

## **A STUDY ON LEARNING SATISFACTION OF COLLEGE STUDENTS AT CHS VOCATIONAL COLLEGE IN SHANDONG PROVINCE, CHINA**

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**Abstract:** At present, students' learning satisfaction in ordinary higher education institutions has attracted the attention of many scholars. However, compared to vocational colleges that were not mature and complete in various aspects, their education quality and the degree of emphasis on student learning satisfaction still need to be further improved. Therefore, this study focused on college students at CHS Vocational College in Shandong Province, China, and conducted a questionnaire survey. The study used convenience sampling to perform statistical analysis on 374 collected questionnaire data, aiming to understand the current level of learning satisfaction of college students at CHS Vocational College in Shandong Province, compared the differences in student learning satisfaction among different demographic backgrounds, and based on the research results, analyzed the problems that currently exist in education at the school, and proposed relevant suggestions and countermeasures. The research found that college students had higher learning satisfaction. There were significant differences in the learning satisfaction of college students at CHS Vocational College in Shandong Province, China, under different demographic backgrounds such as gender, grade, and major. Females were more satisfied with their studies than males. Regarding grade variables, the learning satisfaction of freshmen and sophomores was higher than that of juniors. Regarding major variables, students from other majors had higher learning satisfaction than those from science and engineering majors.

**Keywords:** Vocational College, Learning Satisfaction

### **Introduction**

Even though vocational education systems in various countries have their characteristics and advantages, there was a broad consensus among countries that governments attach great importance to vocational education and training as an essential measure to enhance national competitiveness (Tang & Qin, 2009). As a critical branch of the higher education system, vocational education aims to cultivate high-quality skilled talents with academic knowledge and professional skills. The quality of vocational

education not only directly affects the overall quality of higher education but also indirectly affects the quality and sustainability of national economic development (Kuang & Jing, 2023). In the process of actively implementing the National Vocational Education Reform Implementation Plan in China, to ensure that vocational education could more effectively fulfill its mission of cultivating high-quality and skilled talents for the country and society, the Ministry of Education and nine other departments jointly issued the Action Plan for Improving and Optimizing Vocational Education (2020-2023) in September 2020, which emphasized the principle of "people-oriented and quality first". The purpose was to emphasize that in the process of vocational education reform and education quality improvement, the growth and needs of students should always be given top priority (Wu & Hu, 2023). Quality has become one of the most influential keywords in higher vocational education. Meanwhile, how to promote and ensure the quality of higher vocational education has gradually become a vital focus of the development of China's higher vocational education industry.

So, how could we effectively promote and improve vocational education quality? According to relevant data, the survey of individual satisfaction could reflect their overall evaluation of a particular behavior and situation. The satisfaction level could affect the individual's willingness to continue a specific behavior (Tan & Fu, 2020). In education, students are the most critical stakeholders in any educational institution. In addition to their progress and development, student learning satisfaction was also one of the essential indicators for measuring the quality of education. "Learning satisfaction was the inner perception of students in the learning context, which reveals the degree to which students hope to obtain satisfaction during the learning process" (Cortes & Barbera, 2013). The satisfaction level of students with learning-related factors would play a crucial role in their willingness to continue their studies. For example, school management, curriculum design, teaching staff, teaching conditions, and other factors provided student learning and development services. If these factors could meet the needs of students' growth and development, their learning satisfaction would be improved, and they might engage in learning with a more positive, complete, and persevering attitude (Shelley et al., 2023). In other words, the improvement of vocational education quality should not only focus on students learning professional knowledge and mastering professional skills, but also pay attention to their learning experience, emotions, and values, and ensure service quality from various aspects such as curriculum design, teaching activities, teaching facilities, and learning environment (Xu, 2020). It could be seen that the research on improving the learning satisfaction of vocational college students has attracted widespread attention from experts and scholars.

However, with the rapid development of higher vocational education in recent years, the issue of student education in higher vocational colleges has become increasingly prominent. In the current development process of vocational colleges, more emphasis was placed on expanding the scale of education, which to some extent overlooks the improvement of teaching quality and management level.

At the same time, it has not indeed achieved student-centered development. As a result, in the actual process of education, the development of infrastructure, teaching activities, and other aspects of the school was challenging to meet the development needs or expectations of students, reducing their academic performance and experience (Wang et al., 2020). In addition, some surveys have shown us that lower learning satisfaction was a significant factor leading to negative learning emotions and behavioral problems among vocational college students, including aversion to learning, academic procrastination, mobile phone dependence, and even internet addiction (Zhang, 2016. Jia et al., 2018).

In summary, as a direct perceiver of the quality of vocational education, it was necessary to conduct a survey and research on the learning satisfaction of vocational college students. The results helped schools understand the actual situation of student learning satisfaction. They used it as a standard to evaluate student learning experience to improve and adjust various relevant factors and policies on campus. Furthermore, it provided a reference for improving vocational education quality and developing and constructing vocational colleges.

### **Research Objectives**

(1) To understand the demographic backgrounds of CHS vocational college students in Shandong Province, China, including their gender, grade, major, household registration location, and whether to serve as student leaders.

(2) To analyze the current status of learning satisfaction of college students at CHS Vocational College in Shandong Province, China.

(3) To analyze the differences in learning satisfaction of college students at CHS Vocational College in Shandong Province, China, under different demographic backgrounds such as gender, grade, major, household registration location, and whether to serve as student leader.

### **Literature Review**

#### ***Research on the Conceptual of Learning Satisfaction of Students***

The concept of satisfaction was first born in the management circle, which referred to the degree to which the individual's expectations were met in the actual situation. It was used to measure the gap between the individual's psychological state in the actual situation and the expected conditions. Therefore, learning satisfaction was borrowed initially from "customer satisfaction". Different scholars have interpreted and defined the concept of student learning satisfaction differently due to differences in research background or objectives. Through literature analysis, it was found that previous studies defined learning satisfaction from three different perspectives: holistic concept, element concept, and expectation gap concept.

Regarding the expectation gap, this concept believed students were engaged in the learning

process with certain expectations. After actual learning activities, students would compare before and after learning. Students would have relatively high learning satisfaction if the actual gains were consistent or close to their ideal expectations (Chen et al., 2023). For example, Fang et al. (2016) proposed that learning satisfaction was the subjective evaluation and overall feeling generated by the difference between the actual perception of learners after learning and their expectations. It was the inner feeling gradually accumulated by learners during the learning process. Therefore, the higher the degree, the higher the degree of learning satisfaction of learners. After investigating the participation of college students in online education, Chen (2017) proposed that students' perception of the quality of online learning was not limited to the learning effect itself but should also reflect the relative relationship between their expectations and academic achievements. Therefore, this perception and evaluation based on online learning was called learning satisfaction.

#### ***Research on Measurement of Learning Satisfaction of Students***

The construction of an indicator system was the basis for quantifying student satisfaction. For example, when constructing a satisfaction index system for college students, Liu from Jiangsu University (2012) divided the overall system into four levels. The first level was student satisfaction, which was the overall evaluation of students on learning scenarios and experiences. The second level included campus cultural atmosphere, student expectations and perceived outcomes, student complaints and loyalty. The third level was the significant variables that could affect student satisfaction and were not perceived as quality, such as curriculum design, teaching modes, etc. The fourth level was related to specific student learning and life issues. This hierarchical division presented an indicator system from macro to micro, with abstract and concrete functions.

Referring to many scholars' past evaluation index systems, Xu (2015) constructed a college student learning satisfaction evaluation index system around several major factors in the learning process and developed the "College Student Learning Satisfaction Questionnaire." The questionnaire included five aspects: satisfaction with the primary learning environment, teaching management satisfaction, theoretical teaching satisfaction, practical teaching satisfaction, and evaluation of expected results. The reliability of the questionnaire was 0.957, indicating that the reliability of this questionnaire was high. Therefore, this study chose this questionnaire to investigate the current status of learning satisfaction of college students at CHS Vocational College in Shandong Province, China.

#### ***Research on the Influencing Factors of Learning Satisfaction of Students***

There was a wealth of research on the influencing factors of student learner satisfaction. After sorting out, it was found that the influencing factors of student satisfaction in learning could be divided into internal factors caused by individual learner factors and external factors caused by the learner's environment.

Regarding internal factors, Adela's (2009) study found that senior students, female students,

students majoring in natural sciences, and those not working part-time during their studies often have lower learning satisfaction with demographic variables. Lu & Lv (2015) found through their research that students at Nanjing University have higher learning satisfaction. In comparing demographic variables, significant differences were observed in grade, major, and whether they were student leaders. Guo et al. (2022) pointed out in their survey analysis of college student learning satisfaction that learning satisfaction was an individual's subjective psychological perception. Therefore, it was influenced by individual differences. In other words, individual differences among students could lead to different learning cognition, attitudes, and experiences in the same learning context. The research results found significant differences in the learning satisfaction of college students of different genders, grades, and majors. Xu & Liu (2023) studied nursing students and found significant differences in learning satisfaction among gender, grade, and household registration location. Females had higher learning satisfaction than males. Compared to lower grades, the overall learning satisfaction of junior students has decreased. Regarding household registration location, rural students have relatively low satisfaction with their studies.

Karimi & Sotoodeh (2019) found that motivation controlled by external factors was not significantly related to learning satisfaction, while positive changes in students' intrinsic and self-active mechanisms could significantly predict their learning satisfaction. There was no significant relationship between external learning motivation and learning satisfaction, while intrinsic learning motivation could significantly predict learning satisfaction. Levpuek & Podlesek (2019) also support this viewpoint, and they found that good relationships and interactions with teachers and peers were the most important influencing factors in improving student learning satisfaction. It could be seen that there were also intricate connections between various factors that affect learning satisfaction.

#### ***Research on Strategies for Improving Learning Satisfaction of Students***

Currently, in exploring strategies to improve learner satisfaction, many scholars focus on reducing the gap in learner expectations through improving teaching methods, innovating teaching models, and improving management models to enhance student learner satisfaction.

In the research on improving teaching methods to enhance learner satisfaction, Qu (2021) found that visual attention was an important factor affecting learner satisfaction. It was suggested that teachers reasonably match expanded colors and layout during the teaching process while also paying attention to whether the teaching content presented by courseware visual style and animation elements met student expectations. By improving visual attention, students could have a good learning experience, improving their learning satisfaction.

#### ***Research on the Learning Satisfaction of Vocational College Students***

While exploring how to improve teaching quality and overall school satisfaction effectively, researchers and educators generally agree on the importance of student learning satisfaction as a factor.

Especially in the evaluation of the quality and construction of vocational colleges, its role was crucial (Wang et al., 2020). For example, Xiao (2008) conducted an empirical study on a vocational college in southern Jiangsu. The study found that the overall score of student learning satisfaction at the school was not high. Middle school students have the highest level of satisfaction with "practical teaching" in all dimensions, which might indicate that the school has achieved outstanding results in practical teaching and has a high degree of satisfaction with students' actual needs in practical application. The student satisfaction scores for "theoretical teaching" and "teaching management" were moderate, indicating that there was still room for further improvement in these two areas. In contrast, the satisfaction score for "quality expansion" in the study was the lowest, indicating that in the current era of diversified development, the school's quality expansion curriculum lacks changes and urgently needs to be updated.

He & Huang (2012) used a vocational college in Guangdong as an example to investigate the learning satisfaction status of vocational college students. The results showed that the score of student learning satisfaction reached a moderate standard. Among various factors, students had the highest satisfaction with the level of teaching staff and quality expansion, indicating that the school's teaching staff provided high-quality teaching services to students. At the same time, the rich and diverse quality expansion activities also won the recognition and welcome of students. However, students showed lower satisfaction scores regarding teaching conditions and their learning factors, which could be attributed to slow updates of teaching facilities and resources and insufficient learning ability and motivation among students.

### ***Summary of Reviewed Literature***

Through a review of existing research, it has been found that there were several characteristics of current research on learning satisfaction: regarding research subjects, although it mainly focuses on college students, it was primarily focused on research in ordinary universities and research on vocational college students was relatively scarce, and the literature was relatively outdated. Regarding research topics, more research was related to online learning, mainly focusing on students' overall experience and feelings when learning in the form of the internet.

### **Methodology**

The study used convenience sampling to test students at CHS Vocational College in Shandong Province, China. In the formal testing stage, 374 electronic questionnaires were collected, which met the sample size determination criteria of the Morgan Table (Krejcie & Morgan, 1970).

This study used the "College Student Learning Satisfaction Questionnaire" compiled by Xu (2015) to investigate the learning satisfaction of vocational college students. This questionnaire included satisfaction with the learning environment, teaching management satisfaction, theoretical

teaching satisfaction, practical teaching satisfaction, and evaluation of expected results, with 30 questions in 5 dimensions.

## Results

### *Demographic Analysis of the Respondents*

This study analyzed 374 questionnaires collected through frequency and percentage to determine the distribution of background information characteristics among college students at CHS Vocational College in Shandong Province, China. Among the gender variables, there were 153 males, accounting for 40.9%. There were 221 female students, accounting for 59.1%, and the number of female students participating in the survey was more than that of male students. The gender distribution was relatively close to the actual gender ratio in the college. Among the grade variables, there were 148 freshmen, accounting for 39.6%. 150 sophomores, accounting for 40.1%, and 76 juniors, accounting for 20.3%. The number of participants in the survey was similar in freshmen and sophomores but slightly lower in juniors. Regarding majors, 91 students in literature and history, accounted for 24.3%. There were 78 students majoring in science and engineering, accounting for 20.9%, and 205 students majoring in arts and sports, accounting for 54.8%. The students in other majors was relatively high, and the distribution of this major was related to the professional settings in the college. In the variable of household registration location, there were 146 urban residents, accounting for 39.0%. Rural areas account for 228, accounting for 61.0%, with most rural students participating in the survey. In whether to serve as a student leader, there were 104 student leaders, accounting for 27.8%. There were 270 non-student leaders, accounting for 72.2%, and the distribution of student leaders was in line with the actual situation.

### *Descriptive statistical analysis*

According to the analysis results in Table 1, the overall level of student learning satisfaction was high ( $M=3.78$ ). And the current level of each dimension was high, ranked from high to low according to the average value, practical teaching satisfaction ( $M=3.81$ )> theoretical teaching satisfaction ( $M=3.80$ )> expected result evaluation ( $M=3.80$ )> learning environment satisfaction ( $M=3.79$ )> teaching management satisfaction ( $M=3.73$ ). Therefore, the students of CHS Vocational College in Shandong Province, China, had higher learning satisfaction.

**Table 1:** Descriptive Statistics of Learning Satisfaction of College Students

Dimension	Mean	SD
Learning environment satisfaction	3.79	0.676
Teaching management satisfaction	3.73	0.685
Theoretical teaching satisfaction	3.80	0.684
Practical teaching satisfaction	3.81	0.721
Expected outcome evaluation	3.80	0.728
Overall learning satisfaction	3.78	0.639



**Difference Analysis**

**Table 2:** Comparison of Differences in Learning Satisfaction of College Students at CHS Vocational College of Different Genders

	Gender	N	M	SD	T	P
Learning environment satisfaction	Male	153	3.69	0.691	-2.423*	0.016
	Female	221	3.86	0.658		
Teaching management satisfaction	Male	153	3.68	0.698	-1.233	0.219
	Female	221	3.77	0.675		
Theoretical teaching satisfaction	Male	153	3.72	0.678	-1.775	0.077
	Female	221	3.85	0.685		
Practical teaching satisfaction	Male	153	3.73	0.706	-1.818	0.070
	Female	221	3.86	0.727		
Expected outcome evaluation	Male	153	3.69	0.766	-2.203*	0.028
	Female	221	3.87	0.694		
Overall learning satisfaction	Male	153	3.70	0.651	-2.068*	0.039
	Female	221	3.84	0.626		

Note: \*p<.05

**Table 3:** Comparison of Differences in Learning Satisfaction of College Students at CHS Vocational College of Different Grades

	Grade	N	M	SD	T	P	LSD
Learning environment satisfaction	① Freshman	148	3.80	0.646	2.427	0.090	
	② Sophomore	150	3.85	0.637			
	③ Junior	76	3.64	0.788			
Teaching management satisfaction	① Freshman	148	3.75	0.670	1.347	0.261	
	② Sophomore	150	3.77	0.657			
	③ Junior	76	3.62	0.761			
Theoretical teaching satisfaction	① Freshman	148	3.83	0.650	3.526*	0.030	①>③
	② Sophomore	150	3.85	0.659			②>③
	③ Junior	76	3.61	0.770			
Practical teaching satisfaction	① Freshman	148	3.85	0.656	3.962*	0.020	①>③
	② Sophomore	150	3.87	0.710			②>③
	③ Junior	76	3.60	0.828			
Expected outcome evaluation	① Freshman	148	3.80	0.688	2.559	0.079	
	② Sophomore	150	3.87	0.694			
	③ Junior	76	3.64	0.846			
Overall learning satisfaction	① Freshman	148	3.81	0.609	3.173*	0.043	①>③
	② Sophomore	150	3.84	0.602			②>③
	③ Junior	76	3.62	0.742			

Note: \*p<.05

By analyzing the mean (M) and standard deviation (SD) data, we aim to understand the overall learning satisfaction level and various dimensions of CHS vocational college students in Shandong Province, China. According to the analysis results in Table 2, the overall learning satisfaction was T=-



2.068, and the  $P= 0.039$ , less than 0.05, indicating a significant difference. Therefore, there was a significant difference in learning satisfaction of college students at CHS Vocational College of different genders in Shandong Province, China, with female students having higher learning satisfaction than male students.

According to the analysis results in Table 3, the overall learning satisfaction was  $F=3.173$ , and the  $P= 0.043$ , less than 0.05, indicating a significant difference. According to the multiple comparison results of LSD, it could be seen that overall learning satisfaction was higher regarding grades, with freshmen and sophomores having higher learning satisfaction than juniors. There was a significant difference in the learning satisfaction of college students at CHS Vocational College from different majors in Shandong Province, China.

## **Discussion**

### ***Current Status of Learning Satisfaction of College Students at CHS Vocational College in Shandong Province, China***

Descriptive statistical results showed that the overall satisfaction level of CHS vocational college students in Shandong Province, China was at a high level, indicating that the college students have a high level of satisfaction with current academic content and have a good experience in learning activities. The gap between their needs and expectations and actual income was also small. At the same time, this also reflects that the school could consider the development needs of students from multiple aspects when carrying out school construction and improving teaching quality, and actively provide students with a better learning environment and high-quality learning resources.

### ***Differential Learning Satisfaction of College Students at CHS Vocational College in Shandong Province, China***

The results of the gender difference comparison showed that there was a significant difference in the learning satisfaction of college students at CHS Vocational College in Shandong Province, China, with female students having higher learning satisfaction than male students. This result was consistent with Guo et al. (2022) research conclusion. Regarding various dimensions, female students scored significantly higher than male students regarding satisfaction with the learning environment and evaluation of expected outcomes. The reason might be that under the influence of traditional beliefs, males have different needs and career expectations for future development than females. They were usually given more social expectations, and their positioning for future development was higher. Therefore, their evaluation criteria for learning satisfaction were more inclined towards theoretical and practical aspects, such as whether course content, skill training, and teaching resources were beneficial for future career development. As a result, males generally have higher psychological expectations, which could quickly increase the gap between actual gains and expectations, decreasing learning

satisfaction.

The comparison results of grade differences showed a significant difference in the learning satisfaction of college students at CHS Vocational College in Shandong Province, China. The learning satisfaction of freshmen and sophomores was higher than that of juniors. Xu & Liu (2023) also demonstrated in their research that junior students' overall learning satisfaction was lower than lower grades. The grade differences in this survey were mainly evident in the theoretical teaching satisfaction and practical teaching. The reason might be that lower-grade students have lower academic and employment pressures than junior students. They were full of aspirations for the future and felt fresh and curious about everything on campus. Therefore, the passion for learning and life and a good learning experience among freshmen and sophomores led to higher satisfaction with their studies. Secondly, as grades increase, the difficulty of professional courses increases in the junior of college, and theoretical knowledge becomes more difficult to understand. At the same time, during this period, many students had more exams, whether it was the final year's assessment of various subjects, participation in academic advancement exams, or various qualification exams, which would increase the academic pressure on junior students and also had a particularly negative impact on their learning satisfaction.

The comparison results of professional differences showed a significant difference in the learning satisfaction of CHS vocational college students in Shandong Province, China, and the learning satisfaction of students in other majors was higher than that of science and engineering majors. Other consistent conclusions were He (2012), and Xu (2015). The reason for this difference might be that, on the one hand, CHS Vocational College was a regular university in the province specializing in film, television, and mass media. Majors related to radio, film and television program production, news and communication, such as art design, news and communication, and humanities and social sciences, were more distinctive in the college. They also have curriculum design, teaching models, and employment planning advantages. The corresponding learning environment construction, teaching resource allocation, and faculty team building were all of high quality. Therefore, the number of students in these majors in the college was relatively high, and their learning satisfaction was also higher than that of other majors. In contrast, the investment in the construction of science and engineering majors appears relatively weak, and the support and learning experience that students receive would also have a gap in comparison, resulting in a decrease in learning satisfaction.

## **Conclusions**

Conclusion 1: The overall learning satisfaction of CHS vocational college students in Shandong Province, China and the score standards for each dimension have reached a high level, indicating that CHS vocational college students in Shandong Province, China, have a high level of learning satisfaction.

Conclusion 2: Under different demographic backgrounds such as gender, grade, and major, there were significant differences in the learning satisfaction of college students at CHS Vocational College in Shandong Province, China.

The specific difference comparison results showed that regarding gender variables, female students have higher learning satisfaction than male students. Regarding grade variables, the learning satisfaction of freshmen and sophomores was higher than that of juniors. Regarding professional variables, students from other majors have higher learning satisfaction than those from science and engineering majors.

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