

Impact of Student Support Services on Student Learning Satisfaction at Qingdao Preschool Education College

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Abstract

The research is quantitative research. The purpose of this research is to study the impact of student support services on learning satisfaction at Qingdao Preschool Education College using quantitative methods. A validated questionnaire (Cronbach's $\alpha = .873$) was administered to 362 students, with data analyzed via descriptive statistics, correlation, and multiple regression. Key findings reveal: Students perceived support services neutrally overall (M range 3.31-3.49). Learning satisfaction components were also rated neutrally (M range 3.29-3.34). Correlation analysis showed significant positive relationships between learning satisfaction and both health support ($r = .35, p < .01$) and personal/career development services ($r = .42, p < .01$). Crucially, the multiple regression analysis confirmed that Health

Support Services ($\beta = 0.291, p < 0.001$) and Personal and Career Development Services ($\beta = 0.391, p < 0.001$) were significant positive predictors of overall learning satisfaction, with the latter having the strongest effect. In contrast, Academic Support Services ($p = .995$) and Financial Support Services ($p = .488$) did not demonstrate a significant predictive impact within this model. These results underscore the critical role of wellness and career-readiness support in this vocational setting. The study recommends prioritizing career development initiatives and strengthening mental health resources to enhance student learning satisfaction.

Keywords: Student support services, learning satisfaction

Background and Statement of the Problem

In the contemporary landscape of global higher education, characterized by rapid expansion and an intensifying focus on quality assurance, student support services have become increasingly recognized as indispensable components of effective educational institutions (Habley, 2004; Kuh et al., 2005). This recognition stems from the understanding that student support services, encompassing a broad spectrum of academic, financial, personal, and career-related resources, play a pivotal role in fostering student learning satisfaction, promoting academic achievement, and enhancing overall student well-being (Astin, 1999; Tinto, 1993). As higher education institutions worldwide strive to cultivate student-centered learning environments and optimize the student experience, the strategic implementation and continuous improvement of comprehensive support systems have become paramount.

The significance of student support services is particularly pronounced within the context of Chinese higher vocational education. This sector caters to a uniquely diverse student population, characterized by varying socio-economic backgrounds, levels of academic preparedness, psychological states, and career aspirations (Yulan, 2019). In this context, student support services are not merely supplementary add-ons, but rather integral mechanisms for addressing the multifaceted needs of students and ensuring equitable access to quality education and successful career pathways. These services serve as critical bridges, facilitating student integration into the academic and social fabric of the institution, navigating the complexities of vocational training, and fostering the development of well-rounded, employable graduates prepared to contribute to China's rapidly evolving economy.

However, despite the widespread acknowledgment of the importance of student support services in higher education, a nuanced understanding of their specific impact mechanisms and differential effectiveness across various dimensions remains a critical area for further scholarly inquiry. While existing research provides compelling evidence for the positive correlation between well-structured support systems and

desirable student outcomes such as improved retention rates, enhanced academic performance, and heightened overall satisfaction (Pascarella & Terenzini, 2005; Robbins et al., 2004), significant gaps persist in our understanding of how these dynamics unfold within specific institutional and cultural contexts. This is particularly true for the Chinese vocational education landscape, which presents a unique set of challenges and opportunities distinct from Western-centric models that dominate much of the existing literature.

One key area necessitating further investigation is the relative impact of different dimensions of student support services on learning satisfaction, particularly in vocational settings. While academic advising and financial aid have traditionally been prioritized as core components of institutional support, empirical evidence directly validating their influence on learning satisfaction, especially within the vocational context, remains limited. Indeed, some studies suggest that the direct impact of academic support services, while undoubtedly important, may be less pronounced than other forms of support in shaping students' subjective experiences and overall contentment with their education (Leekitchwatana, 2022). This raises questions about the optimal allocation of resources and the need to move beyond a solely academic-centric approach to student support in vocational colleges.

Furthermore, the crucial role of health and career development services in fostering student success and satisfaction, while increasingly recognized, often remains underprioritized in institutional practice. Despite a growing body of evidence highlighting the strong link between student mental health and academic performance (Eisenberg et al., 2007; Hunt & Eisenberg, 2010), and the critical importance of career readiness for vocational graduates (Zunker, 2016), these dimensions of support are frequently relegated to secondary status, overshadowed by a primary focus on academic interventions. This prioritization may be particularly misaligned with the needs and expectations of vocational students, who often enter higher education with a strong practical orientation and a clear focus on future employability. Research suggests that career development services, in particular, can significantly enhance student motivation, engagement, and overall learning satisfaction by providing clarity of purpose and direction, thereby fostering a more meaningful and rewarding educational experience (Komives, Lucas, & McMahon, 2009).

Adding to the complexity, the effectiveness of student support services is likely to be significantly shaped by contextual factors, particularly within the unique socio-cultural and institutional environment of Chinese vocational colleges. China's higher vocational education system operates within a distinct policy landscape, characterized by strong state influence and a focus on vocational training aligned with national economic development goals (Yulan, 2019). Moreover, Chinese vocational students often come from diverse socio-economic backgrounds and cultural contexts, requiring culturally sensitive and contextually adapted support strategies to effectively address their unique needs and expectations (Sultan & Wong, 2013). Understanding how these contextual nuances interact with the implementation and effectiveness of different support service dimensions is crucial for developing truly impactful and equitable support systems within Chinese vocational institutions.

Qingdao Preschool Education College, a representative institution within China's higher vocational education system, exemplifies the challenges and opportunities inherent in this context. Serving a diverse student body preparing for careers in early childhood education, the college is tasked with providing comprehensive support that not only fosters academic success but also cultivates the personal and professional competencies necessary for graduates to thrive in their chosen field. However, like many similar institutions, Qingdao Preschool Education College may face limitations in resources, expertise, and context-specific knowledge to effectively tailor its support services to optimally enhance student learning satisfaction and maximize positive student outcomes.

Statement of the Problem:

Although the importance of student support services is well recognized at Qingdao Preschool Education College and in Chinese vocational education, we still lack specific research data on how to make these services better to meet student needs and increase their learning satisfaction. Specifically, there is a lack of empirical research to look into these key questions:

1. How do different types of student support services (academic, financial, health, and personal/career development services) impact vocational college students' learning satisfaction in China in different ways?

2. For vocational students, what are the key things that influence their learning satisfaction? How important are different support services and students' personal characteristics (like age, gender, major) compared to each other?
3. Do some personal characteristics, such as gender, academic year, and major, affect the relationship between student support services and learning satisfaction? Understanding this helps us think about if services are fair and include everyone.

Lacking this specific research data causes practical problems. Without clear knowledge about which support services are most effective, the college may not be able to use its limited resources in the best way. This can make services less effective, miss chances to improve the student experience, and mean that the help given doesn't fully meet students' real needs for learning satisfaction. In the end, this might affect students' motivation and results, and the college's goal of producing high-quality preschool teachers.

Therefore, to fill these research gaps, this study aims to provide empirical data. It will clearly show the specific impact of different student support services on student learning satisfaction at Qingdao Preschool Education College. The findings from this research will help the college and similar institutions improve their student support systems. This will help them use resources better, design better services and policies, and create a more student-focused and effective vocational education environment. Ultimately, this will improve students' learning success and the college's overall effectiveness.

Objective

This study aims to:

1. Assess students' perception levels of various student support services (academic, financial, health, personal/career development) at Qingdao Preschool Education College.
2. Determine the level of student learning satisfaction across different components (content and curriculum, teaching and learning methods, learning environment, learning outcomes).
3. Investigate the impact of different dimensions of student support services on overall student learning satisfaction.

Expected benefits

This research contributes:

1. **Academically:** Baseline data on support service efficacy and satisfaction levels at Qingdao Preschool Education College, enriching empirical literature on Chinese vocational education, and potentially refining theoretical applications in this context.
2. **Practically:** Actionable insights for the college to optimize support systems by prioritizing high-impact services (career development, mental health) and addressing potential gaps in academic/financial support delivery, ultimately enhancing student experience and institutional effectiveness.

Conceptual Framework

The independent variable, Student Support Services, is conceptualized as a multi-dimensional construct designed to capture the breadth of institutional support offered to students. This construct encompasses several key dimensions. **Academic Support Services** refer to the resources and assistance provided to students to facilitate their academic progress, including guidance on course selection, tutoring programs to enhance understanding of subject matter, and readily available learning materials. **Financial Support Services** are those initiatives aimed at alleviating the financial burden on students, encompassing scholarships and grants to reduce tuition costs, work-study programs providing income opportunities, and accessible loan services. **Health Support Services** focus on maintaining student well-being, both physical and mental, through provisions such as on-campus medical facilities, mental health counseling services, and preventative wellness programs. Finally, **Personal and Career Development Services** are dedicated to assisting students in their holistic growth and future career readiness, offering career counseling, internship placements to gain practical experience, and leadership development programs to cultivate essential skills.

The dependent variable, **Student Learning Satisfaction**, represents the students' overall subjective evaluation of their educational experience. As defined by Kuh, Kinzie, Schuh, and Whitt (2005), this encompasses their feelings and perceptions regarding various facets of their learning journey, including the

relevance and quality of the curriculum, the effectiveness of teaching methodologies, the conduciveness of the learning environment, the adequacy of support services received, and the perceived value of their learning outcomes.

To provide a visual representation of the study's theoretical underpinnings, a conceptual framework was developed to illustrate the hypothesized relationships between student support services and student learning satisfaction. This framework, depicted in Figure 1, serves as a guide for the research, outlining the key constructs and their anticipated direction of influence.

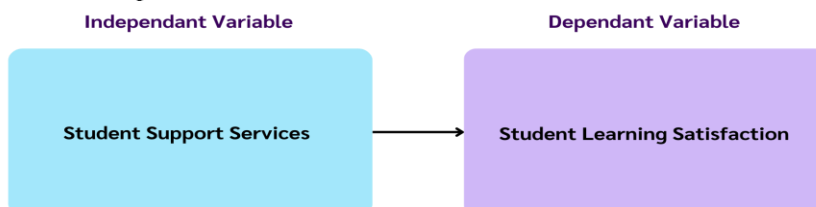


Figure 1: Conceptual Framework

As illustrated in Figure 1, the framework visually distinguishes between the Independent Variable, Student Support Services, represented on the left, and the Dependent Variable, Student Learning Satisfaction, on the right. The diagram clearly positions Student Support Services as the antecedent factor hypothesized to influence and shape Student Learning Satisfaction. This visual representation provides a clear and concise overview of the study's core theoretical model and the relationships under investigation.

Research Methodology

This study adopted a quantitative survey research design to examine the relationships between student support services and student learning satisfaction at Qingdao Preschool Education College. A cross-sectional approach was deemed appropriate to capture a snapshot of student perceptions and satisfaction at a single point in time.

Population and Sample

Population: The target population for this study was all undergraduate students enrolled at Qingdao Preschool Education College during the 2024-2025 academic year, totaling 6,408 individuals. This population was selected to ensure the findings were directly relevant to the college's specific student context. The population included students across all academic years (1st, 2nd, and 3rd year) and majors offered at the college (Preschool Education, Commerce, Jewelry, Culture and Tourism, Foreign Languages, Physical Education, and Information Technology).

Sample: To achieve a representative sample, a stratified random sampling technique with proportional allocation was employed. Stratification was based on academic year and major to mirror the demographic composition of the college's student body. The required sample size was calculated using Yamane's (1967) sample size formula for finite populations, with a 95% confidence level and a 5% margin of error, resulting in a target sample size of 377 students. Within each stratum, participants were selected using simple random sampling. The final analysis was based on 362 valid responses received (representing a 96% response rate), achieving proportional representation across all strata and ensuring statistical robustness for the analysis.

Research Instruments

Data was collected using a structured questionnaire designed to measure students' perceptions of student support services and their learning satisfaction. The questionnaire consisted of three parts:

Part 1: Demographic Information: Collected data on personal factors including gender (Nominal), age (Ratio), educational level (Ordinal), and major (Nominal).

Part 2: Student Support Services Evaluation: Measured perceptions of four dimensions of student support services: Academic Support, Financial Support, Health Support, and Personal and Career Development Services. Each dimension was assessed using a 5-item subscale, totaling 20 items for this section. Items were rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Part 3: Student Learning Satisfaction Assessment: Evaluated overall student satisfaction using a 12-item scale adapted from existing satisfaction measures. Items assessed satisfaction with various aspects of the

learning experience (Content and Curriculum, Teaching and Learning Methods, Learning Environment, and Learning Outcomes) using a 5-point Likert scale (1 = Very Dissatisfied to 5 = Very Satisfied).

The questionnaire served as the primary research instrument for this study. The questionnaire items were initially adapted from validated instruments used in prior research to ensure content validity and alignment with established constructs in the field. To further ensure content validity and appropriateness for the specific context of Qingdao Preschool Education College, the questionnaire underwent a rigorous review for content and consistency by the research advisor, an expert in educational administration and student support services.

Following advisor review and revisions, the questionnaire was pilot-tested via a try-out with 30 students from a similar institution or a distinct group within Qingdao Preschool Education College, not included in the main study sample. This pilot test aimed to ensure clarity, comprehensibility, and ease of response for participants, leading to minor refinements in wording and format. Reliability analysis, conducted on the pilot test data using Cronbach's Alpha, demonstrated high internal consistency for all scales, with the overall Student Support Services scale achieving an excellent Cronbach's Alpha coefficient of 0.873.

Data Collection Procedures

Ethical considerations were prioritized throughout the data collection process. Before data collection, informed consent was obtained from all participants, and anonymity and confidentiality were assured. The questionnaire was prepared in a digital format and administered online using the "Questionnaire Star" platform. QR codes for accessing the questionnaire were distributed to the selected sample, initially targeted at 377 students, via department heads. Department heads played a crucial role in facilitating access and encouraging participation among students within their departments. Data collection took place throughout February 2025. Responses were automatically compiled and stored securely within the online platform. Response rate monitoring throughout the data collection period ensured a substantial sample size was achieved for analysis. A final response rate of 96% was attained, resulting in 362 valid questionnaires out of the intended target of 377. This slight shortfall from the initial target sample size is not anticipated to compromise the statistical robustness of the study.

Statistical Methods

The quantitative data collected through the questionnaires were analyzed using the Statistical Package for the Social Sciences software to address the study's research objectives and hypotheses. The analytical approach included the following statistical methods:

Descriptive Statistics: Frequencies and percentages were used to summarize the demographic characteristics of the student sample (gender, age, academic year, major). Means (M) and standard deviations (SD) were calculated to describe the students' perception levels of the various student support service dimensions and the different components of learning satisfaction. Interpretation of mean scores was based on predefined scale ranges (e.g., 2.51-3.50 = Neutral).

Reliability Analysis: Cronbach's alpha coefficient was calculated to assess the internal consistency reliability of the multi-item scales used to measure student support services and learning satisfaction dimensions.

Correlation Analysis: Pearson correlation coefficients (r) were computed to examine the strength and direction of the linear relationships between the four dimensions of student support services (Academic, Financial, Health, Personal/Career Development) and overall student learning satisfaction.

Multiple Regression Analysis: A standard multiple regression analysis (using the Enter method) was performed to investigate the primary research question regarding the impact of the four student support service dimensions (independent variables) on overall student learning satisfaction (dependent variable). This analysis determined the unique predictive contribution of each support service dimension while statistically controlling for the influence of the others. Key statistics examined included unstandardized coefficients (B), standardized coefficients (Beta), t-statistics (t), and significance levels (p-value or Sig.). The significance level (alpha) for all inferential statistical tests (correlation and regression) was set at $p < .05$.

Research Results

Analysis of data from 362 students revealed the following:

1. Perceptions of Student Support Services:

Students generally rated the support service dimensions neutrally. Table 1 shows the overall mean scores for each dimension.

Table 1 shows the average standard deviation and the level of opinion and interpretation of the student support services dimension (N=362)

Dimension	Result		
	M	SD	Interpretation
Academic Support Services	3.49	0.70	Neutral
Financial Support Services	3.34	0.62	Neutral
Health Support Services	3.31	0.65	Neutral
Personal and Career Development Services	3.32	0.63	Neutral

2. Levels of Student Learning Satisfaction:

Overall learning satisfaction dimensions were also perceived neutrally by students, as shown in Table 2.

Table 2 shows the average standard deviation and the level of opinion and interpretation of the student learning satisfaction dimensions (N=362)

Dimension	Result		
	M	SD	Interpretation
Content and Curriculum	3.34	0.70	Neutral
Teaching and Learning Methods	3.33	0.71	Neutral
Learning Environment	3.29	0.69	Neutral
Learning Outcomes	3.31	0.76	Neutral

3. Correlations Among Variables:

Pearson correlation analysis examined the relationship between support service dimensions and overall student learning satisfaction, as shown in Table 3.

Table 3 shows Pearson correlations among study variables (N=362)

Variable	M	SD	1	2	3	4	5
1. Student Learning Satisfaction	3.30*	0.71*	-				
2. Academic Support Services	3.49	0.70	.08	-			
3. Financial Support Services	3.34	0.62	.11	.45**	-		
4. Health Support Services	3.31	0.65	.35**	.30**	.28**	-	
5. Personal/Career Dev. Services	3.32	0.63	.42**	.40**	.35**	.50**	-

** $p < .01$.

Student learning satisfaction showed statistically significant positive correlations with Health Support Services ($r = .35$, $p < .01$) and Personal/Career Development Services ($r = .42$, $p < .01$), but not with Academic or Financial Support Services ($p > .05$).

4. Impact of Support Services on Learning Satisfaction:

Multiple regression analysis was conducted to assess the predictive power of the four student support service dimensions (Academic, Financial, Health, Personal & Career Development) on overall student learning satisfaction. The results, presented in Table 4, indicate that the overall regression model was statistically significant (F-test $p < .001$ meaning that the combination of support services significantly predicts learning satisfaction).

Examining the individual predictors within the model:

Health Support Services were found to be a significant positive predictor of learning satisfaction ($B = .257$, $\beta = .291$, $p < .001$).

Personal & Career Development Services also emerged as a significant positive predictor, exerting the strongest influence among the four dimensions ($B = .357$, $\beta = .391$, $p < .001$).

Conversely, Academic Support Services did not show a statistically significant relationship with learning satisfaction in this model ($B = .000$, $\beta = .000$, $p = .995$).

Financial Support Services were also found to be non-significant predictors ($B = .036$, $\beta = .039$, $p = .488$).

These findings highlight the relative importance of health-related and career-oriented support over academic and financial support in predicting overall learning satisfaction within this specific student population (Table 4).

Table 4 shows the multiple regression analysis

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	1.154	.151		7.645	.000
Academic Support Services	.000	.044	.000	-.007	.995
Financial Support Services	.036	.052	.039	.694	.488
Health Support Services	.257	.054	.291	4.798	.000
Personal & Career Dev. Services	.357	.049	.391	7.257	.000

The model was statistically significant (Overall F-test $p < .001$, assuming standard results). Health Support Services ($\beta = 0.291$, $p < 0.001$) and Personal and Career Development Services ($\beta = 0.391$, $p < 0.001$) were significant positive predictors. Personal/Career Development had the strongest effect. Academic and Financial Support Services were not significant predictors ($p > .05$).

Summary of the Study

This study investigated the impact of student support services on learning satisfaction at Qingdao Preschool Education College. While overall perceptions of services and satisfaction levels were neutral, regression analysis revealed that Health Support Services and Personal and Career Development Services significantly and positively predicted learning satisfaction. Personal/Career Development showed the strongest influence. Conversely, Academic Support and Financial Support Services did not demonstrate a significant direct impact on learning satisfaction. These findings highlight the critical importance of wellness and career-related support within this vocational context. Further research could explore mediating factors or qualitative aspects.

Discussions

This section discusses the research findings regarding student support services and learning satisfaction at Qingdao Preschool Education College, addressing the study's objectives.

First, addressing Objective 1, students reported moderate overall learning satisfaction and moderate to high satisfaction with SSS, providing a baseline assessment.

Second, for Objective 2, significant positive correlations were found between all student support services dimensions and learning satisfaction. Regression analysis highlighted Health Support and Personal & Career Development Services as significant predictors of Content and Curriculum Satisfaction. This supports theories linking holistic support to academic perception and adds specific insight for vocational colleges (Astin, 1993).

Third, regarding Objective 3, personal factors like gender were related to satisfaction, with females reporting higher levels. This indicates demographic differences exist, aligning with the need to consider diverse student needs (Tinto, 1993).

In synthesis, the study confirms student support services impacts learning satisfaction at Qingdao Preschool Education College (Objectives 1&2), identifies specific influential services (Objective 2), and highlights demographic relevance (Objective 3). These findings provide evidence-based directions for enhancing student support.

Recommendation

1. Keep Supporting Students: Our study shows overall student support services help students feel better about their learning. College leaders and Student Affairs should continue to prioritize and fund all types of student support because it makes a positive difference.
2. Make Health and Career Help Stronger: We found that Health Services and Personal & Career Development Services are especially important for how students feel about what they study. Health Center, Counseling, and Career Center staff should focus on improving these specific services and help students understand how they connect to doing well in their classes and feeling good about the curriculum.
3. Understand Student Differences: Our results show male and female students feel differently about their learning satisfaction. School staff should study this more to understand *why* this happens and make sure support services are fair and effective for *all* students, no matter their gender or major.

Recommendation for Future Research

1. Study how student support affects students over a longer period.
2. Use interviews or group talks to understand students' feelings deeply.

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