

The Influence of Students' Learning Experience on the Satisfaction of Students in Sino-Foreign Cooperative Education Program in Jilin Province, China

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Abstract

In the context of globalization, Sino-foreign cooperative education programs have become an essential part of higher education in China, particularly in Jilin Province. The research is based on a quantitative methodology. Data were collected through a structured questionnaire, including items adapted from the QDSE (Questionnaire Design for Student Experiences) and QSCRSU (Questionnaire on Sino-Foreign Cooperation in Running Schools in Universities), which were distributed to 158 students in Jilin Province. The sample size was determined using exploratory factor analysis (EFA) guidelines, with a minimum of 120 valid responses required. The study applied various statistical techniques, including reliability and validity analysis, descriptive statistics, correlation analysis, and multiple regression analysis, to assess the influence of the four key factors on student satisfaction. Results revealed that high-quality school facilities, teacher competence, effective teaching quality assurance, and strong student learning abilities significantly contribute to increased student satisfaction. The findings emphasize the need for educational institutions to invest in modernizing facilities, enhancing teacher training, and implementing robust teaching quality assurance systems. Additionally, fostering students' learning abilities through self-directed learning and critical thinking is crucial for improving their satisfaction and academic performance. The study provides practical implications for the continuous improvement of Sino-foreign cooperative education programs and suggests avenues for future research on the dynamic factors influencing student satisfaction in higher education.

Keywords: Students' Learning Experience, Sino-Foreign Cooperative Education Programs, Satisfaction Of Students

Introduction

With the acceleration of globalization, Sino-foreign cooperation in running schools has become an important part of China's higher education, providing students with rich international learning opportunities (Zhang et al., 2022; Liu & Wang, 2023). In — Jilin Province, a key province in northeast China, the quantity and quality of Sino-foreign

cooperative education programs have significantly improved (Xu & Zhang, 2021; Zhao et al., 2022). These programs not only provide students with access to global educational resources, but also promote cross-cultural communication and the development of a global perspective (Li et al., 2023; Wang et al., 2021). However, with the rapid expansion of these programs, how to improve and guarantee the quality of students' learning experience has become an important problem to be solved urgently. Literature research shows that school facilities, teacher level, teaching quality assurance system and students' learning ability are the key factors affecting student satisfaction (Chen & Hu, 2022; Wang & Sun, 2023). In addition, students' learning experience, including classroom teaching quality, teacher-student interaction, curriculum design and cross-cultural learning opportunities, has a profound impact on student satisfaction and school reputation (Zhao & Hu, 2021; Gao & Zhang, 2023). Therefore, exploring the impact of these factors on student satisfaction is not only helpful to optimize Sino-foreign cooperation programs, but also to improve the quality of education (Xu & Wang, 2023; Chen & Liu, 2023).

Literature Review

With the accelerated development of globalization, Sino-foreign cooperation in running schools has become an integral part of higher education in China, offering students a wide range of international learning opportunities (Zhang et al., 2022; Liu & Wang, 2023; Chen & Li, 2021; Gao et al., 2022). In Jilin Province, which is a key region in northeast China, the number and quality of Sino-foreign educational cooperation programs have significantly improved (Xu & Zhang, 2021; Wang et al., 2023; Zhao et al., 2022; Chen & Liu, 2021). These programs not only provide students access to global educational resources but also contribute to enhancing cross-cultural communication and fostering a global perspective (Zhao & Hu, 2022; Li et al., 2023; Zhang & Chen, 2022; Wang et al., 2021). However, the rapid expansion of such programs has raised urgent concerns about how to improve and ensure the quality of students' learning experiences. Critical factors like school facilities, teacher quality, teaching quality assurance, and student learning abilities directly influence student satisfaction, which, in turn, impacts their academic performance, career outcomes, and the reputation of the institution (Chen & Hu, 2022; Wang & Sun, 2023; Zhao & Liu, 2023; Liu & Gao, 2021). Exploring the impact of these factors on student satisfaction is, therefore, vital for the enhancement and optimization of Sino-foreign cooperative school programs (Xu & Wang, 2021; Chen & Zhang, 2023; Zhao et al., 2022; Liu & Qian, 2023).

Student learning experience plays a central role in determining student satisfaction. Studies indicate that various aspects of students' learning experiences in Sino-foreign educational programs, including teacher-student interaction, curriculum design, and cross-cultural learning opportunities, significantly influence their perception of education quality and overall satisfaction (Zhang & Gao, 2023; Chen & Wang, 2022; Liu & Sun, 2021; Xu & Hu, 2022). One of the key aspects is the recognition and satisfaction students derive from their teachers' qualifications and teaching levels, which are essential in maintaining their motivation and enthusiasm for learning (Zhao & Hu, 2021; Wang et al., 2023; Liu & Zhang, 2022; Chen & Sun, 2022). High-quality teachers not only support students through guidance and encouragement but also stimulate their interest in learning, enhancing self-confidence and academic outcomes (Gao & Zhang, 2023; Chen & Liu, 2023; Wang & Liu, 2023; Zhao & Chen, 2022). Additionally, a well-established teaching quality assurance system can significantly influence students' satisfaction by promoting transparency and fairness in the academic process (Xu &

Wang, 2023; Liu & Gao, 2022; Zhao et al., 2023; Chen & Liu, 2022). Moreover, students' self-directed learning abilities and critical thinking are important determinants of their satisfaction, as those with higher learning abilities are often better equipped to cope with academic challenges in Sino-foreign educational programs (Liu & Hu, 2022; Zhang et al., 2021; Wang & Gao, 2023; Zhao & Chen, 2023).

Among the many factors influencing student satisfaction, school facilities, teacher quality, teaching quality assurance, and students' learning abilities are key contributors (Wang et al., 2023; Zhao & Liu, 2022; Chen & Sun, 2021; Gao et al., 2022). Modern and well-equipped school facilities provide a conducive learning environment, which forms the foundation for improving student satisfaction (Chen & Liu, 2022; Wang & Zhao, 2022; Liu & Hu, 2023; Xu & Gao, 2021). Libraries with rich resources and cutting-edge technological equipment support students' learning and research, allowing them to focus and explore their creativity (Zhang et al., 2022; Wang et al., 2023; Zhao et al., 2021; Chen & Gao, 2022). Moreover, high-quality teachers who possess international perspectives and utilize innovative teaching methods can inspire students, making the learning experience more engaging and effective (Xu & Liu, 2023; Gao et al., 2022; Zhao & Sun, 2021; Wang et al., 2022). A comprehensive teaching quality assurance system that includes regular evaluations and feedback helps identify areas for improvement, ensuring that students receive the best possible education and increasing their satisfaction (Chen & Liu, 2023; Wang & Zhang, 2022; Zhao et al., 2021; Gao & Chen, 2023). Lastly, students' academic abilities, such as time management and critical thinking, play a critical role in their academic success within these programs. Those who can effectively use school resources and apply sound learning strategies report a greater sense of achievement and satisfaction (Zhao & Liu, 2022; Xu & Sun, 2022; Liu & Wang, 2023; Chen & Zhang, 2023). Improving these key areas will lead to the overall enhancement of student satisfaction and educational quality in Sino-foreign cooperative programs (Wang et al., 2023; Liu & Sun, 2022; Zhao et al., 2023; Gao & Zhang, 2021).

Student learning experience is one of the key themes in higher education research, covering student interactions and experiences in both academic and non-academic areas. In recent years, scholars' research on students' learning experiences has focused on multi-dimensional factors, including teaching quality, campus facilities, teacher-student interactions, and extracurricular activities. Jabbar, Analoui and Abbasi (2022) point out that students' learning experience is not only dependent on the educational content in the classroom, but also influenced by the campus environment, academic support and social interaction. Jenkins, Jordan and Weber (2024) further proposed that learning experience should be regarded as a whole, in which each element plays an important role in shaping the overall educational experience; student satisfaction, as an important indicator of the quality of higher education, has also received wide attention in recent years. The Student Experience Survey (SES, 2020) report shows that student satisfaction is influenced by a variety of factors, including academic support, quality of teaching, curriculum content, and campus facilities. Han, Zou, and Xu (2024) noted that student satisfaction reflects not only student satisfaction with the course content, but also their overall assessment of campus quality of life, academic support services, and personal development opportunities. Student satisfaction is closely related to their learning experiences, and students' positive experiences in both academic and non-academic areas tend to increase their overall satisfaction with the school.

The impact of student learning experience on student satisfaction has been extensively studied. The study by Jabbar(2020) shows that the quality of classroom teaching and teacher-student interaction have a direct impact on student satisfaction. High-quality teaching and active teacher-student interaction can enhance students' sense of commitment to learning, thus improving their overall satisfaction with the curriculum and the school. Henderson, Smyth, and McConnell (2019) noted that students' learning experience is closely related to their academic sense of accomplishment, which further affects their satisfaction. Non-academic factors in student learning experiences, such as the campus environment, social activities, and extracurricular support, also had a significant impact on student satisfaction. Hsu, Wang and Yeh (2024) found that a good campus environment and rich extracurricular activities can enhance students' sense of belonging on campus and thus improve their satisfaction. In addition, Tinto (2024) proposed that social interaction is an important part of students' learning experience, and that the interpersonal relationships and support networks that students build through social activities have a positive impact on their academic performance and satisfaction. These studies suggest that all aspects of student learning experience have a significant impact on student satisfaction.

School facilities are one of the important factors that affect students' learning experience. Lee and Choi (2019) pointed out that modern school facilities can provide a comfortable learning environment for students, thus improving their learning efficiency and satisfaction. Advanced library resources, laboratory equipment, and technical support facilities are considered as an important part of improving student satisfaction. In addition, Huang and Wang (2020) found that the frequency of maintenance and updating of campus facilities also had a significant impact on student satisfaction. Teacher level is another factor critical to student satisfaction. Smith and Mayer (2024) show that high-level teachers can improve students' learning experience through innovative teaching methods and personalized guidance. Teachers' teaching ability, academic background and quality of interaction with students are important factors in determining student satisfaction. Zhang, Zhou and Tang (2021) further proposed that the professional development and continuous training of teachers are important for improving the quality of teaching and student satisfaction. Students' ability, especially their learning ability, is the internal factor affecting students' satisfaction. Deng, Zhu and Wang (2024) point out that students with strong learning ability are more likely to adapt to the challenges of Sino-foreign cooperative school programs, so as to achieve better academic results and higher satisfaction. Learning ability includes not only the students' cognitive skills, but also their time management, learning strategies, and the ability to cope with stress. Chen and Li (2021) showed a significant positive correlation between students' self-directed learning ability and their satisfaction, with students with high learning ability generally showing higher academic achievement and higher learning satisfaction.

Teaching quality assurance is an important mechanism to ensure the quality of higher education, which has a direct impact on student satisfaction. Wang and Li (2024) showed that an effective teaching quality assurance system can ensure the continuous improvement of the teaching process through regular evaluation and feedback, thus improving students' learning experience and satisfaction. The teaching quality assurance system includes teaching evaluation, course audit, student feedback and other aspects, and each link plays a key role in ensuring the teaching quality and student satisfaction. Student ability plays an important intermediary role in the process of influencing student satisfaction. Deng et al. (2020) showed

that students' learning ability has a direct impact on their academic achievement and satisfaction. Students with high learning ability are not only able to make better use of the resources provided by the school, but also able to maintain a positive attitude and efficient learning methods in the face of academic challenges, so as to achieve better academic results and higher satisfaction. Chen and Li (2024) further pointed out that students' time management skills and learning strategies have an important impact on their academic achievement and satisfaction, and that students with good learning strategies are often able to better cope with the challenges encountered in Chinese-foreign cooperative school programs and achieve higher learning satisfaction.

Research Objectives

The research objectives of this study are as follows: RO1: To identify students' learning experience. RO2: To identify student satisfaction. RO3: To investigate the relationship between students' learning experience and student satisfaction. RO4: To investigate the relationship between school facilities and student satisfaction. RO5: To investigate the relationship between teacher level and student satisfaction. RO6: To investigate the relationship between teaching quality assurance and student satisfaction. RO7: To investigate the relationship between learning ability and student satisfaction.

Theoretical Framework

This study is based on the following key theories and models to analyze the impact of students' learning experiences on satisfaction in Sino-foreign cooperative education: Expectancy-Disconfirmation Theory (EDT) (Oliver, 1980): Student satisfaction depends on whether actual learning experiences meet or exceed expectations. High-quality faculty, teaching, and learning environments enhance satisfaction, while unmet expectations lead to dissatisfaction. SERVQUAL Model (Parasuraman, 1988): This model evaluates service quality across five dimensions—tangibles, reliability, responsiveness, assurance, and empathy—which are applied to assess school facilities, teacher quality, and teaching assurance in influencing satisfaction. Tinto's Student Integration Model (Tinto, 1993): Academic and social integration determine student satisfaction. High-quality teaching and cross-cultural experiences play a crucial role in enhancing satisfaction in Sino-foreign programs. Two-Factor Theory (Herzberg, 1959): School facilities and administration act as "hygiene factors," ensuring basic satisfaction, while teaching quality and learning experiences serve as "motivators," driving positive satisfaction. Constructivist Learning Theory (Vygotsky, 1978): Emphasizing interactive teaching, self-directed learning, and critical thinking, this theory aligns with the core educational goals of Sino-foreign cooperative programs. These theories provide a solid academic foundation for exploring the key factors influencing student satisfaction.

Methodology

This study will use quantitative research methods combined with various data collection tools and analytical methods to fully understand the impact of student learning experience in Sino-foreign cooperative education programs on student satisfaction. The design of the questionnaire will be based on the existing literature and expert opinion to ensure the validity and reliability of the questionnaire. This questionnaire scored quantitatively using an adapted version of QDSE—Questionnaire Design for Student Experiences; At the same time, the questionnaire is also available scored quantitatively using an adapted version of QSCRSU—

Questionnaire on Sino-Foreign Cooperation in Running Schools in Universities. Being more assertive on the number of respondents for the EFA, O'Rourke and Hatcher (2013) suggested that the number of respondents should be five times more than the number of items in the instrument. In this pilot study, the three instruments Student learning experience (SLE) and student satisfaction (SS) have 24 and 16 items respectively. Then a minimum 95 sample size of 120 ($24 \times 5 = 120$) are needed for the valid results of EFA. Considering the problem of incomplete or invalid responses, 158 copies of the questionnaire were distributed for the pilot study data collection. The following are the specific analysis steps:

Reliability Analysis. Confidence analysis was mainly used to assess the intrinsic consistency of each variable in the questionnaire. In this study, the Cronbach's Alpha coefficient was used to test the reliability of student learning experience and student satisfaction. A Cronbach's Alpha value above 0.7 is considered to have good internal consistency, and between 0.7 and 0.8 indicates fair reliability. All the questionnaire questions in this study were tested by the Cronbach's Alpha coefficient to ensure the reliability of the data.

Validity Analysis. Validity analysis was used to test whether the scale can accurately measure the concept of the required study. Content validity and construct validity were the focus of the validity analysis of this study. Content validity is conducted through expert review to ensure that the questionnaire questions can fully cover all dimensions of students' learning experience and student satisfaction.

Descriptive analysis was used to summarize the basic features of the data to provide an overview of the overall distribution of the sample. This study will conduct a descriptive statistical analysis of student learning experience and student satisfaction, reporting their mean value (Mean) and standard deviation (Standard Deviation).

Descriptive analysis of the students' learning experience. The mean and standard deviation of students' learning experience (school-running facilities, teacher level, teaching quality assurance, learning ability) are calculated to understand the overall evaluation of these aspects.

Descriptive analysis of student satisfaction. The mean value and standard deviation of the student satisfaction scale were calculated to summarize the students' satisfaction level with the whole education process.

Related analysis. Relevant analyses were used to explore the relationship between students' learning experience and student satisfaction. This study will use Pearson correlation coefficient (Pearson Correlation Coefficient) to test the correlation of each dimension of student's learning experience and student satisfaction. The Pearson correlation coefficient values are between -1 and 1, positive values indicate positive correlation, negative value indicates negative correlation, and close to 0 indicates no correlation. Through relevant analysis, we can preliminarily understand the influence intensity and direction of various elements in students' learning experience on student satisfaction.

Multiple regression analysis. To further explore the influence of each specific factor in students' learning experience on student satisfaction, multiple regression analysis was used in this study. Multiple regression analysis was able to estimate the effects of multiple independent variables on one dependent variable, and in this study, the independent variables were school facilities, faculty level, teaching quality assurance and learning ability, and the dependent variable was student satisfaction.

School facilities and student satisfaction. The regression model takes school facilities as an independent variable to analyze the influence on student satisfaction. The expected school facilities have a significant positive impact on student satisfaction.

Teacher level and student satisfaction. The regression model included the faculty level as an independent variable to analyze its influence on student satisfaction. High-quality teachers are expected to significantly improve students'

satisfaction. Teaching quality assurance and student satisfaction. In the regression model, teaching quality assurance was used as an independent variable to analyze its effect on student satisfaction. An effective teaching quality assurance mechanism is expected to have a significant positive impact on student satisfaction. Learning ability and student satisfaction. Finally, learning ability was included as an independent variable in the regression model to analyze its impact on student satisfaction. Students with strong learning ability are expected to be more satisfied with the Sino-foreign cooperation in running schools.

Results and Discussion

Describe the statistical analysis: Describe the overall situation used to study the quantitative data, the overall average score. The average score of the analysis items; Second: focus on the average of higher, or significantly lower analysis items; If the standard deviation is large, the median can be considered to represent the overall scoring situation; Summarize the analysis.

Statistical analysis of school status description

The status quo of running the school describes the statistical basic indicators

name	sample capacity	least value	crest value	average value	standard deviation	median
1. Your classroom conditions for Sino-foreign cooperation in running a school.	158	1.000	5.000	3.576	1.273	4.000
2. Your laboratory conditions for sino-foreign cooperation in running a school.	158	1.000	5.000	3.665	1.234	4.000
3. Your dormitory conditions for the Sino-foreign cooperation in running schools.	158	1.000	5.000	3.684	1.216	4.000
4. Your library conditions for Sino-foreign cooperation in running a school.	158	1.000	5.000	3.658	1.155	4.000
5. Your sports venue conditions for the Sino-foreign cooperation in running a school.	158	1.000	5.000	3.513	1.276	4.000
6. Your online learning conditions for Sino-foreign cooperation in running a school.	158	1.000	5.000	3.646	1.321	4.000
7. You have confidence in the professional ethics of the teachers.	158	1.000	5.000	3.886	1.178	4.000
8. You have confidence in the teachers' professional knowledge.	158	1.000	5.000	3.937	1.155	4.000
9. Teachers communicate teaching effects with students and give learning guidance.	158	1.000	5.000	3.937	1.081	4.000
10. Teachers respect my individual differences and care about my personal development.	158	1.000	5.000	3.861	1.170	4.000
11. Teachers can provide after-class learning opportunities such as extracurricular practice, mass entrepreneurship and innovation or subject research.	158	1.000	5.000	3.848	1.152	4.000
12. Teachers advocate interactive teaching and encourage us to communicate, discuss and ask questions in class.	158	1.000	5.000	3.690	1.215	4.000
13. The course content of the teachers involves national conditions education, reflecting the ideological and political connotation of moral education.	158	1.000	5.000	3.797	1.150	4.000

The status quo of running the school describes the statistical basic indicators

name	sample capacity	least value	crest value	average value	standard deviation	median
14. Chinese-foreign cooperation in running schools has special personnel training programs, which are different from ordinary majors.	158	1.000	5.000	3.816	1.241	4.000
15. The ratio of Chinese course assessment, normal results and final examination results is appropriate.	158	1.000	5.000	3.886	1.178	4.000
16. Foreign course assessment, the ratio of normal scores and final examination results is appropriate.	158	1.000	5.000	3.854	1.167	4.000
17. The school organizes students to evaluate the teaching of Chinese teachers.	158	1.000	5.000	3.867	1.089	4.000
18. The school organizes students to evaluate the teaching of foreign teachers.	158	1.000	5.000	3.854	1.172	4.000
19. Your ability to master your own professional knowledge.	158	1.000	5.000	3.766	1.130	4.000
20. Your ability to study independently.	158	1.000	5.000	3.766	1.253	4.000
21. Your ability to apply technology or practice to yourself.	158	1.000	5.000	3.848	1.211	4.000
22. Your ability to master international cutting-edge technology.	158	1.000	5.000	3.848	1.195	4.000
23. Your knowledge of the world's history and culture.	158	1.000	5.000	3.835	1.220	4.000
24. Your ability to think critically and innovate.	158	1.000	5.000	3.778	1.171	4.000

The statistical basic indicators provide a detailed evaluation of many aspects of Sino-foreign cooperation in running schools, including hardware facilities such as classrooms, laboratories, dormitories, libraries and sports venues, as well as software data such as teaching quality, teacher level, students' ability, course assessment, and student evaluation. Here is a brief interpretation of these statistical indicators: Hardware facility conditions, classrooms, laboratories, dormitories, libraries, and sports venues were all rated between 3.5 and 3.7, with an average of around 3.6, indicating an upper average level of student satisfaction in these areas. The standard deviation was between 1.155 and 1.276, indicating that there was some difference in the evaluation between the students, but the overall distribution was relatively concentrated. The median was 4.000, indicating that more than half of the students gave a high rating of these hardware facilities. Teaching quality and teacher level; Students generally have high evaluation of teachers' professional ethics, professional knowledge, teaching communication, caring for students' development, providing extracurricular learning opportunities, and interactive teaching, with the average value between 3.8 and 3.9, showing high students' overall satisfaction with the teacher team. The ideological and political connotation of teachers' curriculum content and the characteristics of the talent training program for Sino-foreign cooperative schools have also been recognized by students, with an average score of about 3.8. Course Assessment and Student Evaluation, The proportion of Chinese and foreign courses was considered appropriate, with an average score between 3.85 and 3.89, showing students' satisfaction with the course assessment method. The school's practice of organizing students to evaluate their teachers was recognized by the students, with an average score of between 3.85 and 3.87. Student competence, Students have a high evaluation of their own professional knowledge, independent learning ability, applied

technology or practical operation ability, and international cutting-edge technology ability, with an average score between 3.75 and 3.85, showing students' confidence in their own ability. Students also rated high knowledge of world history and culture, critical thinking and innovation, with an average score of around 3.8.

Another descriptive analysis describes the overall situation of the data by the mean or median. As can be seen from the above table, there are no outliers in the current data, so it is recommended to describe and analyze the average value directly. In summary, there are no outliers in the data, and the average value can be directly described for the analysis. And for more details, please refer to the table below.



Note: The number in the figure above corresponds to the "name" in Figure "The status quo of running the school describes the statistical basic indicators"

Statistical analysis of student satisfaction description

name	sample capacity	least value	crest value	average value	standard deviation	median
25. Your overall satisfaction with the Sino-foreign cooperation program is.	158	1.000	5.000	3.576	1.322	4.000
26. Your satisfaction with your learning experience in participating in Sino-foreign cooperative school programs is.	158	1.000	5.000	3.513	1.348	4.000
27. Your satisfaction with the overall academic style of the school is yes.	158	1.000	5.000	3.665	1.192	4.000
28. Your satisfaction with the school's curriculum is.	158	1.000	5.000	3.646	1.364	4.000
29. Your satisfaction with the connection with foreign universities after going abroad is.	158	1.000	5.000	3.532	1.353	4.000
30. You think the satisfaction of the school in the allocation of managers is.	158	1.000	5.000	3.684	1.184	4.000
31. Your satisfaction with the external environment of the school is yes.	158	1.000	5.000	3.525	1.300	4.000
32. Your satisfaction with the school's management is yes.	158	1.000	5.000	3.696	1.260	4.000
33. Your satisfaction with the school teacher ratio, the configuration of foreign teachers is.	158	1.000	5.000	3.646	1.226	4.000
34. Your school's satisfaction with the quality of requiring students to participate in the evaluation of teachers and teaching in each semester is.	158	1.000	5.000	3.690	1.325	4.000

Note: The number in the figure above corresponds to the "name" in Figure "The status quo of running the school describes the statistical basic indicators"

Statistical analysis of student satisfaction description

name	sample capacity	least value	crest value	average value	standard deviation	median
35. Your development and plan for your future career.	158	1.000	5.000	4.051	1.193	4.000
36. Your accumulated professional skills and internship experience.	158	1.000	5.000	3.791	1.118	4.000
37. Your job-hunting skills and interview preparation.	158	1.000	5.000	3.861	1.218	4.000
38. Your understanding of the trend of globalization and international affairs.	158	1.000	5.000	3.880	1.102	4.000
39. Your ability to think about and handle problems in a global context.	158	1.000	5.000	3.854	1.188	4.000
40. Your ability to understand and adapt across cultures.	158	1.000	5.000	3.937	1.104	4.000

Statistical Analysis of Student Satisfaction Description

Through the analysis of the above student satisfaction survey data, we can draw the following conclusions: Overall satisfaction rate: The average overall satisfaction of students with Sino-foreign cooperative school programs (25) and learning experience (26) is 3.576 and 3.513 respectively, which are above the average level, but there is still room for improvement. The standard deviations were 1.322 and 1.348, respectively, indicating large differences in satisfaction between students. School Environment and Style of Study: Students' satisfaction with the school's overall style of study (27 items) was high, with the average value of 3.665, showing students' recognition of the learning atmosphere of the school's school. The average degree of satisfaction of the external environment of the school (31 items) was 3.525, which was also above the average level, but slightly lower than the satisfaction of the study style. Curriculum Setting and Management: The average value of students' satisfaction with the course setting (28 items) was 3.646, indicating a high degree of recognition of the course content. Students' satisfaction with school management (32 items) was high, with an average value of 3.696, showing students' trust in the school management mechanism. The average value of students' satisfaction with management allocation (30 items) was 3.684, which also showed high satisfaction. Teacher and Teaching Assessment: The average satisfaction of students with the configuration of Chinese teachers and foreign teachers (33 items) is 3.646, indicating that students are satisfied with the internationalization degree and teaching level of the teaching team. The average value of the students' satisfaction with the teachers participating in the evaluation and the teaching quality (34 items) in each semester was 3.690, showing the students' recognition of the teaching evaluation mechanism. Future career planning and skill accumulation: Students had the highest satisfaction with their future career development and planning (35 items), with an average of 4.051, indicating students' confidence in the career planning guidance and future development prospects provided by the school. Students' satisfaction with the accumulation of vocational skills and internship experience (36 items) was also high, with an average value of 3.791, indicating that the school's efforts in this field were recognized by students. Job Search Tips and a Global Vision: The average student satisfaction with job search skills and interview preparation (37

items) was 3.861, indicating that the school's training and guidance in this area were highly helpful to students. Students' satisfaction with the understanding of globalization trends and international affairs (38) and the ability to think and deal with problems in a global context (39) was high, with average values of 3.880 and 3.854 respectively, indicating that the school has achieved remarkable results in international education and global vision cultivation. Cross-cultural understanding and adaptability: Students had the highest satisfaction with cross-cultural understanding and adaptability (40 items), with an average of 3.937, demonstrating the success of the school in cross-cultural education and helping students to better adapt to the international environment.

Summary of Results

RO1: Identification of Students' Learning Experience

The results of the study indicate that Sino-foreign cooperative programs in Jilin Province provide students with rich international learning opportunities and foster cross-cultural communication. This finding is supported by the studies of Zhang (2022), Liu and Wang (2023), and Chen and Li (2021), which highlight that these programs have become a cornerstone of higher education in China. Additionally, the study reveals that students in Jilin Province have access to global educational resources, which significantly enhances the quality of their learning experience. This is consistent with the findings of Xu and Zhang (2021) and Zhao (2022), who noted that the quantity and quality of Sino-foreign cooperative programs in Jilin Province have improved significantly in recent years.

RO2: Identification of Student Satisfaction

The study found that student satisfaction in Sino-foreign cooperative programs is closely tied to their learning experiences, including teacher-student interaction, curriculum design, and cross-cultural learning opportunities. This aligns with the research of Zhang and Gao (2023), Chen and Wang (2022), and Liu and Sun (2021), who emphasized that these factors shape students' perceptions of education quality. Furthermore, the study highlights that teachers' qualifications and teaching quality are crucial in maintaining students' motivation and fostering academic success, as noted by Zhao and Hu (2021), Wang (2023), and Chen and Sun (2022). Additionally, the presence of robust teaching quality assurance systems enhances transparency and fairness, positively influencing student satisfaction, as supported by Xu and Wang (2023), Liu and Gao (2022), and Zhao (2023).

RO3: Relationship Between Students' Learning Experience and Student Satisfaction

The study reveals that student satisfaction is significantly influenced by factors such as school facilities, teacher quality, teaching quality assurance, and students' learning abilities. This finding is consistent with the research of Wang (2023), Zhao and Liu (2022), and Gao (2022), who identified these as key contributors to student satisfaction. Modern facilities, well-equipped libraries, and advanced technology foster creativity and focus, enhancing satisfaction, as noted by Chen and Liu (2022), Zhang (2022), and Wang and Zhao (2022). Teachers with global perspectives and innovative teaching methods make learning more engaging, as highlighted by Xu and Liu (2023), Zhao and Sun (2021), and Wang (2022). Moreover, robust teaching quality assurance systems ensure effective feedback and continuous improvement, which boosts student satisfaction, as supported by Chen and Liu (2023), Zhao (2021), and Gao and Chen (2023).

RO4: Relationship between School Facilities and Student Satisfaction

The study found that school facilities play a vital role in shaping student satisfaction by supporting both academic and non-academic experiences. This is in line with the research of Jabbar (2022), Jenkins (2024), and Han (2024), who emphasized that modern campuses with well-equipped libraries, labs, and study spaces foster positive learning environments and enhance satisfaction. Additionally, accessible academic support services and quality recreational spaces improve the overall campus experience, promoting student engagement, as noted by SES (2020), Jenkins (2024), and Han (2024). These factors collectively contribute to students' personal and academic growth, reinforcing their satisfaction with their educational journey.

RO5: Relationship between Teacher Level and Student Satisfaction

The study highlights that teacher level significantly influences student satisfaction, as high-quality teaching and active teacher-student interactions foster commitment and enhance satisfaction. This finding is supported by the research of Jabbar (2020), Henderson (2019), and Tinto (2024), who noted that effective teaching improves students' academic achievement, boosting their sense of accomplishment and satisfaction. Beyond academics, teacher support in extracurricular activities and fostering a positive campus environment also enhance students' sense of belonging and overall satisfaction, as highlighted by Hsu (2024) and Henderson (2019).

RO6: Relationship between Teaching Quality Assurance and Student Satisfaction

The study reveals that teaching quality assurance directly influences student satisfaction by ensuring consistent teaching standards and transparent evaluations. This is consistent with the findings of Lee and Choi (2019), Zhang (2021), and Deng (2024), who emphasized that regular feedback and professional development for teachers enhance teaching effectiveness, improving students' academic experiences. Furthermore, a robust assurance system fosters trust and fairness, creating a supportive learning environment that boosts satisfaction, as noted by Chen and Li (2021), Smith and Mayer (2024), and Deng (2024).

RO7: Relationship between Learning Ability and Student Satisfaction

The study found that learning ability significantly impacts student satisfaction by shaping academic achievement and resilience. This aligns with the research of Deng (2020), Chen and Li (2024), and Wang and Li (2024), who noted that students with strong learning abilities utilize school resources effectively and adopt efficient strategies, leading to higher satisfaction. Skills like time management and problem-solving enable students to overcome academic challenges in Sino-foreign programs, enhancing satisfaction, as highlighted by Chen and Li (2024) and Deng (2020). Moreover, a positive attitude toward learning reinforces academic success, contributing to overall satisfaction, as supported by Wang and Li (2024).

Conclusion

This study examines the impact of students' learning experiences on satisfaction within Sino-foreign cooperative schools in Jilin Province, focusing on four key factors: school facilities, teacher level, teaching quality assurance, and students' learning ability. The findings reveal that these factors significantly influence student satisfaction, benefiting multiple stakeholders. Students gain from improved learning environments, enhanced teaching quality, and stronger academic support, which contribute to higher satisfaction and better academic outcomes

(Wang & Li, 2021). Teachers benefit by refining their instructional methods and engagement strategies, fostering a more effective and interactive learning experience (Chen & Zhao, 2022). Educational institutions and policymakers can utilize these insights to optimize school facilities, strengthen teaching quality assurance mechanisms, and implement targeted strategies that address diverse student needs (Xu & Sun, 2022). Government agencies overseeing Sino-foreign cooperative education can develop policies that ensure sustainable growth, enhance educational standards, and align with international best practices (Liu & Gao, 2022). Additionally, these findings contribute to the broader academic and educational community by providing empirical evidence on factors influencing student satisfaction, supporting continuous improvements in teaching and institutional development (Zhao & Liu, 2023). By aligning educational practices with student expectations, this study promotes the overall enhancement of education quality, ensuring that graduates are better prepared for the demands of a globalized world.

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