



## The Relationship between Peer Support and Academic Achievement Among College Students Majoring in Dance in Changsha, China

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### ABSTRACT

Based on Self-Determination Theory (SDT) and Hierarchy of Needs Theory to carry out this study, a questionnaire survey of academic achievement and peer support was conducted on 85 Changsha dance college students, and peer support atmosphere emotional support and instrumental support, and explored the relationship between peer support on academic achievement. The study found that: 1. The academic achievement of dance college students is positively related to the emotional support in peer support; 2. The academic achievement of dance college students is positively related to the instrumental support in peer support.

### KEYWORDS:

peer support, academic achievement, dance major students, emotion support, tool support

### 1. INTRODUCTION

The academic achievement of students is an important measure of their growth and development, as well as an important indicator of the results of education and teaching in schools. Not only students themselves, but also their parents, schools and other social organizations are very concerned about their academic achievements. High academic achievement can help them enhance their self-confidence, boost their motivation to learn, increase their commitment to learning, and promote their own positive development. However, if their academic achievement is low, then they will feel frustrated and then develop an aversion to learning (Li, 2022). Factors that have an impact on academic achievement can be summarized as follows: first, individual factors, which include: learning strategies, emotions, self-efficacy, intelligence level, personality traits, etc. The second is the influence of the family, which includes parenting style, parent-child relationship, and the economic and social situation of the family. The third is the influence of the school, including teacher-student relationship, teachers' teaching style, and the learning atmosphere of the school.

In recent years, with the society's emphasis on art education, dance professional education has developed rapidly in China.

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However, the triple pressures of academic pressure, physical training load and future career competition for dance majors have made their psychological health and academic performance a focus of attention in the education field. In this context, peer support, as an important form of social support, has a profound impact on students' learning process and psychological state. Dance majors face multiple challenges of academic pressure, physical training, and professional competition, and peer support has become an important factor in promoting academic development and alleviating psychological pressure. This study focuses on Changsha dance majors' college students to explore the effects of peer support on academic performance.

### II. LITERATURE REVIEW

Academic achievement is regarded as a measure of students' knowledge and adaptation to school, an effective indicator for quantitatively assessing the effectiveness of national education and has become a core term of concern for students, parents, schools, and society. Good academic achievement is not only conducive to the virtuous cycle of individual development, but also an important factor in eliminating the intergenerational transmission of poverty (Wang & Zhao, 2022). So it is significant to analyze the influencing factors of academic achievement. While intrinsic motivation is important for students to pursue their goal of improving academic achievement, they also need external support. Peer support is an important part of social support and plays an important role in students' academic achievement. Social support is a key environmental factor that contributes to students' success in achieving their goals and has become the

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most consistent predictor of academic achievement in current research. Previous research has shown that perceived social support, an internal positive psychological reality that serves as an actual variable that influences a person's external behavior and long-term development, is more predictive and functional than actual social support, and is consistent with an individual's overall effect on social support (Robbins et al., 2004).

Previous research on the factors affecting academic achievement has mainly focused on individual factors and external factors. In the research on individual factors of academic achievement, scholars mostly explore the influence on academic achievement from a non-cognitive perspective. Wang&Liu (2000),Zhang&Shen (2005), Yu et al(2018) believe that students' own internal motivation has a significant impact on their academic achievement. Zeng (2009) based on Bandura's self-efficacy theory, believes that self-efficacy has an impact on students' academic achievement, and self-efficacy can influence learning behavior by affecting students' psychology. efficacy theory, argued that self-efficacy has an impact on students' academic achievement, and self-efficacy can influence learning behaviors by affecting students' psychology. Cai (2019) also based on the theory of self-efficacy, explored the impact of academic self-efficacy on learning strategies and academic achievement. Wang&Li (2011) showed that psychological capital and achievement goal orientation all have a significantly positive influence. Li&Yang (2016) found that undergraduate students' emotional intelligence has a positive correlation with academic achievement. Wu&Wang (2017) pointed out that college students' emotional intelligence does not directly affect students' academic achievement, and that there is an indirect effect between the two.

Research on the influence of the external environment on academic achievement can be divided into two main aspects: family factors and school factors. Liu (2012) found that the school environment can only be realized through the promotion of students' participation, which can indirectly achieve the development of students' quality and ability. This is because student participation is an active behavior, which requires not only the support of teachers, parents and peers, but also the enthusiasm of the students themselves. Based on student engagement, the role of the environment in students' academic gains can be realized, and Bao & Zhang et al (2013) and others have shown that there is a positive correlation between school climate and adolescents' academic achievement.

The term “peer” refers to a person of similar age, status or ability, but does not represent only a fixed individual, but rather a group of people with the same socio-cognitive abilities in a social organization that can be physically contacted with less differences in age (Foot, 1975). Peer support is a system of mutual respect, knowing how to share

with peers and give help to each other, and this system is mainly implemented through support, friendship, and responsibility sharing. Loneliness and depression are often encountered by adolescents and these conditions can be gradually alleviated in this type of support (Solomon, 2004). Peer support is material assistance or emotional care and companionship between people of similar age, social status, or experience, which contributes to an individual's development and adjustment (Larry, Chyrell, Kimberly, & Rebecc, 2012).Wentzel et al (2017) consider peer support as the help that an individual needs to accomplish a certain task, and this help is expressed by material emotions. And after getting help, they will take the role of supporter to carry out a way to support other partners. Peer support plays an indispensable part in daily life, both emotionally and materially.

Based on the previous literature, this paper considers peer support as a subjective behavior, which refers to an individual's expectation and evaluation of peer support. Based on the conceptual definition of “peer” and the structural limitation of “peer support”, and taking into account the characteristics of college students' career development, this study defines “peer support” as the behavior of an individual in the In the university period and environment, students, seniors, friends or lovers who are of the same age, have similar experiences, have more communication, study together and prepare for their careers give support and help to them in career development, which mainly includes four factors: information support, instrumental support, emotional support and behavioral role models.

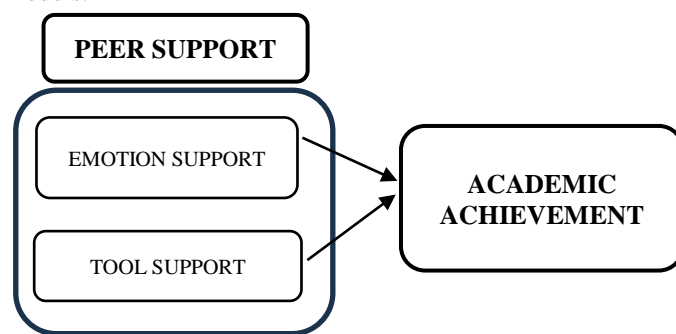


Fig 1. Conceptual Framework

In past studies, peer support has been shown to be positively correlated with students' academic achievement (Burke & Sass, 2013; Wentzel et al, 2017). Burke & Sass (2013) found that peer support had a significant effect on students' academic achievement. In conclusion, relevant studies have found a correlation between peer support and academic achievement. This study hypothesized that peer support influences academic achievement of college students. When searching for previous related studies, we found that there are more studies on the relationship between academic

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performance and peer support, but there is a gap in the field of research on family support and academic performance of college students majoring in dance. For this reason, we will conduct this study based on Self-Determination Theory (SDT) and Hierarchy of Needs Theory, and we intend to explore the effects of family support on college students' academic performance. Hypotheses: 1 Emotional support in peer support is positively related to the academic performance of college students majoring in dance. 2 Instrumental support in peer support is positively related to the academic performance of college students majoring in dance.

### III. RESEARCH METHODOLOGY

#### Research design

This study adopted a cross-sectional quantitative research design aimed at exploring the relationship between peer support and academic performance among college students majoring in dance in Changsha, China. The study collected data through random sampling method and obtained a total of 85 valid questionnaires from college students majoring in dance in Changsha, Hunan Province. The purpose of using this research design was to measure the correlation between variables at specific points in time, thus providing data to support the research hypotheses. A detailed description of each scale and measurement tool used in the study is provided below.

#### Measurement

The Peer Support Scale (Mostafaei & Hosseinezhad, 2020) developed by Mostafaei and Hosseinezhad was used in this study. The scale consists of 22 items divided into two main dimensions: the first one is Emotional Support consisting of 10 items that measure the emotional care and support students receive from their peer relationships, such as understanding, encouragement and warmth. The internal consistency index (Cronbach's  $\alpha$ ) for this dimension was 0.851, indicating good reliability. The second is instrumental support including 12 items, which mainly assesses the practical help that students receive from their peers in their study and life, such as study materials, suggestions for solving problems, and so on. The Cronbach's  $\alpha$  for this dimension is 0.768, which also indicates that it has high reliability (Wills et al., 1992).

Students' academic performance was measured through four dimensions, specifically: academic performance, students' performance in course work. Interpersonal Facilitation, the support and motivation students receive in their interpersonal interactions. Learning Ability, the student's demonstrated ability and potential in the learning process. Objective performance, students' achievement as reflected through assessments and examinations. Du's (2022) scale was used in this study to assess the above four dimensions. The internal consistency (Cronbach's  $\alpha$ ) of the scales were all greater than 0.7, indicating high reliability and measurement accuracy (Wang, 2011).

#### Research Procedures and Data Processing

To collect the data needed for the study to answer the research questions, a questionnaire was administered to the target sample between January and February 2025 for this study. The questionnaire survey was completed through the online platform "Questionnaire Star", and data were collected from university students majoring in dance in Changsha, Hunan Province, using random sampling, with a total of 85 valid questionnaires collected. Before the study was conducted, the researcher communicated with the relevant departments and students and obtained their informed consent. All participation was based on the principle of voluntariness, and the survey was conducted anonymously to protect privacy, thus ensuring the ethical nature of the study and the reliability of the data. After the data collection was completed, the research team comprehensively organized and analyzed the data and used statistical methods to explore the relationship between the variables in order to answer the core questions of the study.

### IV. RESULTS

#### Reliability and Validity

In this study, internal consistency reliability was used to test the stability and reliability of the scales, and Cronbach's  $\alpha$  coefficient was calculated to measure the reliability of the scales, with larger values indicating higher reliability. The results are shown in Table 1, and the Cronbach's alpha coefficients of the four scales and their dimensions are all greater than 0.80, indicating that the scales have high reliability. The measurement tools in this study have good reliability and validity, which can provide a good foundation for the subsequent data analysis. (As shown in table 1.2).

Table1: Reliability Analysis

Dimension	Cronbach $\alpha$	Item count
Emotion support	0.851	10
Tool support	0.768	12
Learning Performance	0.807	6
Interpersonal Facilitation	0.740	5
Learning Competence	0.812	3
Objective performance	0.715	3
Scale overall	0.936	39

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**Table 2: KMO and Bartlett test**

Meters	KOM value	Bartlett's test		
		Approximate	df	p
PS	0.820	587.600	105	0.00
AA	0.829	754.040	136	0.00

PS: peer support AA: academic achievement

The level of reliability and validity of the measurement instruments in this study is good and can provide a good basis for subsequent data analysis. (As shown in Figure 1.2)

**Descriptive statistics**

Descriptive statistics were analyzed for peer support and academic performance of college students majoring in dance, and it can be found through Table 3 that the overall peer support M-value is 3.38 and SD-value is 0.67, and the M-value is higher than the theoretical median value of 3, which indicates that the level of peer support of college students majoring in dance is at the middle-upper level, and that most of the students are able to obtain emotional and instrumental support from their peers.

**Table 3: Descriptive Statistics**

Scale	Min	Max	M	SD
Peer support	2.13	4.87	3.38	.67
Emotion support	1.71	5.00	3.42	.83
Tool support	1.75	4.88	3.35	.69

**Correlation Analysis**

As shown in Table 4. At the significance level of 0.01, the correlation coefficient between academic achievement and the total score of peer support is 0.806, which is a significant positive correlation, i.e., the more peer support, the higher the academic achievement of the students; in the emotional and instrumental dimensions, the correlation coefficients with the academic achievement are 0.714 and 0.721, which are higher, i.e., the peer emotion and the support instrument also play a positive influence on the students' achievement.

**Table 4: Correlation analysis table between peer support and academic achievement**

	AA	LP	IF	LC	OP
Peer support	.806**	.632**	.780**	.659**	.594**
Emotion support	.714**	.577**	.712**	.509**	.541**

Tool	AA	LP	IF	LC	OP
support	.721**	.545**	.674**	.668**	.514**

\*\* . The correlation is significant at the 0.01 level (two-tailed).

AA: Academic Achievement  
 LP: Learning Performance  
 IF: Interpersonal Facilitation  
 LC: Learning Competence  
 OP: Objective Performance

**regression analysis**

Multiple linear regression equations were established with academic achievement as the dependent variable and emotional support and instrumental support as independent variables, and the results were as follows.

**Table 5: Regression model results**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
Constant	.307	.250		1.227	.223		
Emotion support	.392	.071	.445	5.555	.000	.663	1.509
Tool support	.493	.086	.462	5.762	.000	.663	1.509

R<sup>2</sup>=0.651; Durbin-Watson=1.892; F=76.356,P=0.000

From table 5, the R-square value of the model is 0.651, which means that emotional support, instrumental support explains 65.1% of the cause of change in academic achievement. The model passed the F-test (F=76.356, p=0.000<0.05), which means that at least one of the emotional support and tool support will have an influential relationship on academic achievement, in addition, all the VIF values in the model are less than 5, which means that there is no covariance between the variables, and the DW value is near 2, and the random error term is not autocorrelation, and the results of the analysis are as follows:

From the results of the analysis of peer emotional support, the regression coefficient is 0.392 (t=5.555, p=0.000<0.05), which indicates that emotional support has a significant positive effect on academic achievement, i.e., for every 1-point increase in the peer emotional support score, there is an average increase of 0.392 in the academic achievement of the respondents.



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From the results of peer instrumental support, the regression coefficient is 0.493 ( $t=5.762$ ,  $p=0.000<0.05$ ), which indicates that instrumental support has a significant positive effect on academic achievement, i.e., for every 1-point increase in the score of peer instrumental support, there is an average increase in the academic achievement of the respondents by 0.493. Based on this, a regression model was developed,  $Y$  (academic achievement) =  $0.392 * X_1$  (emotional support) +  $0.493 * X_2$  (instrumental support)

### V. CONCLUSION

#### Relationship between emotional support and academic achievement

The results of the study indicate that there is a significant positive relationship between peer support and academic achievement, especially in the dimension of emotional support. Specifically, academic achievement showed a significant positive relationship with both important dimensions of emotional support, which means that emotional care and warmth from peers can significantly enhance students' academic performance. This was further verified by regression analysis that emotional support could significantly and positively predict students' academic achievement. For college students majoring in dance, emotional support from peers (e.g., encouragement, understanding, and friendly interactions) has a significant positive role in enhancing their academic achievement. This shows that strong emotional warmth from peers not only enhances students' self-confidence, but also stimulates their academic commitment and effort, which ultimately contributes to their academic achievement.

#### Relationship between instrumental support and academic achievement

Similarly, instrumental support was found to have a significant contribution to academic achievement. The results of regression analysis showed that instrumental support in peer support positively predicted students' academic achievement. This suggests that when students receive more practical help and resources (e.g., guidance on study methods, sharing of study materials, or advice on problem solving) from their peers, their academic achievement increases. For college students majoring in dance, instrumental support from peers can effectively alleviate learning difficulties and improve learning efficiency, thus driving academic performance. Therefore, increasing cooperative communication and resource sharing among peers can create a more positive learning environment for students and help them achieve better academic performance.

In summary, both emotional support and instrumental support, as important components of peer support, have important positive effects on the academic achievement enhancement of dance college students. By focusing on and enhancing supportive relationships among peers, students'

overall academic and professional development can be better promoted.

This study aims to deeply explore the relationship between academic achievement and peer support among college students majoring in dance in Changsha City, focusing on the impact of peer support on academic achievement and its mechanism of action. This study not only helps to enrich and improve the theory related to academic achievement but also provides a reference value with practical significance for the education field of dance majors. At present, there is a relative lack of research on the academic achievement of college students majoring in dance in China, which mostly focuses on dance technique, artistic expression and aesthetics, but pays less attention to students' academic achievement and its influencing factors. Therefore, this study will take students as the main body, further expand the scope of academic achievement research, and explore how to improve the academic performance and comprehensive quality of dance college students from the perspective of whole-person development.

In addition, this study will focus on analyzing the specific roles of emotional support and instrumental support among peer support in the growth of dance majors, revealing their profound impact on students' academic development. This will not only help to provide a more systematic basis for educational theories but also guide schools and teachers to create a healthy and harmonious campus atmosphere, promote the formation of positive and mutually supportive relationships among peers, and thus adopt more scientific and effective educational methods to promote the overall improvement of college students' academic performance. This study aims to provide practical guidance for educational administrators, to lay a theoretical foundation for the further development of dance education in China, and to provide strong support for the overall growth of college students.

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