-emotional sensitivity to environmental support. The study pursues three focused objectives: (1) to analyze the overall levels of perceived social support and academic satisfaction among senior primary school students in calligraphy education; (2) to explore the correlation between social support and academic satisfaction; and (3) to verify the predictive effect of social support on students' academic satisfaction. By concentrating on these objectives,

this investigation shifts the scholarly conversation from descriptive accounts of policy implementation toward explanatory models of student psycho-social experience in calligraphy education, thereby addressing the methodological and conceptual gaps identified in prior research.

This research endeavor is important for three principal reasons. Theoretically, it extends the application of social support theory into the under-researched domain of traditional arts education, thereby enriching our understanding that supportive environments are not merely relevant for cognitively-oriented academic subjects but are equally critical for skill-based aesthetic learning that demands persistence and self-regulation. Research has demonstrated that family support, teacher support, and peer support significantly influence various dimensions of learning adaptation, including learning methods, attitudes, habits, and interpersonal relationships, with class type moderating these relationships (Chen, 2016). Furthermore, studies have shown that long-term experience of Chinese calligraphic handwriting is associated with better executive functions and stronger resting-state functional connectivity in related brain regions, indicating the cognitive benefits of sustained calligraphy practice (Chen et al., 2017). Practically, identifying the predictive effect of social support on academic satisfaction can inform targeted interventions for teachers, parents, and policymakers—such as enhancing emotional encouragement, providing informational support on calligraphy techniques, and offering material resources—to improve student satisfaction and mitigate silent dropout from extracurricular cultural activities. Studies have indicated that sensorimotor intervention programs can effectively improve Chinese handwriting performance in primary school students, providing a model for evidence-based pedagogical support (Li-Tsang et al., 2022). In the context of the "Double Reduction" policy's emphasis on interest-driven talent development, academic satisfaction serves as a key indicator of policy implementation success at the grassroots level. Finally, this research contributes to the broader discourse on educational equity, as studies have shown that while art education plays a vital role in Chinese children's cognitive development, access to quality visual arts education remains uneven, with socioeconomic status influencing cultural capital accumulation and extracurricular participation (Frontiers in Psychology, 2022). Consequently, this study bridges critical gaps in the literature by connecting students' psycho-social experiences directly with the broader national agenda for traditional cultural education reform and sustainable development goals for quality education.

## **B. Literature Review**

### ***Prior Research on Social Support***

Social Support is an important research concept in the fields of social psychology and educational psychology. It is generally believed that social support refers to the emotional care, information help and practical resource support that individuals receive in the social relationship network (House, 1981). This concept was first used in the fields of social psychology and health research, and was later gradually introduced into educational research.

Domestic and foreign scholars have divided the structure of social support into multiple dimensions. Wilhite (1990) pointed out in a study of student groups that social support mainly comes from three aspects: family, teachers, and peers. These supports can effectively promote students' psychological adaptation and learning development. Ma (2003) further proposed in the Chinese context that social support can be divided into three dimensions: subjective support, objective support, and support utilization. Among them, subjective support refers to an individual's perception of being cared for, respected, and understood;

objective support refers to the help and resources actually obtained; support utilization reflects an individual's ability to use social support resources.

In the field of educational research, a large number of empirical studies have shown that social support has an important impact on students' learning process. For example, Guo (2006) research pointed out that support from families and teachers can significantly improve students' learning confidence and participation. Hou et al. (2011) found through a survey of middle school students that the higher the level of social support, the higher the positive emotions and learning engagement displayed by students in the learning process. Wu's (2013) research also shows that social support can effectively relieve students' learning pressure and promote their learning adaptation.

In recent years, with the rise of educational ecological research, scholars have paid more attention to the impact of the family-school-peer multiple support system on student development. Zhou et al. (2014) pointed out that in the basic education stage, teacher support and family support are important environmental factors that affect students' learning experience. Research by Zhao et al. (2014) further found that peer support also plays an important role in the formation of students' learning motivation and learning attitude.

#### ***Prior Research on Academic Satisfaction***

Academic satisfaction refers to students' overall evaluation of their own learning experience and learning environment. It is an important psychological indicator to measure students' learning experience and education quality. Azevedo (2009) pointed out that academic satisfaction can reflect students' subjective feelings about the learning environment, course content, and teacher-student relationships, and is one of the important indicators for evaluating the quality of education.

Foreign scholars began to pay attention to the influencing factors of students' academic satisfaction earlier. Jiang's (2014) research found that the learning environment, teacher teaching methods, and peer relationships can significantly affect students' academic satisfaction levels. When students gain positive emotional experiences during the learning process, their academic satisfaction will increase accordingly.

In terms of domestic research, scholars generally explore the influencing factors of academic satisfaction from aspects such as school environment, teacher teaching, and family support. Wang(2018) research shows that teachers' teaching ability and teacher-student relationship are important factors that affect students' academic satisfaction. Hu(2018) pointed out that a good home learning environment can significantly improve students' learning experience and learning satisfaction.

In addition, some studies explore the formation mechanism of academic satisfaction from the perspective of students' psychological development. Research by Yang and Liu (2016) found that students' learning motivation, self-efficacy, and learning engagement were significantly and positively related to academic satisfaction. Liu and Ma (2015) pointed out that positive learning emotions can effectively improve students' satisfaction with the learning process.

Generally speaking, existing research generally believes that academic satisfaction is not only affected by individual internal factors, but also plays an important role by the external learning environment. Among them, social environmental factors such as family

support, teacher support, and peer interaction are considered important variables that affect students' academic satisfaction.

### ***Prior Research on the Relationship between Social Support and Academic Satisfaction***

With the continuous development of social support theory in educational research, more and more scholars have begun to pay attention to the impact mechanism of social support on students' academic satisfaction. Research generally believes that social support can improve students' academic satisfaction by improving their learning experience and emotional state.

Research by Wilhite (1990) pointed out that when students receive support from families and teachers in the learning process, their learning confidence and learning satisfaction will be significantly improved. Chang et al.'s (2007) study also found that social support can effectively enhance students' positive evaluation of the learning environment, thereby improving their academic satisfaction.

In domestic research, Zhou et al. (2014) found through a survey of middle school students that family support, teacher support, and peer support were all significantly positively correlated with students' academic satisfaction. Research by Zhao et al. (2014) further pointed out that social support can not only directly affect students' academic satisfaction, but also play an indirect role by affecting psychological variables such as learning motivation.

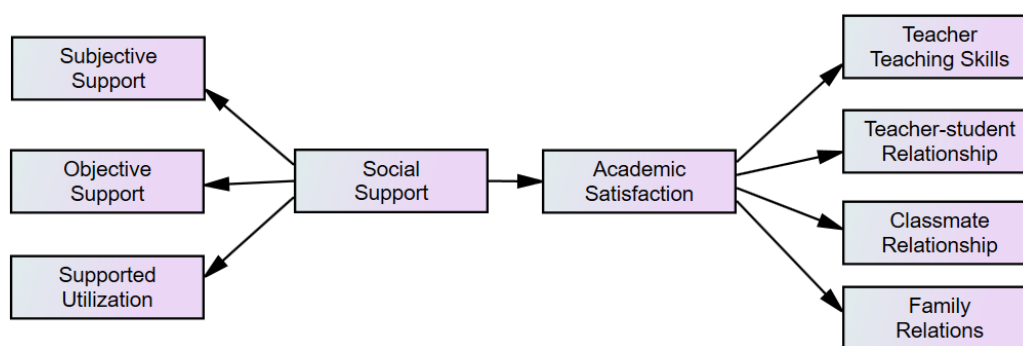
In addition, Chen's (2023) research shows that in school education situations, the more social support students perceive, the more positive their learning experience will be, and the higher their overall evaluation of the learning environment will be. Wu (2020)'s research also found that a good social support system can enhance students' sense of belonging in learning, thereby improving their academic satisfaction level.

To sum up, existing research generally agrees that there is a significant positive correlation between social support and academic satisfaction. Support from families, teachers, and peers can provide students with a positive learning environment and improve their academic satisfaction by improving their learning experience and emotions. However, there are still relatively few empirical studies on the relationship between social support and academic satisfaction in the context of primary school calligraphy education, so further relevant research is necessary.

## **C. Methods**

### ***Research Models and Hypotheses***

A research model is a simplified description of a researcher's research topic to achieve a specific goal. Research models can indirectly facilitate explanations and serve as tools for identifying certain phenomena as well as necessary processes in scientific research. If used correctly, it can serve a theoretical purpose. This study takes primary school calligraphy students in grades 5-6 as the research object, explores the relationship between social support and academic satisfaction in calligraphy learning, and studies their differences in different demographic variables. Based on the relationship between previous research and theoretical background investigations, this study established a model with social support as the independent variable and academic satisfaction as the dependent variable, as shown in Figure 1.



**Figure 1.** Research model

In addition, the following assumptions were established. First, social support in calligraphy learning for primary school students in grades five and six has a significant positive impact on academic satisfaction. Second, gender and grade have a certain impact on social support and academic satisfaction in calligraphy learning among primary school students in fifth and sixth grade.

**Research Objects and Procedures**

This study takes senior primary school students in X city, China, as the research subjects. A cluster sampling method was used to conduct a questionnaire survey on 5th-6th-grade students who were receiving calligraphy courses from 5 primary schools in X city. In this study, a total of 540 questionnaires were distributed, and 532 questionnaires were recovered. After excluding incomplete and invalid questionnaires, 518 valid questionnaires were finally obtained, with an effective recovery rate of 95.9%. Among the effective samples, the ratio of boys to girls is basically balanced, and the students are all from primary schools that teach calligraphy courses, so they have a certain degree of representativeness. This study uses SPSS 25.0 statistical software to analyze the collected data, which mainly includes the following statistical methods:

First, descriptive statistical analysis: Means and standard deviations of the variables of social support and academic satisfaction were analyzed to understand the overall development level of students. Secondly, in order to study whether there are differences in the impact of demographic variables on students participating in calligraphy education in grades 5-6 of primary schools, a difference analysis was conducted. Third, the Pearson correlation analysis method was used to explore the correlation between various dimensions of social support and academic satisfaction. Finally, multiple regression analysis was used to test the predictive effect of social support on academic satisfaction to verify the research hypotheses.

**Table 1.** Basic demographic information of study subjects

Basic Information	Category	Frequency (N)	Ratio (%)
Gender	Male	243	46.9
	Female	275	53.1
Grade	Fifth	301	58.1
	Sixth	217	41.9

**Social Support and Academic Satisfaction Scale**

This study used the social support scale, which adopts the scale SSRS-CA adapted by Dai Xiaoyang (2010) based on Xiao Shuiyuan's "Social Support Rating Scale (SSRS)". According to the research objectives and research purposes, the scale of social support for students learning calligraphy in grades 5-6 of primary schools was adjusted. This research scale contains 9 items and 3 dimensions. The scale adopts a five-point Likert scale, ranging from "1=strongly disagree" to "5=strongly agree". Higher scores indicate higher levels of social support perceived by students. In this study, the reliability of the social support scale was tested, and the results showed that the overall Cronbach's  $\alpha$  coefficient of the scale reached a good level of 0.818, indicating that the scale has good internal consistency.

**Table 2.** Composition of the Social Support and Academic Satisfaction Questionnaire

Variable	Total number of items	Cronbach $\alpha$
Social Support	9	0.818
Academic Satisfaction	12	0.874
<i>Scoring method: 1 point for strongly disagreeing, 2 points for disagreeing, 3 points for generally speaking, 4 points for agreeing, and 5 points for strongly agreeing.</i>		

Based on the characteristics and goals of this study, this study is based on the primary school students' academic satisfaction scale compiled by Hu (2010), and refers to the primary school students' academic satisfaction scale revised by Han (2012) to complete the preparation of the primary school students' academic satisfaction questionnaire. The primary school students' academic satisfaction scale, revised by Han (2012), has a total of 27 items. Measurements were also conducted using a five-point Likert scoring method. The higher the score, the higher the student's satisfaction with the learning environment and learning process. Through reliability analysis, the overall Cronbach's alpha coefficient of the academic satisfaction scale is 0.874. Reached a high level, indicating that the scale has good reliability.

**D. Results and**

*Descriptive Statistical Analysis of Research Objects*

Descriptive statistical analysis was conducted to understand the overall characteristics of the research subjects in this study in terms of social support and academic satisfaction. The relevant results (Table 3) show the key descriptive indicators of each variable, such as mean (M), standard deviation (SD), skewness, and kurtosis. The mean value for social support is 3.35, and the mean value for academic satisfaction is 3.35.

**Table 3.** Descriptive Statistics of Main Variables

Name	Min	Max	M	SD	Skewness	Kurtosis
Social Support	1.22	4.78	3.35	0.72	-.46	-.23
Academic Satisfaction	1.25	4.58	3.35	0.73	-.54	-.34

*Difference Analysis*

In order to study the impact of demographic variables on students participating in calligraphy education in grades 5-6 of primary schools, an independent sample t-test and one-way analysis of variance (ANOVA) in SPSS 25.0 were used to test whether there were significant differences in demographic variables between students' social support and academic satisfaction. The analysis results and discussion on the differences in social support and academic satisfaction by factors such as gender and grade are listed below.

**Table 4.** Gender Results of Social Support and Academic Satisfaction

Variable	Gender	N	M	SD	t
Social Support	Male	243	3.26	.71	-2.664***
	Female	275	3.43	.72	
Academic Satisfaction	Male	243	3.25	.69	-3.118***
	Female	275	3.44	.74	
*** $p < 0.001$					

As shown in Table 4, the average overall social support score of male students is  $M=3.26$  ( $SD=.71$ ), while the score of female students is significantly higher,  $M=3.43$  ( $t=-2.664$ ,  $p<0.001$ ). The average overall academic satisfaction score of male students was  $M=3.25$  ( $SD=.69$ ), while the score of female students was significantly higher,  $M=3.44$  ( $t=-3.118$ ,  $p<0.001$ ). These results indicate that female students have significantly higher levels of social support and academic satisfaction than male students in all dimensions studied.

As shown in Table 5, the average social support of fifth-grade calligraphy students is  $M=3.28$ , while the average social support of sixth-grade calligraphy students is  $M=3.44$ . The difference between the two is statistically significant ( $t=-3.587$ ,  $p<0.001$ ). The average academic satisfaction of fifth-grade calligraphy students is  $M=3.28$ , while the average academic satisfaction of sixth-grade calligraphy students is  $M=3.45$ . The difference between the two is statistically significant ( $t=-3.532$ ,  $p<0.001$ ), which shows that sixth-grade calligraphy students have significantly higher levels of social support and academic satisfaction.

**Table 5.** Grade-Level Results of Social Support and Academic Satisfaction

Variable	Grade	N	M	SD	t
Social Support	Fifth	243	3.28	.72	-3.587***
	Sixth	275	3.44	.71	
Academic Satisfaction	Fifth	243	3.28	.72	-3.532***
	Sixth	275	3.45	.72	
*** $p < 0.001$					

### ***Correlation Analysis between Social Support and Academic Satisfaction among Primary School Calligraphy Students in Grades 5-6***

In questionnaire studies, the data of the Likert scale used in this study are usually considered to be continuous numerical variables, so the Pearson correlation coefficient is generally used for analysis when analyzing the correlation between the two scales. Pearson correlation coefficient analysis is a method to measure the correlation between two variables or dimensions, but a high coefficient does not mean that there must be a decisive relationship between the two. In most cases,  $0.5 < |r| < 0.8$  indicates a correlation,  $p < 0.05$  indicates a significant correlation, and  $p < 0.01$  indicates a high correlation.

**Table 6.** Correlation between main variables and sub-dimensions

	1	2	3	4	5	6	7
1. Subjective Support	1						
2. Objective Support	.318**	1					
3. Level of Utilization of Support	.411**	.364**	1				

4. Teacher Teaching Skills	.251**	.236**	.267**	1			
5. Teacher-student Relationship	.295**	.302**	.348**	.405**	1		
6. Classmate Relationship	.333**	.299**	.345**	.414**	.474**	1	
7. Family Relations	.251**	.203**	.274**	.319**	.485**	.478**	1
** $p < .01$							

Table 6 shows the correlation analysis between the three dimensions of social support and the four dimensions of academic satisfaction. As can be seen from the table, there is a significant positive correlation between social support and academic satisfaction ( $r=0.495$ ,  $p<0.01$ ) for students learning calligraphy in grades 5-6 of primary school. In addition to examining the overall relationship between social support and academic satisfaction, this study also explored the correlations between subdimensions of these two variables. All correlation coefficients ranged from 0.129 to 0.485, and all coefficients reached the level of statistical significance ( $p<0.01$ ).

Specifically, the two dimensions of social support, subjective support and utilization of support, have the strongest correlation, with a correlation coefficient range of 0.411 ( $p<0.01$ ), while the correlation between subjective support and objective support is the weakest, with a correlation coefficient of 0.318 ( $p<0.01$ ). Academic satisfaction includes teachers' teaching skills, teacher-student relationship, classmate relationship and family relationship, and the correlation coefficient ranges from 0.319 to 0.485. The correlation between teacher-student relationship and family relationship is the strongest ( $r=0.485$ ,  $p<0.01$ ), and the correlation between teacher teaching skills and family relationship is the weakest ( $r=0.319$ ,  $p<0.01$ ).

**Regression Analysis between Social Support and Academic Satisfaction**

Based on the test results of the relationship between social support and academic satisfaction variables and dimensions, the impact of social support on academic satisfaction was further studied. In addition, the hypotheses of H1 and H2 were tested through single-factor regression analysis. In linear regression equations, data distortion may occur due to complex calculations. Further validation of the regression model is needed. As shown in Table 7, social support has a significant positive impact on academic satisfaction. The adjusted R-square value is  $Adj.R^2=.244$ , which indicates that social support explains 24.4% of the variance in academic satisfaction.

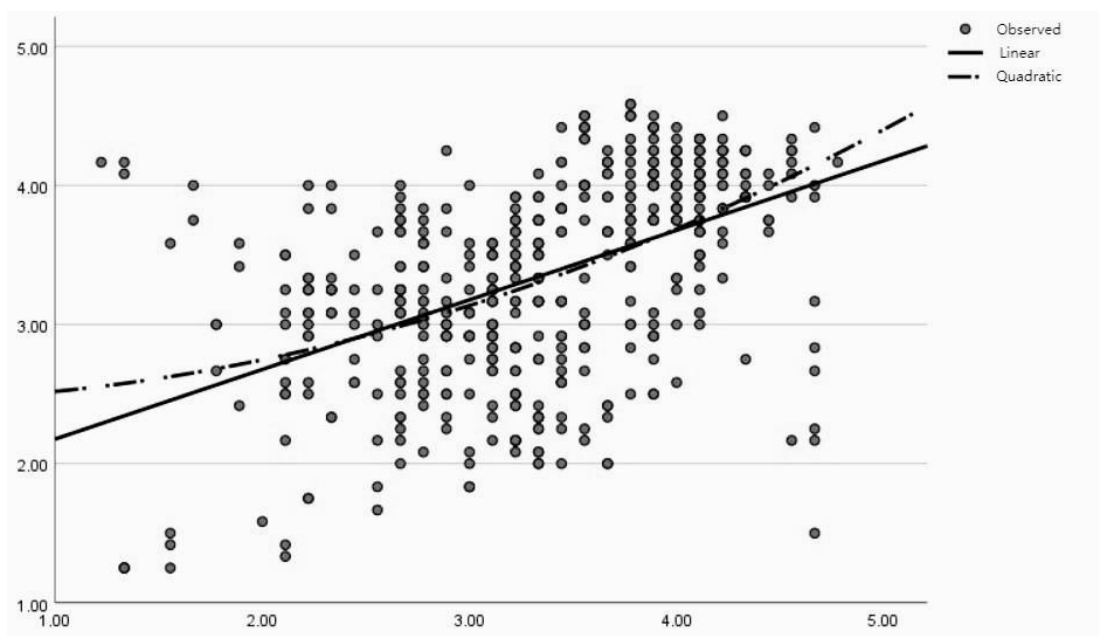
**Table 7.** Regression Analysis of Social Support on Academic Satisfaction

Variable		Equ.	B	$\beta$	Cons.	t	R2	Adj.R <sup>2</sup>	F
Dep.	Indep.								
AS	SS	Lin.	.500x	.495	1.667	12.940***	.245	.244	167.446***
		Quad.	-.015x	-.015	2.453	-.055***	.250	.247	85.900***
			.081x <sup>2</sup>	.515		1.879***			
*** $p < .001$									
Note. Dep.: Dependent, Indep.: Independent, Equ.: Equation, Cons. : Constant, AS: Academic Satisfaction, SS: Social Support.									

As shown in Figure 2, in order to further verify the above regression model, curve regression analysis was performed. The curvilinear regression exhibits a slight U-shaped pattern. The linear regression equation is  $y=1.667-0.500x$ . Considering the possible non-linear relationship, the

quadratic regression model was further tested, and the following equation was obtained:  
 $y=2.453-0.015x+0.081x^2$ .

### *Academic Satisfaction Social Support*



**Figure 2.** Curvilinear regression analysis of social support on academic satisfaction

This study takes senior primary school calligraphy students as subjects to explore the impact of social support on academic satisfaction. The research results show that the overall level of social support is above the medium level, academic satisfaction is generally high, and there is a significant positive correlation between the two. First of all, from the descriptive statistical results, senior primary school students can perceive relatively sufficient social support during the calligraphy learning process, especially in terms of teacher support and family support. Secondly, the correlation analysis results show that each dimension of social support (subjective support, objective support, and support utilization) has a significant positive correlation with academic satisfaction. Among them, the correlation between subjective support and academic satisfaction is relatively high, indicating that students' perception of "being cared for and understood" plays an important role in improving learning satisfaction. Thirdly, the regression analysis results further verified the significant predictive effect of social support on academic satisfaction. The higher the level of social support, the higher the academic satisfaction of students. This shows that social support is not only an important background variable that affects students' learning experience, but also an important factor in promoting students' positive learning outcomes.

### **E. Conclusion**

Based on the empirical analysis results, this study draws the following main conclusions. First, senior primary school students can generally obtain relatively sufficient social support in the process of learning calligraphy, but there is still some room for improvement in the utilization of support. This shows that although students are in a supportive environment, their ability to actively use resources still needs to be strengthened. Second, there is a significant positive relationship between social support and academic satisfaction. Whether it is subjective support,

objective support, or support utilization, these dimensions can affect students' learning experiences to varying degrees. Third, social support can significantly and positively predict academic satisfaction. This shows that in the context of calligraphy learning, building a good social support system plays an important role in improving students' learning satisfaction. Fourth, from the perspective of specific dimensions, emotional support, which refers to subjective support, has a particularly prominent impact on academic satisfaction, indicating that students have a high demand for emotional care and psychological support during the learning process.

Although this study has made some progress in exploring the relationship between social support and academic satisfaction, there are still some shortcomings that need to be further improved in future research. First of all, in terms of research samples, this study only selected primary schools in a certain city as the survey objects. The sample scope is relatively limited, which may affect the generalizability of the research results to a certain extent. Future research can expand the sample sources to cover students from different regions and different types of schools in order to enhance the external validity of the research conclusions. Secondly, this study mainly focused on the direct impact of social support on academic satisfaction without further exploring the mediating or moderating mechanisms. For example, variables such as learning motivation and self-efficacy may play important roles in the relationship between the two. Future research can construct more complex models to further reveal the interaction paths between variables. Finally, this study takes calligraphy learning as a specific context and therefore has certain subject-specificities. In the future, research can be expanded to other subject areas to test the applicability of the research conclusions. In summary, future research should further advance in expanding samples, enriching research methods, and deepening theoretical models, so as to more comprehensively understand the impact mechanism of social support on students' academic development.

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