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What Factors Influence Students' Satisfaction and Loyalty in Higher Vocational Institutions in Jiangxi, China?

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Abstract

Purpose: This study examines the factors that influence undergraduate students' satisfaction and loyalty toward higher education institutions in Jiangxi Province, China. A conceptual framework was developed to analyze the relationships among teachers and teaching (TT), academics (AC), service delivery (SD), built environment (BE), reputation of the university (RU), student satisfaction (SS), and student loyalty (SL). **Research design, data and methodology:** A quantitative design was employed with 450 undergraduates at Jiangxi Polytechnic University. Non-probability sampling combined judgmental and quota techniques to ensure representativeness. Data were collected via an online questionnaire using a 5-point Likert scale and were validated through a pilot test. Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA) were applied to test model fit, reliability, and validity. **Results:** All six hypotheses were supported. TT, AC, SD, BE, and RU significantly influenced SS, while SS directly predicted SL. TT showed the strongest effect on SS, followed by SD, and SS exerted a further positive impact on SL ($\beta = 0.364$). **Conclusions:** The findings highlight that student satisfaction is a crucial mediator linking academic, service, and institutional factors to loyalty. These results suggest that policymakers and university leaders should prioritize teaching quality, service delivery, and institutional reputation to strengthen sustainable development in higher education.

Keywords: Student Satisfaction, Student Loyalty, Higher Education, Undergraduate Student

JEL Classification Code: A22, D91, I23, O30

1. Introduction

Over the past few decades, China's higher education sector has grown rapidly. Since the launch of reform and opening-up policies, enrollment has expanded steadily, with the gross enrollment rate rising year after year (Ministry of Education, 2023). Today, the country hosts a wide range of colleges and universities across disciplines, contributing significantly to talent cultivation and national development (Wang, 2022).

Despite this progress, several challenges remain. Unequal distribution of resources, inconsistent teaching quality, and limited curriculum innovation continue to hinder improvement (Li, 2021). Enhancing student satisfaction and loyalty has therefore become a strategic priority for universities. Improving teaching quality,

upgrading campus facilities, and strengthening communication with students are essential to building positive learning experiences (Chen, 2017; Liu, 2018; Zhang, 2020; Zhao, 2019). In an increasingly competitive higher education landscape, high levels of satisfaction not only motivate students but also build loyalty, which strengthens institutional reputation and long-term sustainability.

Globally, student satisfaction has long been viewed as an important indicator of higher education quality. The United Kingdom, Australia, and the United States were early adopters of student-centered surveys, integrating results into national rankings and institutional assessments (Mehralizadeh & Safaemoghaddam, 2010; Trowler, 2010). In recent years, satisfaction and loyalty have also been recognized as central to institutional reputation and

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competitiveness (Dennis et al., 2016; Manatos et al., 2017; Psomas & Antony, 2017). Yet in China, the concept of service quality in higher education remains only partially embedded, and empirical studies remain limited, particularly at the provincial level (Alves & Raposo, 2007; Bassi, 2019).

In Jiangxi Province, higher education has achieved notable results. As of 2023, the province had 109 universities, including 46 undergraduate institutions and 63 junior colleges. In 2020, the State Council ranked Jiangxi third nationally in “social satisfaction with education.” However, universities in the province still face challenges in teacher development, teaching quality, entrepreneurship education, school-enterprise cooperation, and the cultivation of student competencies. Addressing these gaps requires continued investment and reform.

Against this backdrop, this study focuses on Jiangxi Polytechnic University, an application-oriented higher education institution that evolved from a vocational college and now offers four-year undergraduate programs. Although the university retains its technical and practice-oriented foundation, it operates as a bachelor’s degree granting institution emphasizing applied learning and industry collaboration. This hybrid character, combining vocational roots with undergraduate education, makes it a suitable setting for examining how students perceive satisfaction and loyalty in an applied higher education environment.

Despite its strong academic reputation and ranking, including being ranked 16th nationally and 1st in Jiangxi Province in the 2024 ABC China Higher Vocational College Ranking, little is known about the factors shaping student satisfaction and loyalty within such application-oriented universities. Existing research has not adequately explored how service quality, learning environments, and institutional practices influence student perceptions in Jiangxi.

The purpose of this study is therefore to identify the key factors influencing student satisfaction, examine the link between satisfaction and loyalty, and provide practical recommendations for improving student experiences. By focusing on an application-oriented university context, the study contributes localized evidence to the broader literature on higher education service quality in China while offering actionable insights for policymakers and administrators seeking to enhance institutional sustainability.

2. Literature Review

2.1 Teacher and Teaching (TT)

In today’s educational environment, teachers and teaching (TT) are increasingly shaped by technological progress and the demands of a global society. Effective

teaching now requires more than subject expertise; it involves integrating technology into pedagogy through frameworks such as Technological Pedagogical Content Knowledge (TPACK) (Koehler & Mishra, 2009). Teaching can be understood as a purposeful activity designed to facilitate learning while supporting students’ cognitive, social, and emotional development (Johnson & Johnson, 2009). Teachers are also described as agents of change who create meaningful learning experiences and adapt instruction to diverse learner needs (Hammerness et al., 2005). In this sense, teaching is a dynamic interaction between instructors and students that promotes knowledge acquisition, skill development, and holistic growth (Brown, 2012; Smith et al., 2010).

The influence of TT on student satisfaction (SS) has been widely recognized. Early research stressed that teachers must combine multiple skills to be effective (Lortie, 1975). Students value teachers who act fairly, avoid favoritism, and treat them with respect (Martirosyan, 2014). Satisfaction also increases when teachers address student concerns actively (Bitner, 1990) and when their services provide tangible value (Rafik & Priyono, 2018). Other studies highlight that teacher tenure and experience can strengthen student loyalty (Aleu et al., 2021). Likewise, when students perceive teachers as knowledgeable, caring, and capable of building confidence, their satisfaction with learning improves (Chaudhary & Dey, 2021).

Taken together, the literature suggests that teachers and teaching play a central role in shaping student satisfaction by ensuring fairness, responsiveness, and professional competence. Building on this evidence, the following hypothesis is proposed:

H1: Teachers and teaching (TT) have a significant impact on student satisfaction (SS).

2.2 Academic (AC)

Academic (AC) activities encompass both teaching and research, shaping how knowledge is created, shared, and applied. Academics are not only responsible for transferring knowledge but also for advancing it through research and innovation (Kuhn, 1962). Teaching within the academic context involves fostering critical thinking and supporting students’ intellectual development (Bloom, 1956; Hattie, 2009). Learning is also described as a transformative process that encourages critical reflection and self-directed growth (Cranton, 2006). Overall, academia represents the dynamic interaction of teaching, research, and learning aimed at developing skills and promoting intellectual growth (Zepke & Leach, 2010).

The role of academics in shaping student satisfaction (SS) has been widely acknowledged. A well-designed curriculum and relevant course content are essential for meeting

students' expectations and preparing them for future careers (Johnson, 2020; Smith, 2019). Students report greater satisfaction when instruction is clear, engaging, and supported by timely feedback (Brown, 2024). Access to academic resources such as libraries, laboratories, and updated learning materials further strengthens the learning experience (Bush et al., 1998). In addition, opportunities for collaboration and a supportive academic community encourage student engagement and satisfaction (Canter & Canter, 1976). The level of academic challenge also plays a role: when courses are appropriately demanding, students feel motivated and satisfied, while poorly balanced workloads can reduce satisfaction (Bell, 2022).

Taken together, these studies indicate that the academic experience, including curriculum quality, instructional effectiveness, resource availability, community support, and appropriate challenge levels, has a direct influence on student satisfaction. Based on this evidence, the following hypothesis is proposed:

H2: Academic (AC) has a significant impact on student satisfaction (SS).

2.3 Service Delivery (SD)

Service delivery (SD) is the process through which organizations combine resources, staff, and systems to provide value and meet expectations (Bitner et al., 1997; Grönroos, 2000; Parasuraman et al., 1988; Rust & Oliver, 1994). In higher education, service delivery encompasses how academic and administrative personnel coordinate activities and interactions that support student learning and well-being. It includes not only instructional performance but also the communication, feedback, and guidance that shape students' overall experience (Astin, 1993; Kuh, 2009; Tinto, 1993). Effective service delivery requires reliability, responsiveness, empathy, and assurance, ensuring that both academic and support services align with student expectations (Chickering & Gamson, 1987; Pascarella & Terenzini, 2005).

Empirical research indicates that high-quality service delivery contributes directly to student satisfaction (SS). When services are reliable and responsive, students perceive greater institutional care and trust (Parasuraman et al., 1988; Zeithaml et al., 1990). Faculty who communicate effectively, offer timely feedback, and remain accessible foster satisfaction and engagement (Hennig-Thurau et al., 2001). Administrative efficiency, including transparent procedures and supportive student services, also enhances satisfaction by reducing barriers to academic progress (Douglas et al., 2006). Support systems such as advising, counseling, and extracurricular opportunities further strengthen positive perceptions of the institutional environment (Clewes, 2003; O'Neill & Palmer, 2004).

Taken together, these studies suggest that the quality of service delivery, encompassing teaching practices, administrative operations, and student support services, plays an important role in shaping students' satisfaction with their educational experience. Based on this evidence, the following hypothesis is proposed:

H3: Service delivery (SD) has a significant impact on student satisfaction (SS).

2.4 Built Environment (BE)

The built environment (BE) refers to the physical and spatial surroundings that shape human activity and interaction. It includes the design, construction, and organization of spaces that support learning, living, and collaboration (Gehl, 2010; Krier & Rowe, 1979; Mumford, 1961). In higher education, the built environment encompasses classrooms, libraries, laboratories, dormitories, and outdoor areas that collectively influence academic and social experiences. It is not simply a backdrop for learning but an active setting that affects creativity, well-being, and inclusivity (Kellert, 2008; Zeisel, 2006). Modern universities increasingly value sustainable, flexible, and technology-integrated designs that can adapt to evolving learning needs and encourage collaboration (Oblinger, 2006).

Research indicates that the built environment has a direct effect on student satisfaction (SS). Aesthetic quality, spatial comfort, accessibility, and safety all contribute to students' positive perceptions of campus life (Pounder, 2007; Price et al., 2003). Faculty also perform more effectively in environments conducive to teaching and learning, which indirectly enhances the student experience (Hill et al., 2008). Campus layout, green spaces, and communal areas encourage interaction and a sense of belonging, while clean, well-maintained, and secure facilities reinforce students' satisfaction and pride in their university (Rowley, 1997; Sander & Sanders, 2000). The built environment therefore represents the physical foundation that supports learning, engagement, and well-being.

Taken together, these studies suggest that the built environment, through its design, spatial organization, and overall quality, plays a vital role in shaping how students perceive their educational experience. Based on this evidence, the following hypothesis is proposed:

H4: Built environment (BE) has a significant impact on student satisfaction (SS).

2.5 Reputation of the University (RU)

The reputation of a university (RU) is shaped by factors such as academic excellence, governance, alumni achievements, and contributions to society (Middlehurst &

Woodfield, 2007). It is considered an intangible asset that affects recruitment, retention, and resource acquisition in a competitive market (Harvey & Green, 1993). A strong reputation reflects the ability to deliver quality education, advance research, and support social development (Ehrenberg, 2002; Jongbloed, 2003). Graduate employability, faculty quality, research output, and international visibility further strengthen institutional reputation (Marginson, 2006; Salmi, 2009). Public perception is also influenced by rankings, partnerships, and online presence (Estermann & Nokkala, 2009; Maldonado-Maldonado & Rauhvargers, 2011; Sullivan, 2005).

Empirical studies show that university reputation significantly shapes student satisfaction (SS). Students report higher satisfaction when their institution is recognized for academic quality, respected faculty, and research achievements (Helgesen & Nettet, 2007; Marzo Navarro et al., 2005). A strong reputation also provides valuable opportunities such as internships, research projects, and professional networks (Voss et al., 2007). Beyond academics, reputation fosters pride, confidence, and a sense of belonging, while also enhancing career prospects through greater employer recognition (Appleton-Knapp & Krentler, 2006; DeShields et al., 2005; Joseph et al., 2005).

Taken together, these findings suggest that university reputation, reflected in academic quality, faculty expertise, opportunities, and perceived value, plays an important role in shaping student satisfaction. Based on this evidence, the following hypothesis is proposed:

H5: Reputation of the university (RU) has a significant impact on student satisfaction (SS).

2.6 Student Satisfaction (SS)

Student satisfaction (SS) refers to students' emotional and cognitive evaluations of their educational experience, shaped by the balance between perceived benefits and costs (Dwyer et al., 1987; Hennig-Thurau et al., 2002). It reflects how well institutions meet academic, social, and personal expectations (Kim & Kim, 2004) and serves as a key indicator of educational quality, retention, and institutional reputation (Elliott & Shin, 2002; Helgesen & Nettet, 2007).

In both traditional and digital learning environments, satisfaction is influenced by instructional quality, usability of resources, and opportunities for interaction (Sung & Mayer, 2012). A sense of belonging, meaningful relationships, and supportive campus services also contribute positively (Kuh et al., 2006; Tinto, 1993; Zhao et al., 2005).

Studies show that higher satisfaction often leads to stronger student loyalty (SL). Satisfied students are more likely to stay enrolled, recommend their institution, and participate actively in campus life (Oliver, 1999; Zeithaml

et al., 1996). Faculty support, personalized learning opportunities, and responsive services further enhance this relationship (Jones & Sasser, 1995; Kotler & Keller, 2012; Rust et al., 1995).

Evidence suggests that student satisfaction is a central driver of loyalty. When institutions meet or exceed expectations, students tend to remain committed. Based on this, the following hypothesis is proposed:

H6: Student satisfaction (SS) has a significant impact on student loyalty (SL).

2.7 Student Loyalty (SL)

Student loyalty (SL) refers to the extent to which students identify with their institution, remain committed over time, and continue to support it (Jones & Taylor, 2007). It is often described as a mix of cognitive, affective, and behavioral elements, involving beliefs about the institution, emotional attachment, and the intent to stay or recommend it (Chaudhuri & Holbrook, 2001). Loyalty develops when students perceive clear benefits, experience strong satisfaction, and form lasting social or psychological bonds with their institution (Hennig-Thurau et al., 2002; Kim et al., 2004).

In higher education, loyalty grows when universities consistently deliver on promises related to academic quality, faculty expertise, campus life, and career opportunities (Reichheld, 2003). A positive campus environment and sense of belonging further encourage students to remain engaged and supportive (Heskett et al., 1994). Loyal students not only continue their studies but also advocate for their institution, strengthening its reputation and brand (Kotler & Keller, 2006; Sirdeshmukh et al., 2002).

Student loyalty is both an outcome of satisfaction and a strategic necessity for universities, as it drives retention, positive word of mouth, and long-term institutional success.

3. Research Methods and Materials

3.1 Research Framework

This study is grounded in three well-established models: Social Identity Theory (SIT), SERVQUAL, and SERVPERF. SIT, proposed by Tajfel and Turner (1979), emphasizes how individuals derive identity and commitment from group membership. Applied to higher education, it explains how student satisfaction fosters pride, belonging, and long-term loyalty, supporting the path from student satisfaction (SS) to student loyalty (SL) in the framework.

The SERVQUAL model (Parasuraman et al., 1988; Zeithaml et al., 1990) highlights five service quality dimensions, reliability, responsiveness, assurance, empathy,

and tangibility. These dimensions justify the inclusion of service delivery (SD) and aspects of the university’s reputation (RU) as factors influencing student satisfaction. SERVPERF (Parasuraman et al., 1991) extends this perspective by focusing on service performance rather than expectations, offering a practical basis for evaluating teachers and teaching (TT), academics (AC), and the built environment (BE).

Building on these models, the conceptual framework (Figure 1) examines how TT, AC, SD, BE, and RU influence SS, which then mediates their impact on SL. Positioning satisfaction as a mediator reflects Bollen’s (1989) view that mediators clarify how external factors shape internal perceptions and behaviors.

This theoretical grounding ensures that the framework integrates both academic and non-academic dimensions, providing a comprehensive basis for analyzing student satisfaction and loyalty in Jiangxi higher education institutions.

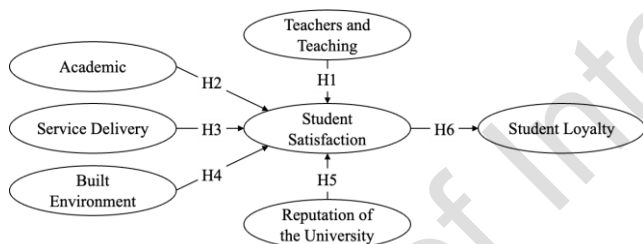


Figure 1: Conceptual Framework

3.2 Research Methodology

This study employed a quantitative approach using non-probability sampling techniques, specifically judgment sampling, quota sampling, and convenience sampling. Questionnaires were distributed online to undergraduate students from three core majors at Jiangxi Polytechnic University: Finance and Accounting, Engineering, and Sergeant Management (Steffens et al., 2014). The aim was to examine the factors influencing student satisfaction and loyalty in higher education institutions in Jiangxi Province.

The questionnaire consisted of three sections. The first included screening questions. The second contained items measured on a 5-point Likert scale, ranging from (1) strongly disagree to (5) strongly agree, which captured the variables linked to the six hypotheses. The third section collected demographic information, including gender, age, and year of study.

Before the main survey, a pilot test was conducted with 30 students to ensure clarity and relevance of the items. Expert review confirmed that the instrument achieved acceptable Item-Objective Consistency (IOC). Reliability testing using Cronbach’s alpha also confirmed that the

scales were valid and reliable (Hartog & Verburg, 2004).

In the main data collection, 450 valid responses were obtained. Data were analyzed using SPSS and AMOS. Confirmatory factor analysis (CFA) was performed to test construct validity and assess model fit, while structural equation modeling (SEM) was applied to examine the causal relationships among the variables.

Ethical standards were maintained throughout the study. Participation was voluntary, and respondents were informed of the research's purpose. Anonymity and confidentiality were assured, and the data were used solely for academic purposes.

3.3 Population and Sample Size

The research focused on undergraduate students at Jiangxi Polytechnic University. A non-probability sampling approach was adopted, incorporating judgment sampling to select the university, quota sampling to ensure representation across the three majors, and convenience sampling to reach respondents within each group. The sample was drawn from three colleges: Finance and Accounting, Engineering, and Sergeant Management. By surveying these groups, the study aimed to identify the factors influencing student satisfaction and loyalty in higher education. Table 1 presents the population and proportional sample sizes for the three majors included in this study.

Table 1: Sample Units and Sample Size

Undergraduate Students	Population Size	Proportional Sample Size
Students of Finance and Accounting	605	145
Students of Engineering	892	213
Students of Sergeant Management	386	92
Total	1883	450

Source: Jiangxi Polytechnic University (2023)

The questionnaires were distributed online between September and December 2024. The multi-stage sampling procedure, combining judgment sampling, quota sampling, and convenience sampling, ensured both representativeness and practicality in data collection. Data collection was conducted through structured questionnaires, followed by screening to ensure the suitability of the responses. In total, 450 valid responses were obtained. The survey was supported by university administrators and received active participation from students.

4. Results and Discussion

4.1 Demographic Information

A total of 450 valid responses were collected from undergraduate students at Jiangxi Polytechnic University. As shown in Table 2, the sample is heavily male-dominated, with nearly nine out of ten respondents being male. The age distribution is relatively balanced, with each group (19-21, 22-24, 25-27, and over 27) accounting for about one quarter of the sample, suggesting representation across both younger and older undergraduates.

All participants were undergraduate students, and their grade levels were fairly evenly distributed, with no group exceeding one quarter of the total sample. This balance indicates that perspectives were captured across different stages of study. In addition, about half of the respondents were native to Jiangxi Province, while the other half came from outside the province, offering a mix of local and non-local perspectives.

Table 2: Demographic Profile

Demographic and General Data (N=450)		Frequency	Percentage
Gender	Male	393	87.3
	Female	57	12.7
Age	19-21 years old	114	25.3
	22-24 years old	116	25.8
	25-27 years old	111	24.7
	Over 27 years old	109	24.2
Grade	Freshman	127	28.2
	Sophomore	111	24.6
	Junior	106	23.6
	Senior	106	23.6
Native of	Yes	228	50.7

Table 3: Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) Results

Variable	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factor Loading	CR	AVE
Teachers and Teaching (TT)	Arif et al. (2013)	4	0.866	0.746-0.840	0.867	0.620
Academic (AC)	Arif et al. (2013)	3	0.823	0.767-0.789	0.823	0.608
Service Delivery (SD)	Chandra et al. (2019)	4	0.867	0.741-0.849	0.868	0.622
Built Environment (BE)	Benetti Corrêa da Silva et al. (2021)	4	0.848	0.728-0.824	0.850	0.588
Reputation of the University (RU)	Heffernan et al. (2018)	4	0.862	0.759-0.802	0.862	0.609
Student Satisfaction (SS)	Othman et al. (2015)	5	0.924	0.691-0.956	0.925	0.716
Student Loyalty (SL)	Mutum et al. (2023)	5	0.902	0.728-0.889	0.903	0.651

Note: CR = Composite Reliability, AVE = Average Variance Extracted

Table 4: Discriminant Validity

Variable	Factor Correlations						
	TT	AC	SD	BE	RU	SS	SL
TT	0.787						
AC	0.333	0.780					
SD	0.314	0.349	0.789				
BE	0.337	0.302	0.372	0.767			
RU	0.341	0.331	0.310	0.296	0.780		
SS	0.577	0.520	0.582	0.512	0.508	0.846	
SL	0.338	0.347	0.304	0.328	0.324	0.385	0.807

Note: The diagonally listed value is the AVE square roots of the variables

Demographic and General Data (N=450)		Frequency	Percentage
Jiangxi province	No	222	49.3

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was used to test the measurement model. The results show that all items were significant and demonstrated adequate factor loadings, confirming discriminant validity. Following Hair et al. (2006), factor loadings above 0.50 and p-values below 0.05 were considered acceptable. In addition, Composite Reliability (CR) values exceeded 0.70, and Average Variance Extracted (AVE) values were above 0.50, meeting the standards recommended by Fornell and Larcker (1981). Table 3 presents the factor loadings, CRs, and AVEs for each construct.

Model fit was further assessed using several indices, including GFI, AGFI, NFI, CFI, TLI, and RMSEA. The results indicate that the measurement model achieved a good fit. Discriminant validity was confirmed, as the square roots of the AVE values were higher than the correlations among the constructs (see Table 4). Convergent and discriminant validity were therefore both satisfied.

The overall model fit for the undergraduate sample was strong: CMIN/DF = 1.421, GFI = 0.926, AGFI = 0.910, NFI = 0.940, CFI = 0.981, TLI = 0.979, and RMSEA = 0.031. These results confirm that the structural model provides a reliable and valid representation of the data. A comparison of CFA and SEM values, shown in Table 5, also indicates that both models meet the recommended criteria for an acceptable fit.

Table 5: Goodness of Fit for Measurement Model

Index	Criterion	CFA Values	SEM Values
CMIN/DF	< 3.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	1.421	2.398
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.926	0.858
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.910	0.833
NFI	≥ 0.80 (Wu & Wang, 2006)	0.940	0.894
CFI	≥ 0.80 (Bentler, 1990)	0.981	0.935
TLI	≥ 0.80 (Sharma et al., 2005)	0.979	0.929

Index	Criterion	CFA Values	SEM Values
RMSEA	< 0.08 (Pedroso et al., 2016)	0.031	0.056

Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index and RMSEA = root mean square error of approximation

4.3 Structural Equation Model (SEM)

The structural equation model (SEM) results indicate that the overall model achieved an acceptable fit. As shown in Table 5, the fit indices were CMIN/DF = 2.398, GFI = 0.858, AGFI = 0.833, NFI = 0.894, CFI = 0.935, TLI = 0.929, and RMSEA = 0.056.

These values are within recommended thresholds. Awang (2012) and Al-Mamary and Shamsuddin (2015) suggest that a CMIN/DF ratio below 3.00 is acceptable. Sica and Ghisi (2007) recommend minimum values of 0.85 for AGFI and 0.80 for GFI. Wu and Wang (2006) propose a lower limit of 0.80 for NFI. Bentler (1990) and Sharma et al. (2005) recommend minimum values of 0.80 for both CFI and TLI. Pedroso et al. (2016) note that RMSEA should be less than 0.08.

Taken together, these results confirm that the structural model is consistent with the observed data. All indices fall within acceptable ranges, indicating that the proposed framework is statistically reliable and provides a good representation of the relationships among the study variables.

4.4 Research Hypothesis Testing Result

The structural model was evaluated using standardized path coefficients (β) and corresponding t-values. As shown in Table 6 and Figure 2, the results provide strong empirical support for all six hypotheses.

Table 6: Hypothesis Testing Result

Hypothesis	Standardized path coefficients (β)	t-value	Test Result
H1: TT→SS	0.380	8.154*	Supported
H2: AC→SS	0.274	6.137*	Supported
H3: SD→SS	0.372	8.042*	Supported
H4: BE→SS	0.248	5.679*	Supported
H5: RU→SS	0.303	6.814*	Supported
H6: SS→SL	0.364	6.852*	Supported

Note: *=p-value < 0.05

The findings indicate that teachers and teaching (H1) had the strongest effect on student satisfaction ($\beta = 0.380$), suggesting that instructional quality and faculty engagement play a central role in shaping positive perceptions. Service delivery (H3) also exerted a strong and significant influence ($\beta = 0.372$), underscoring the importance of reliable, responsive services in supporting the student experience.

Academics (H2) and reputation of the university (H5) made moderate yet significant contributions ($\beta = 0.274$ and $\beta = 0.303$, respectively). This indicates that while course content and institutional prestige matter, they exert less influence compared to teaching and service-related factors. The built environment (H4) had the lowest coefficient ($\beta = 0.248$) but remained significant, suggesting that facilities and campus infrastructure contribute to satisfaction, though their impact is relatively small.

Finally, the link between student satisfaction and student loyalty (H6) was significant ($\beta = 0.364$), confirming that higher satisfaction leads to stronger commitment, continued enrollment, and positive word-of-mouth.

Taken together, the results validate the proposed conceptual framework. They show that both academic and non-academic factors contribute to student satisfaction, and satisfaction itself acts as a driver of loyalty. This reinforces the importance of a holistic approach, where teaching, service quality, and institutional reputation collectively enhance student outcomes.

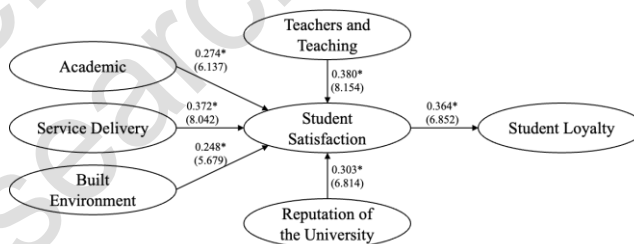


Figure 2: Path Diagram Results

Note: Solid lines report standardized coefficients with $p < 0.05$; t-values in parentheses.

5. Conclusions and Recommendation

5.1 Conclusions

Student satisfaction has become a central concern in higher education, as institutions increasingly view it as a foundation for long-term sustainability (Dennis et al., 2016; Manatos et al., 2017; Psomas & Antony, 2017). This study confirms that satisfaction and loyalty are closely connected in the context of Jiangxi higher education, reflecting global trends where these outcomes are used as indicators of institutional quality and competitiveness (Mehralizadeh & Safaemoghaddam, 2010; Trowler, 2010).

The results show that teachers and teaching (TT), academics (AC), service delivery (SD), built environment (BE), and reputation of the university (RU) all contribute significantly to student satisfaction (SS), which in turn strengthens student loyalty (SL). Among these, teaching and

service delivery emerged as the strongest predictors, highlighting the importance of faculty engagement, instructional quality, and reliable student services. This finding aligns with earlier studies emphasizing the relational and interactive aspects of education as key to satisfaction (Brown, 2024; Hennig-Thurau et al., 2001). Academic programs and institutional reputation also played important roles, consistent with research linking high-quality curricula and prestige to stronger student perceptions and outcomes (Helgesen & Nettet, 2007; Voss et al., 2007). The influence of the built environment, while positive, was weaker than that of other factors, suggesting that, in this context, functional and interpersonal elements of education outweigh physical infrastructure.

These findings enrich the existing literature by applying established models such as Social Identity Theory, SERVQUAL, and SERVPERF to a provincial Chinese setting. The evidence shows that the mechanisms identified in international research, where service quality drives satisfaction and satisfaction fosters loyalty, are also relevant in Jiangxi, though the relative strength of each factor differs. This underscores the need to consider both global frameworks and local conditions when analyzing student experiences.

For institutions, the results suggest that improving teaching quality, refining academic programs, and strengthening student services should be prioritized. Efforts to enhance institutional reputation, such as investing in faculty development, increasing research visibility, and creating career opportunities for students, also contribute meaningfully to satisfaction. While upgrading facilities remains important, universities are likely to see greater gains by focusing on academic and service-related improvements.

In conclusion, this study shows that student satisfaction is not only an outcome of educational quality but also a driver of loyalty. By addressing both academic and non-academic dimensions, higher education institutions in Jiangxi can strengthen their competitiveness and better support students in an evolving educational landscape.

5.2 Recommendations

Based on the study's findings, several recommendations are proposed to enhance undergraduate satisfaction and loyalty in Jiangxi's higher education institutions.

Prioritize teaching quality and faculty development. Since Teachers and Teaching had the strongest influence on satisfaction, institutions should invest in faculty training to improve teaching methods, encourage interactive learning, and promote fair and transparent communication. Faculty who actively support students and respond to their needs can significantly increase satisfaction.

Optimize service delivery. Universities should simplify administrative procedures, strengthen academic advising and career counseling, and ensure that student inquiries are handled quickly and empathetically. Efficient and supportive services foster trust and a stronger connection between students and their institution.

Strengthen academic relevance. Curricula should be aligned with industry demands and updated regularly. Practical and engaging courses, supported by adequate learning resources, can help students see their education as valuable and connected to future career opportunities.

Upgrade the campus environment. Investments in classrooms, libraries, and recreational areas should aim to create a safe, inclusive, and attractive learning space. A well-maintained and welcoming environment enhances students' daily experiences and contributes to their overall satisfaction.

Enhance university reputation. Institutions should highlight achievements in teaching, research, and graduate employability. Building strong links with industry and local communities, as well as sharing success stories, can improve public perception and reinforce students' pride in their university.

Establish continuous feedback loops. Regularly gathering student feedback on key aspects of satisfaction and loyalty will allow institutions to adjust strategies and allocate resources effectively. By responding to student input, universities can ensure that their development remains aligned with student expectations.

5.3 Limitation and Further Study

Although this study provides useful insights into the factors influencing student satisfaction and loyalty in Jiangxi higher education, several limitations should be acknowledged.

First, the research was limited to one institution, Jiangxi Polytechnic University, and focused only on three majors: Finance and Accounting, Engineering, and Sergeant Management. While the sample size of 450 students is robust, the findings may not fully represent the diversity of higher education institutions or disciplines across Jiangxi Province. Future studies could expand to multiple universities and include a wider range of academic programs for stronger generalizability.

Second, the study relied on self-reported questionnaire data. While this method is efficient for large-scale surveys, it may introduce response bias or social desirability effects. Further research could combine surveys with interviews, focus groups, or longitudinal designs to capture deeper insights into student experiences and changes over time.

Third, the study examined a specific set of variables: Teachers and Teaching, Academics, Service Delivery, Built Environment, and Reputation of the University. Although

these constructs explain satisfaction and loyalty, other important factors such as financial support, digital learning environments, and extracurricular engagement were not included. Future research should explore additional dimensions that may influence satisfaction and loyalty in both traditional and online contexts.

Finally, this study was cross-sectional, capturing student perceptions at a single point in time. Longitudinal studies would provide a clearer understanding of how satisfaction and loyalty evolve during a student's academic journey. Comparative studies across regions in China or between developing and developed education systems would also help identify contextual differences and broader patterns.

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