

Research Article

Cite this article: Zhong, J., Liu, Y., & Triatmanto, B. (2025). International Competitiveness of Thai Higher Education: The Lens of Student Satisfaction. *Educational Process: International Journal*, 14, e2025024. <https://doi.org/10.22521/edupij.2025.14.24>

Received December 01, 2024

Accepted December 31, 2024

Published Online January 14, 2025

Keywords:

International competitiveness, internationalization, Thai higher education, curriculum change, student satisfaction

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International Competitiveness of Thai Higher Education: The Lens of Student Satisfaction

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Abstract

Background/purpose. This study aims to assess the international competitiveness of Thai Higher Education and the satisfaction levels of Chinese international students, taking into account the previously overlooked experiences of this group. These criteria are crucial for Thailand's objective of positioning itself as a leading educational center in Southeast Asia.

Materials/methods. The research methodology employed a mixed-methods approach, combining qualitative and quantitative research methodologies. The qualitative component consisted of conducting in-depth interviews with 25 participants, while the quantitative component comprised administering a complete survey to 718 students. The poll specifically targeted four primary domains: entrance protocols, curriculum structure, tuition and living expenses, and student support services.

Results. The research findings demonstrated a direct and favorable relationship between student happiness and the international competitiveness of Thailand's Higher Education Institutes (HEIs). Student satisfaction is influenced by various aspects such as the quality of instruction, the rapport between teachers and students, extracurricular activities, campus facilities, tuition fees, curriculum design, the overall environment of the institution, and the availability of academic resources.

Conclusion. This study emphasizes the significance of strategic initiatives implemented at the institutional level, such as offering customized student services to meet specific requirements and implementing substantial changes to the curriculum. These activities are recognized as significant factors that contribute to the international competitiveness of Thailand's higher education institutions.

1. Introduction

Thailand has been facing the persistent challenge of a declining birth rate for many years, a significant demographic concern. The birth rate has decreased from 2.1 children per woman in 2007 to 1.5 in 2019 (Songsathaphorn et al., 2014; Wei, 2023). Consequently, there has been a consistent decline in the enrollment of local students in higher education. There has been an estimated decline of 348,086 pupils during the last ten years. Thai universities, namely vocational and professional public institutions, have adopted internationalization initiatives for their degree programs since the 2010s to tackle this problem. These techniques mostly revolve around recruiting international students, with a specific focus on enticing students from China (Armstrong & Laksana, 2016; Prasartkul et al., 2018). This method has proven successful, as the number of Chinese students pursuing education in Thailand has experienced a substantial increase, rising from 5,364 in 2009 to 14,423 in 2020 (Scott & Guan, 2023). However, the challenge remains to maintain this growth while ensuring the quality of education is not compromised.

China has been proactively cultivating international partnerships in higher education, with the government implementing many measures to facilitate educational exchanges and cooperation worldwide, including with Thailand (Rungfamai, 2019; Sethakul & Utakrit, 2019). In 2021, Thailand implemented various strategies to attract and support Chinese students. These initiatives include scholarships and financial aid programs that cover tuition fees, living expenses, and other costs (Siricharoen, 2023; Thi Thu Le et al., 2024). The confluence of these endeavors, mutual accords, optimized immigration protocols, English-medium curricula, cultural assimilation and assistance, and collaborations with Chinese educational institutions have fostered a conducive environment for Chinese students (Siricharoen, 2023; Sivarin, 2018). These efforts aim to bolster academic and cultural connections, improve reciprocal comprehension, and safeguard the welfare and academic achievements of Chinese students in Thailand.

In 2019, the proportion of international students at Thai higher education institutions was around 8% of the total student population. Among the foreign student population in 2020, Chinese students constituted 51.3%. (Zhang & Boonphadung, 2024). The emergence of COVID-19 prompted a transition to online instruction, leading to a substantial rise in the enrollment of Chinese students from 2020 to 2022. In 2022, the Chinese Embassy in Thailand made an informal calculation indicating that approximately 32,000 Chinese students were pursuing their education in Thai educational institutions. Of this number, 70% were enrolled in private universities, while the remaining 30% attended public ones (Yin et al., 2015). The presence of Chinese students has enhanced the competitiveness of Thai higher education, especially in the global arena. The three private universities with the largest number of Chinese students enrolled were Dhurakij Pundit University, Assumption University, and Krirk University (Sivarin, 2018).

On the other hand, the highest-ranking public university was Rajamangala University of Technology Krungthep. Between 2009 and 2020, the number of Chinese students in Thai institutions increased by more than four times, going from 5,364 to 14,423. Additionally, a total of 7,231 Chinese students graduated from 2018 to 2022 (Wei, 2023). Thailand's appeal to Chinese students stems from several factors, such as the scarcity of university spots in China, the cost-effective education in Thailand, the wide range of courses available, the cultural similarity, the straightforward visa procedures, and the enhanced employment opportunities resulting from partnerships between Thai and Chinese educational institutions.

Due to the significant increase in the number of Chinese students enrolling in Thai colleges, it has become necessary for these institutions to make changes to their curricula (Lertpusit, 2023; Zhang & Boonphadung, 2024). Nevertheless, the achievement of Thai universities in attracting international students, namely Chinese students, who make up a substantial proportion of the

international student population, has faced criticism. Detractors contend that these establishments are jeopardizing the caliber of tertiary education in their quest for increased student enrollment. This problem is worsened by the fact that international programs designed to be taught in English have resorted to using a combination of Chinese, English, and Thai languages to overcome language hurdles. This has raised issues about teaching effectiveness and grading fairness (Siricharoen, 2023; Sivarin, 2018). Thai institutions must deliberately broaden their foreign student channels and enhance their competitiveness and innovative capabilities to retain their competitiveness in student recruitment and improve education quality (Enkhtur et al., 2024).

Several studies in the past decade have focused on the competitiveness and innovation of Thai Higher Education (Thi Thu Le et al., 2024; Yin et al., 2015; Zhang & Boonphadung, 2024;). The experiences of Chinese overseas students have received insufficient scholarly attention despite their substantial numbers and contributions to tuition income. The sustainability and international competitiveness of Thai higher education continue to be significant concerns, especially when considering the imperative to evaluate its strengths, shortcomings, possibilities, and threats. Moreover, the contentment and welfare of international students play a crucial role in establishing Thailand as a prominent educational center in Southeast Asia. Obtaining accurate and thorough information about these aspects from Chinese international students is difficult because of language and cultural differences, the requirement for extensive research and collaboration with different parties, and the complexities of selecting a representative sample and appropriate research methods.

This research aims to conduct the following academically relevant inquiries:

1. How satisfied are overseas students, specifically those from China, with the Thai Higher Education program they are enrolled in?
2. Does the Thai Higher Education system retain a strong level of competitiveness in the contemporary global economy, and if it does, how can this competitiveness be measured?
3. What tactics could be utilized to improve the competitiveness of Thai Higher Education in the global market?

2. Literature Review

2.1. Student Satisfaction and the Concept of Competitiveness

Higher education, which plays a crucial role in fostering economic growth, regards students as customers and considers their happiness as a vital factor in institutional performance (Carrera, 2024). Global institutions aim to improve student satisfaction, which has individual, institutional, and societal repercussions (Inouye et al., 2023). The caliber of the teaching faculty is a crucial factor in determining student happiness, which has resulted in the growing adoption of student rating systems to assess teaching methods (Siricharoen, 2023; Zhang & Boonphadung, 2024). Nevertheless, several educators perceive these surveys as unbeneficial, apprehensive that they would transform the evaluation of practical instruction into a competition based on popularity. Satisfaction in higher education, typically assessed through the expectations disconfirmation theory, plays a crucial role in comprehending students' opinions and pinpointing areas for enhancement (Ayten & Göver, 2024; Bwachele et al., 2023; Nguyen et al., 2024; Yang, 2024).

Moreover, the level of happiness among students, which is greatly influenced by their perception of academic services, is a moderator for the effect of these services on the likelihood of student dropout. Satisfied students are less inclined to drop out and more likely to graduate within the expected timeframe (Elistia & Mayasari, 2023; Pandita & Kiran, 2023).

Competitiveness is crucial for firms to prosper in a capitalist system, thus requiring a comprehensive comprehension of its constituents (Liao & Maulana Suprpto, 2024; Musselin, 2018). Nevertheless, the task of defining competitiveness remains a formidable challenge, as it encompasses

various interpretations, spanning from a state or attitude to a company's status, strategy, or performance indicator (Dehtjare et al., 2024). Academic entrepreneurship institutions are crucial for achieving and sustaining competitiveness. Institutions that have formulated strategic plans that attract talented applicants, produce graduates in high demand, and secure funding for essential activities are likely to be highly ranked in global educational rankings (Lunag et al., 2024; Ramezani & Ursin, 2024). In the face of increasing global competition, public institutions compete for financing and resources, requiring them to adopt adaptable management methods and develop strategic plans. Competitive advantages at Higher Education Institutions (HEIs) are established through intangible Intellectual Capital (IC) assets, including teaching quality, research, innovation, image, reputation, and stakeholder relationships (Pardaev et al., 2024; Yang, 2024;). Recognizing the benefits of a digital-first approach, HEIs increasingly adopt advanced technologies like chatbots and virtual reality as standard practices.

2.2. International Recognition of Thai Universities

In 2018, Thailand's higher education sector consisted of 155 institutions, which included autonomous, public, Rajabhat, and Rajamangala universities, as well as private institutions. These institutions were all under the supervision of the Office of the Higher Education Commission and used an industrial approach to education (Pattama & Nathara, 2022). Nevertheless, this strategy presented difficulties, such as apprehensions over the standard of education and inequality, especially due to the government's endeavor to boost the number of university graduates to stimulate economic development. Although there are more than 173 higher education institutions, only a select few manage to recruit the most talented students in the country, resulting in significant disparities in the academic caliber of students among universities. This highlights the necessity of directing attention and allocating funds towards lower-ranked universities such as Rajabhat (Lu, 2017). Despite the absence of empirical evidence, policymakers and Higher Education Institutions (HEIs) have made the internationalization of higher education a significant priority. This focus is driven by globalization and the aim to enhance economic competitiveness.

However, whether internationalization is essential for HEIs to excel and for countries to maintain their competitive edge remains unclear. Thai universities are currently facing obstacles that could affect their global reputation as they strive to improve their international recognition. These issues include language barriers, limited resources, and a lack of exposure within the international academic community (Jones, 2006; Shar, 2016). The term "internationalization of higher education" encompasses the incorporation of an international or intercultural aspect into an institution's teaching, research, and service functions. This necessitates institutions and policies to adjust to the international academic environment, motivated by factors such as economic benefits, acquisition of knowledge and language skills, and enrichment of the curriculum with foreign content (Herberholz, 2014).

2.3. The Dimensionality of University Student Satisfaction

An investigation into the aspects that contribute to student satisfaction can provide substantial advantages for educational institutions, students, and society. Several study models, such as the College Student Satisfaction Questionnaire (CSSQ) and models developed by Betz et al., DeVore & Handal, Clemens, and Lo, have been suggested to comprehend the different aspects of happiness among university students. Although there is less research on the satisfaction levels of Chinese students in Thai public universities, a study conducted in 2019 and a report by the British Council have identified important elements that influence their contentment and have observed a generally high level of satisfaction among these students (Bwachele et al., 2023; Elistia & Mayasari, 2023). Nevertheless, additional investigation is required to acquire a more profound comprehension of their encounters and levels of contentment.

A SWOT analysis is a strategic tool used to assess an organization's competitiveness by identifying its internal strengths and weaknesses, as well as external opportunities and threats. Strengths might encompass distinctive market differentiators and a proficient workforce, whilst flaws may entail a dearth of innovation and constrained resources (Shahijan et al., 2016). Potential advantages encompass an expanding market and advantageous alliances, while potential disadvantages encompass economic recessions and technological upheavals, which pose obstacles (Kostadinova et al., 2022; Phadermrod et al., 2019;).

Implementing pedagogical innovation to boost student learning can result in enhanced learning outcomes. The transformation of "pedagogical technologies" into educational, pedagogical, and teaching technologies signifies a deliberate approach to advancing education. Within the realm of higher education, pedagogical innovation refers to a deliberate and purposeful effort to enhance students' learning in a lasting and effective manner (Mustafa et al., 2022; Phadermrod et al., 2019; Shahijan et al., 2016;). Service innovation is essential for universities to maintain their operations and achieve a competitive advantage. It involves creating new services and practical ideas to improve the efficiency and effectiveness of service delivery.

Several studies have found that academic quality, administrative service quality, and campus environment quality are important factors in predicting student satisfaction. On the other hand, demographic parameters such as gender, age, and ethnicity have little influence on student satisfaction (Dehtjare et al., 2024; Mustafa et al., 2022; Quinn et al., 2009). An investigation conducted among undergraduate students unveiled six discrete but interconnected areas of contentment: instruction and education, academic assistance, educational materials, evaluation and response, personal growth, and social activities (Ayten & Göver, 2024; Elistia & Mayasari, 2023; Yang, 2024). Some other scholars have put out a conceptual model that combines institutional, intellectual, and social aspects that determine satisfaction. They claim that numerous factors influence student satisfaction (Numsimok & Suwunniponth, 2024). These characteristics can bolster the competitiveness of universities, which is determined by their capacity to allure and keep exceptional students, staff, and resources, as well as generate top-notch research and innovation. Student happiness in higher education is impacted by various aspects, including the quality of academic programs, the competence of faculty members, the availability of financial aid, the campus climate, extracurricular activities, and campus services (Bwachele et al., 2023; Ramezani & Ursin, 2024). The assistance provided by instructors primarily influences the happiness of online courses, the structure of the course, and the level of social interaction. Both hygiene elements and motivational factors have a significant role in predicting student satisfaction and their likelihood of continuing with the course. Competitiveness, a complex and diverse notion encompassing skills, knowledge, resources, and strategies, is gaining attention from policymakers and businesses to promote economic growth, job creation, and social welfare.

The National Competitiveness Index (NCI) and the Global Competitiveness Index (GCI) 4.0 offer thorough assessments of competitiveness. They assist in formulating strategies to enhance competitiveness and foster sustainable economic growth (Pandita & Kiran, 2023). Competitive universities, distinguished by their capacity to attract exceptional students, faculty, staff, research funding, and industry collaborations, depend on various aspects such as the quality of education, research productivity, worldwide presence, and financial resources. Competitiveness, global reputation, societal impact, and the development of academic entrepreneurship can be improved by effective assessment mechanisms, strategic management, and a robust internet presence (Liao & Maulana Suprpto, 2024; Lunag et al., 2024;).

3. Methodology

3.1. Research Design

The study used a mixed methods methodology, incorporating both qualitative and quantitative components to investigate the research issue. This strategy, commonly employed in the fields of behavioral, health, and social sciences, provides a more thorough comprehension compared to a single quantitative or qualitative investigation by capitalizing on the advantages of both methodologies. This study utilizes qualitative research to gain exploratory insights into Higher Education Institutions (HEIs) and the current state of the research problems within them. Using a causal research method, quantitative research allows for the investigation of the causative link between variables within a conceptual framework by collecting facts and constructing models. The concurrent parallel design combines several elements and is crucial for creating strategic guidelines that help higher education institutions (HEIs) attain international innovation and competitiveness. The research process has multiple stages: conducting qualitative interviews, delivering a quantitative questionnaire survey, evaluating the data, integrating the findings, and debating the conclusions and consequences.

3.2. Population and Sample

The survey includes a total of 1,889 Chinese students who are currently enrolled at three out of the nine campuses of the Rajamangala University of Technology (RMUT) in Thailand. The qualitative aspect of the study is conducting interviews with a varied sample of 25 people, which includes students, teachers, and managers affiliated with these colleges. The selection of interviewees is determined by several criteria, including their academic subject, year of study, and their experiences with the four elements being investigated: Admission, curriculum design, tuition, additional fees and living expenditures, and student services. The data-gathering procedure is facilitated by a standardized interview guide, which provides uniformity among participants and enables them to articulate their thoughts and experiences freely.

The quantitative research component of this study specifically examines Chinese students, with a sample size of 718, who are graduates at three campuses of the Rajamangala University of Technology (RMUT) in Thailand. The participants were randomly picked from each student population stratum, which was divided into groups based on factors such as study level and graduation status. Based on Yamane's formula, this method calculates the sample size for different educational levels. The formula for undergraduate students is $N = 863 / (1 + 863 * (0.05^2))$, for postgraduate students it is $N = 603 / (1 + 603 * (0.05^2))$, and for graduated students it is $N = 423 / (1 + 423 * (0.05^2))$. Guarantees a sample that accurately represents the population and enables accurate comparisons across different groups. The sampling technique employed a combination of convenience and random sampling methods, with the addition of stratified sampling to guarantee the inclusion of individuals from various categories within the population. This approach aimed to capture a wide range of opinions and experiences among Chinese students. The summary of demographic information is depicted in Table 1.

Table 1. Summary of Demographic Information

| Demographic Information | Details |
|-----------------------------------|--|
| Total Participants | 1,889 Chinese students enrolled at three Rajamangala University of Technology (RMUT) campuses |
| Qualitative Sample | 25 interviewees (students, teachers, and managers) |
| Selection Criteria for Interviews | Academic subject, year of study, experiences with admission, curriculum design, tuition, additional fees, and student services |
| Data Gathering Procedure | Standardized interview guide for uniformity and free expression of thoughts |
| Quantitative Sample | 718 Chinese graduate students from three RMUT campuses |
| Sampling Method | Random sampling from each stratum based on study level and graduation status |
| Formula Used | Yamane's formula for calculating sample sizes for different educational levels |

3.3. Data Collection

This study used a mixed-methods approach, integrating both qualitative and quantitative research components. The qualitative data was collected through individual interviews with participants, using open-ended questions and probes to explore their viewpoints and experiences about the research topic. Furthermore, a case study methodology was utilized to thoroughly examine particular views of persons or groups. The quantitative component employed a meticulously designed questionnaire that was tailored to the research objectives and aimed to gather pertinent information. Before collecting data, the researchers received the required ethical permissions and provided participants with information about the research's objective, the voluntary nature of participation, and the confidentiality of their responses. Subsequently, the gathered responses were scrutinized utilizing SPSS, a statistical software package for data analysis.

To ensure content validity, survey questions were designed to evaluate four elements relevant to the experience of Chinese students at selected RMUT campuses. These factors were chosen following a thorough literature analysis and input from experts. Reliability, which refers to the consistency of survey results, was determined by techniques such as test-retest and internal consistency metrics such as Cronbach's alpha. The Index of Coincidence (IOC) was computed for the questionnaire to evaluate the degree of concurrence among distinct groups of respondents. Finally, Cronbach's Alpha was employed during the process of developing the instrument to guarantee the dependability and internal coherence of the survey, with a threshold of 0.7 or higher being deemed satisfactory for research objectives.

3.4. Data Analysis

The study utilized a combination of qualitative and quantitative methodologies for data analysis. The qualitative data was examined through content analysis techniques, particularly a SWOT analysis. Descriptive statistics, such as central tendency and variability measures, were employed to examine the quantitative data, which allowed for a comprehensive examination of the survey results and provided valuable insights into the perspectives of Chinese students regarding the four topics being investigated. Inferential statistics, such as Correlation Analysis, Regression Analysis, Differences

Analysis, Confirmatory Factor Analysis (CFA), and Structural Equation Modeling, were employed to analyze the data further, evaluate the convergent validity of each variable dimension, and test the established hypotheses. The model parameters were determined using the maximum likelihood estimation (MLE) approach.

4. Results

4.1. Relationship Between Student Happiness and Institutional Competitiveness

An examination of the interview data indicated a direct relationship between student happiness and the international competitiveness of Thailand's Higher Education Institutes (HEIs). Delighted students were more inclined to actively advocate for their higher education institutions (HEIs) and suggested them to their acquaintances, guaranteeing a consistent flow of dependable students. Consequently, this benefited the infrastructure, teaching quality, and resource accumulation of the Higher Education Institutes (HEIs). In addition, content graduates were more inclined to contribute personal donations, offering financial backing for advancing higher education institutions. These students, who strongly identified with their Higher Education Institutes (HEIs), actively enhanced the institutions' public image and demonstrated high enthusiasm for learning. The passion displayed by these students promoted the development of a wide range of skills, which in turn made them more competitive in the labor market, which ultimately enhances the international competitiveness of Thailand's higher education institutes.

The reputation and standing of an institution are greatly impacted by a contented student body. Highly-satisfied and contented students at the Higher Education Institute (HEI) are likely to disseminate affirmative messages, augmenting the HEI's allure and resulting in enhanced post-graduation achievement. Contented students are more inclined to contribute to the Higher Education Institution (HEI) or offer further assistance upon completion their studies, hence augmenting competitiveness (S1, S2, S3).

4.2. Factors Influencing Student Satisfaction

This study uncovered a noteworthy association between student satisfaction and the worldwide competitiveness of Thailand's Higher Education Institutes, where an increase in satisfaction results in an improvement in competitiveness. The study additionally identified crucial elements that impact student satisfaction, such as the quality of teaching, the rapport between teachers and students, extracurricular activities offered by the college, the quality of facilities, the cost of tuition, the curriculum, the overall environment of the institution, and the availability of academic resources. The participants frequently noted these characteristics.

I have had a rewarding experience at the Higher Education Institute (HEI), which offers a stimulating academic atmosphere and a highly competent faculty. During my transfer to graduate study, I discovered increased opportunities for extensive engagement with academics and involvement in research projects facilitated by the university's laboratories and facilities. The HEI's distinct services, such as academic guidance and career strategizing, have greatly improved student contentment (S6).

The level of satisfaction, which indicates the excellence of education and the overall experience at the higher education institution (HEI), leads to increased engagement, improved academic performance, and a higher likelihood of recommending the HEI, thus boosting its reputation (S7).

Interviews conducted with undergraduate and postgraduate students indicated that various factors, such as the ambiance of the higher education institute (HEI), curriculum and resources, infrastructure, and teaching quality, substantially impact students' international competitiveness in Thailand's higher education colleges. The study found that student happiness was closely connected

to the international competitiveness of educational institutions. This connection was primarily influenced by the rationality, diversity, and relevance of the curriculum.

Teachers recognized curriculum design, classroom communication, and after-class feedback as crucial elements in improving the international competitiveness of Thailand's Higher Education Institutes (HEIs). Based on students' distinct personality traits and professional backgrounds, customized curriculum design was considered to cultivate practical skills and improve job prospects. Effective classroom communication, including the development of a pleasant classroom environment and strong teacher-student connections, increased students' feeling of belonging and their readiness to support their higher education institutions (HEIs), thus improving the reputation of the institution. Curriculum input enabled ongoing course innovation and optimization focused on meeting the needs of students, resulting in the creation of unique, high-caliber courses that enhance students' professional skills.

Programs that exhibit high levels of student satisfaction tend to recruit more students and establish a favorable reputation (S8).

Content students, who are pleased with the education they receive and their overall experience at the higher education institution (HEI), are more involved, achieve higher academic performance, and are more likely to recommend the HEI, improving its reputation (S9).

Our higher education institution (HEI) has adopted diverse initiatives to attract and support international students and staff, thereby revitalizing its international standing. Our exposure to the worldwide academic community has been strengthened via our active involvement in research collaborations, academic projects, and international conferences.

The international competitiveness of Thailand's Higher Education can be assessed based on several factors, including the curriculum, the academic standing of the institution, collaborative initiatives with international partners, and the presence of foreign faculty members. Examining interview data from teachers highlights the crucial importance of excellent teachers in promoting high-quality teaching and nurturing remarkable abilities. This, in turn, contributes to establishing a positive reputation and attracting an adequate number of students for the college's growth. The college's growth relies heavily on the continuous process of hiring highly skilled teachers and creating top-notch courses.

4.3. Strategic Initiatives for Enhancing Competitiveness

In order to improve the competitiveness of higher education in Thailand, several strategic initiatives were put in place at the Higher Education Institute (HEI) level. These included creating professional service organizations that provided customized services to students and significant curriculum innovation. These efforts greatly contributed to the international competitiveness of Thailand's higher education institutions.

We have employed many tactics to augment our university's competitiveness and prestige involves monitoring graduate employment rates, salary levels, and industry distribution (T1).

Our main focus is on ensuring student satisfaction and providing support. We understand that satisfied students are more likely to stay at the university and recommend it to others, which helps to enhance our visibility and reputation (T2).

Standard student satisfaction surveys evaluate contentment with courses, instructional techniques, campus amenities, and additional services (T3).

This study investigated the international competitiveness of Thailand's Higher Education Colleges by analyzing student satisfaction. It confirmed that the institution's dedication to prioritizing students was crucial to its success. The study identified that the courses, faculty, and current institutional resources were important aspects that influenced student happiness, which in turn affected the

competitiveness index. The satisfaction levels related to courses, teachers, learning resources, and support services were important to the overall satisfaction measurement. This suggests that Thailand's Higher Education College can significantly improve its international competitiveness by focusing on these areas.

Thai universities bolster their technological competitiveness by focusing on three crucial areas: curriculum innovation, service innovation, and teaching innovation. Curriculum innovation prioritizes the creation of fundamental courses that cultivate students' abilities to analyze and solve problems, therefore equipping them for a swiftly evolving world. Service innovation, focused on the needs of students, utilizes interactive teaching techniques that promote self-directed learning and self-expression. In addition, it encompasses extracurricular activities and foreign cross-cultural initiatives aimed at enhancing the student experience. Instruction innovation, which is supported by students, teachers, and administrators, utilizes technology to enhance the quality of instruction and increase student happiness, ultimately enhancing the competitiveness of higher education institutions. The interview findings can be depicted briefly in Table 2.

Table 2. Results of interview

| Categories | Summary |
|--|--|
| Relationship Between Student Happiness and Institutional Competitiveness | Delighted students advocate for their HEIs, ensuring a steady flow of dependable students. This positively impacts infrastructure, teaching quality, and resource accumulation. Content graduates are more likely to donate, support the institution's image, and show enthusiasm for learning, enhancing competitiveness in the labor market. |
| Factors Influencing Student Satisfaction | The study identifies elements such as teaching quality, teacher-student rapport, extracurricular activities, facilities, tuition costs, curriculum, environment, and academic resources as crucial to student satisfaction. These factors are closely linked to the international competitiveness of educational institutions. Effective curriculum design, classroom communication, and feedback improve competitiveness. |
| Strategic Initiatives for Enhancing Competitiveness | HEIs have implemented initiatives like professional service organizations, curriculum innovation, and attracting international students and staff to improve competitiveness. Student satisfaction surveys and feedback mechanisms guide institutional improvements. Curriculum, service, and teaching innovation are crucial areas for boosting competitiveness. |

4.4. Results of SWOT Analysis

Universities serve as academic centers that leverage human and material resources, such as a favorable work environment, to promote academic production and improve the performance and competitiveness of academic personnel. The working conditions, which include a scientific research environment and teaching environment, as well as the number of successfully completed scientific research projects and the use of modern teaching methods, substantially influence the innovation of academic human resources. These universities also have physical facilities, such as libraries and

practice rooms, that are essential elements of the campus infrastructure. Furthermore, universities encompass tangible, organizational, and intangible cultures, with the latter encompassing the university's ideology and cultural values, which are essential for academic advancement. An amicable campus ambiance, scholastic milieu, and teacher-student rapport greatly augment the competitiveness of higher education institutions.

Thai universities encounter several obstacles, such as constrained resources for strategic objectives, inadequate IT proficiency among educators, a scarcity of foreign collaborative degree programs, and minimal engagement in global scholarship competitions (deficiencies). Although there has been a rise in the quantity of scientific papers produced worldwide, there is still a notable disparity in research productivity when compared to prestigious global universities. The teaching staff has a low level of fluency in foreign languages, which requires the recruitment of more globally competitive individuals. The current professors should increase their involvement in international exchanges and collaboration, while foreign affairs personnel should undergo professional training. Inadequate remuneration exacerbates the phenomenon of brain drain, as the salaries offered to academics fail to align with those provided in the private sector. Although Thai university lecturers have received recent compensation hikes, their wages still do not possess a competitive edge on the world stage.

Securing mentorship might often require students to vie for the direction of a skilled mentor, although the availability of mentors is constrained by limited resources. I experienced a sense of pressure when vying for mentorship opportunities due to the awareness that other students were also in the competition. The competition has the potential to influence a student's research trajectory and enthusiasm (T4, T5).

The limited resources available to Thai universities pose significant obstacles to the professional development of teachers and the satisfaction of students. Sufficient resources are crucial for promoting students' academic progress, personal growth, and post-graduation prospects, such as spontaneous brand promotion and favorable employment options.

University subject classes, particularly those focused on instruments, often lack the level of thoroughness seen in courses that are devoted to a certain discipline, as they prioritize specific themes or issues. Effective cross-cultural education necessitates a strong grounding in topic expertise, which is essential for interdisciplinary learning and bolstering the competitive edge of higher education institutions in Thailand. Nevertheless, the present allocation of resources towards cross-cultural disciplines frequently results in inadequate instruction in specialized subject matter, highlighting the need for more emphasis on the creation and incorporation of these courses within the fundamental curriculum.

In universities, a "system" refers to a solid and normative structure that guides behavior, manages staff, and promotes flexible development models. In recent times, industrialized nations have been actively encouraging the movement of academic personnel across schools, which has resulted in the improvement of discipline development and general academic excellence. Nevertheless, there is a contradiction between the flexibility of mobility and the rigid human management systems at universities, specifically in Thailand, where the system has not undergone any changes from the planned economy model. The antiquated system impedes the efficient utilization of academic human resources, diminishes the flow of talent, and suppresses academic creativity by restricting the introduction of new ideas from the forefront of academia.

Seminars and feedback sessions are regularly arranged to invite student representatives and representatives from relevant departments to express their perspectives and experiences about student services. This strategy enables seamless communication among students, university

administration, and staff, allowing for a better understanding of students' expectations and requirements for student services (T6).

In order to optimize faculty and staff engagement and ensure their performance is in line with the objectives of Higher Education Institutions (HEIs), universities must cultivate effective collaboration between HEIs and their people (opportunity). This entails the identification of crucial criteria, such as faculty psychology and behavior, that dictate the behaviors of subsystems and the overall functioning of the institution. Efficient coordination necessitates synchronizing individual faculty requirements with the university's, as well as integrating individual faculty traits with the university's style and concept. This can be accomplished by ensuring that the university's culture, beliefs, goals, and standards are firmly embedded in every faculty member, thereby promoting collaboration.

The size of a country's higher education system is inherently connected to its economic progress, as economic growth and increased income levels serve as the foundation for expanding higher education. Thailand's consistent economic growth fosters the growth of higher education, bolstering the competitiveness of academic personnel despite a notable disparity with countries such as the United States. The increasing popularity of higher education and the growing demand for practical and creative individuals in the age of rapid technological progress present opportunities for local universities, especially those of high caliber, to enhance knowledge innovation and foster innovative talents. The augmented financial backing from the Thai government and non-governmental organizations for university research and education facilitates the growth of competitive higher education institutions in Thailand.

The presence of excessive internal competition inside institutions, fueled by administrative authority, has the potential to damage the academic atmosphere and impede scholarly pursuits (threat). The absence of professional development possibilities weakens teachers' mastery of advanced information, while the mounting pressures from government, society, and market demands intensify the stress of university teaching. Universities must boost their academic standards to gain additional funding and increase their market share and social status. Conversely, several forward-thinking Thai colleges have implemented industrialized training programs, resulting in advantages such as enhanced market competitiveness and increased revenue. Nevertheless, the societal service component of training is frequently disregarded, resulting in inflexible project management systems, diminished market competitiveness, and a dearth of worker motivation. This discrepancy highlights the necessity for a well-rounded approach to academic and vocational endeavors in higher education institutions.

During my tenure at a Higher Education Institution (HEI), the presence of fierce internal competition resulted in a highly stressful atmosphere, which hindered the exchange of teaching experiences and had a detrimental effect on both student education and the institution's reputation. In addition, the implementation of new educational resources frequently posed technological difficulties, requiring a period of adjustment and comprehension of intricate technologies (Adm 1,2 and 3).

The brief results of the SWOT analysis can be depicted in Table 3.

Table 3. Results of SWOT Analysis

| Categories | Summary |
|--|--|
| Strengths of Thai Universities | Universities utilize human and material resources, such as favorable work environments, to enhance academic production and competitiveness. Key factors include scientific research environments, teaching conditions, physical facilities like libraries, and a supportive campus culture, which collectively augment academic innovation and competitiveness. |
| Weaknesses and Challenges | Thai universities face obstacles like constrained strategic resources, inadequate IT proficiency among educators, lack of foreign collaborative programs, and minimal global scholarship competition participation. Issues with language fluency, remuneration, and limited mentorship resources hinder progress. An outdated system and internal competition further impede academic development and human resource efficiency. |
| Opportunities for Growth and Development | Economic growth and increased income levels in Thailand support the expansion of higher education. There are opportunities for local universities to foster innovative talents and enhance knowledge innovation, supported by government and NGO funding. Effective collaboration, curriculum, service, and teaching innovation are vital for addressing challenges and boosting competitiveness. |
| Threats to Academic Progress | Excessive internal competition, fueled by administrative authority, damages the academic atmosphere. Lack of professional development and mounting pressures from government and society stress university teaching. Industrialized training programs offer benefits but often neglect societal service aspects, highlighting the need for a balanced approach in higher education institutions. |

4.5. Results of Inferential Statistics

The correlation research indicates a statistically significant positive link between Teaching and Learning and five crucial factors: Infrastructure and Facilities, Administration and Support Services, Student Services, Accreditation and Reputation, and Communication and Feedback. The Pearson correlation coefficient was used to quantify the strength of these relationships, which were measured as 0.523, 0.418, 0.426, 0.442, and 0.414, respectively. All correlation coefficients were more

significant than 0, indicating a positive correlation (Table 4). These findings indicate that making advancements in these five domains can potentially improve outcomes in Teaching and Learning.

Table 4. Results of SWOT Analysis

| | Me an | Std. Deviation | Teachi ng and Learni ng | Infrastruc ture and Facilities | Administra tion and Support Services | Stude nt Servic es | Accredita tion and Reputatio n | Communic ation and Feedback |
|---|-----------|-------------------|-------------------------------------|--------------------------------------|---|-----------------------------|---|-----------------------------------|
| Teaching and Learning | 3.6 71 | 0.992 | 1 | | | | | |
| Infrastructu re and Facilities | 3.6 35 | 0.993 | 0.523 ** | 1 | | | | |
| Administrat ion and Support Services | 3.7 81 | 0.947 | 0.418 ** | 0.456 ** | 1 | | | |
| Student Services | 3.6 47 | 1.005 | 0.426 ** | 0.503 ** | 0.423 ** | 1 | | |
| Accreditati on and Reputation | 3.7 91 | 0.941 | 0.442 ** | 0.457 ** | 0.434 ** | 0.455 ** | 1 | |
| Communic ation and Feedback | 3.6 89 | 0.975 | 0.414 ** | 0.458 ** | 0.448 ** | 0.458 ** | 0.430 ** | 1 |
| * p<0.05 ** p<0.01 | | | | | | | | |

Through the utilization of one-way ANOVA (Table 5), notable disparities were observed in the perception of Thailand's higher education among Chinese students across multiple factors, encompassing Technology Innovation, Curriculum Design, Admission, Student Services, Tuition Fees and Living Expenses, International Competitiveness, and Internal Competitiveness. The group average scores exhibited a considerable disparity for each element, with the ranking as follows: Medium Competitiveness (60-69%) > Highly Competitive (80-100%) > Higher Competitiveness (70-79%) > Lower Competitiveness (50-59%) > Non-competitive (less than 50%). This trend indicates that varying degrees of competitiveness have a significant impact on these characteristics. The findings offer unique perspectives on the position of Thailand's higher education system in the global market, as seen through the eyes of Chinese students. The findings emphasize the significance of bolstering

competitiveness in multiple dimensions to enhance the overall reputation and status of Thailand's higher education.

Table 5. Analysis of variance Analysis results(n=718) *p<0.05 **p<0.01

| | Highly competitive (80-100%) (n=82) | Higher competitiveness (70-79%) (n=231) | Medium competitiveness (60-69%) (n=302) | Lower competitiveness (50-59%) (n=75) | Non-competitive (less than 50%) (n=28) | F | p |
|--|-------------------------------------|---|---|---------------------------------------|--|--------------|---------|
| * 12. Where do you think Thailand's higher education stands in terms of Chinese students' perspective in the international market compared to the others? (mean \pm std) | | | | | | | |
| Technology Innovation | 3.538 0.847 | \pm 3.598 \pm 0.763 | 4.179 \pm 0.786 | 3.411 \pm 0.940 | 3.371 0.980 | \pm 28.395 | 0.000** |
| Curriculum Design | 3.966 0.911 | \pm 4.002 \pm 0.815 | 4.114 \pm 0.730 | 3.818 \pm 0.896 | 3.667 1.104 | \pm 3.581 | 0.007** |
| Admission | 3.620 0.900 | \pm 3.559 \pm 0.953 | 3.864 \pm 0.801 | 3.469 \pm 1.054 | 3.278 0.931 | \pm 6.763 | 0.000** |
| Student Services | 4.023 0.905 | \pm 3.963 \pm 0.952 | 4.185 \pm 0.721 | 3.723 \pm 1.137 | 3.834 1.085 | \pm 5.241 | 0.000** |
| Tuition Miscellaneous Fees & Living Expenses | 3.461 1.017 | \pm 3.603 \pm 1.011 | 3.769 \pm 0.896 | 3.422 \pm 1.097 | 3.247 1.141 | \pm 4.068 | 0.003** |
| International competitiveness | 3.651 1.031 | \pm 3.658 \pm 0.934 | 3.829 \pm 0.825 | 3.575 \pm 1.043 | 3.188 1.210 | \pm 4.123 | 0.003** |
| Internal competitiveness | 3.885 0.874 | \pm 3.873 \pm 0.879 | 4.021 \pm 0.681 | 3.836 \pm 0.888 | 3.488 1.191 | \pm 3.546 | 0.007** |

The Confirmatory Factor Analysis (CFA) of seven factors and 85 observed variables exhibited robust convergent validity, as all factors displayed Average Variance Extracted (AVE) values exceeding 0.5 and Composite Reliability (CR) values surpassing 0.7. The study employed Pearson correlation analysis to investigate the presence of linear associations among the variables. The discriminant validity of factors such as "Technology Innovation," "Curriculum Design," "Admission," "Student Services," "Tuition Miscellaneous Fees and Living Expenses," "International Competitiveness," and "Internal Competitiveness" were confirmed. This was determined by comparing the square root of the average variance extracted (AVE) to the highest absolute value of the correlation coefficients between factors.

The structural equation model's validity was established by conducting a fitting index analysis. Subsequently, the model route was investigated using AMOS26.0 software (Figure 1). The results of hypothesis testing showed that there were significant positive effects on Accreditation and

Reputation from Teaching and Learning (standardized path coefficient = 0.197, $p < 0.05$), Infrastructure and Facilities (standardized path coefficient = 0.163, $p < 0.05$), Administration and Support Services (standardized path coefficient = 0.215, $p < 0.05$), and Student Services (standardized path coefficient = 0.233, $p < 0.05$). These data indicate that improvements in these areas can potentially enhance Accreditation and Reputation.

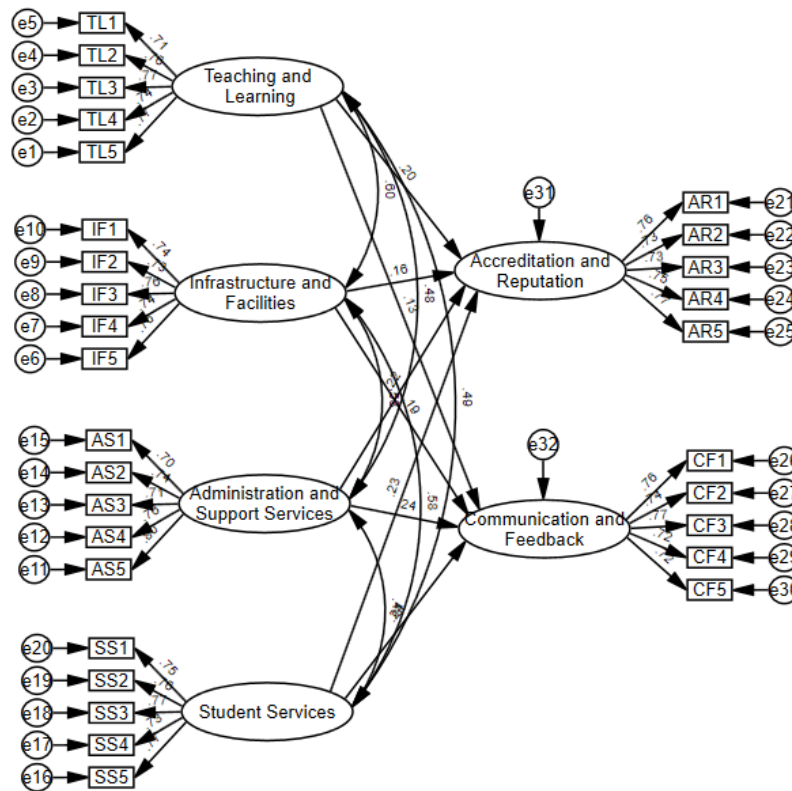


Figure 1. Results of Structural Equation Model

The study investigated two hypotheses: that improving Teaching and Learning, Infrastructure and Facilities, Administration and Support Services, and Student Services would have a beneficial impact on Accreditation and Reputation, as well as Communication and Feedback. The findings indicated considerable beneficial effects on accreditation and reputation from improvements in these areas, with good statistical support. Additionally, developments in these sectors have a considerable positive impact on Communication and Feedback. These findings highlight the significance of enhancing important institutional areas in order to improve overall performance and perception in higher education. The results of hypothesis testing indicate that Teaching and Learning, Infrastructure and Facilities, Administration and Support Services, and Student Services all exert a statistically significant and positive influence on Communication and Feedback. The standardized path coefficients were 0.132, 0.185, 0.243, and 0.243, respectively. All of these coefficients had p -values that were lower than 0.05.

5. Discussion

Universities, being organizations that heavily rely on knowledge, are progressing towards models that are widely accessible, industrialized, globalized, and based on information (Thi Thu Le et al., 2024). Student happiness is of paramount importance for Thai higher education institutions to maintain their competitiveness in this fiercely competitive environment (Nguyen et al., 2024). This study investigated student satisfaction using a combination of quantitative and qualitative methodologies. The analysis included using AMOS analytic software to assess reliability and validity, regression analysis, and path analysis. Additionally, it included interviews with international students,

teachers, and administrators in Thai higher education to complement the quantitative data. The report categorized competitiveness in Thai higher education into three dimensions: international competitiveness, internal competitiveness, and technological innovation. The results showed that, in the face of growing global educational exchange, Thai universities are working hard to establish a strong presence in worldwide competition, supported by strong domestic competitiveness.

The competitiveness of Thai universities is influenced by both soft power factors, such as the campus environment and academic climate, as well as hard power factors, which encompass the quality of faculty and facilities (Sethakul & Utakrit, 2019). These characteristics facilitate a clear and instinctive comprehension of the universities. In the era of technology, the ability to innovate is a crucial aspect of competitiveness in Thai higher education. The institutions' competitiveness is heavily influenced by student satisfaction, which includes curriculum design, enrollment, student services, and tuition prices (Rungfamai, 2019; Tabucanon et al., 2021). Students' high satisfaction levels indicate their acknowledgment of the universities' offers and impact their degree of academic involvement. Nevertheless, problems relating to fees might have a detrimental effect on the satisfaction of overseas students (Burford et al., 2020). The competitiveness of Thai higher education is primarily demonstrated through its worldwide competitiveness, internal competitiveness, and technical innovation.

Thai universities are currently targeting the improvement of their discourse system, with a particular emphasis on developing students' technical abilities and providing them with a high-level education. This entails restructuring fundamental components such as curriculum, pedagogy, and globally recognized vocational education certification credentials (Rhein & Jones, 2020; Sattayaraksa et al., 2023). They are introducing highly sought-after courses for students from around the world and implementing a comprehensive scholarship incentive program. In order to enhance higher education, efforts are being made to bolster international collaboration and exchanges, engage in international initiatives, and provide platforms for discourse through cooperative, remote, and abroad education (Sethakul & Utakrit, 2019; Tabucanon et al., 2021). Internally, the primary objective is improving quality management to promote competitiveness. This is achieved by placing a strong emphasis on enhancing instructor quality, as it has a direct impact on student happiness. Thai universities are making efforts to establish a team of highly skilled educators, researchers, and administrators and aggressively foster and recruit exceptional individuals (Songsathaphorn et al., 2014; Wei, 2023).

To improve internationalization, Thai universities should prioritize collaboration programs with Chinese universities, utilizing these connections to foster academic exchanges, cooperative research projects, and dual-degree programs. Such agreements have the potential to considerably increase the worldwide competitiveness and appeal of Thai higher education institutions (de Wit, 2018; Yi Lin, 2023). However, it is critical to evaluate the long-term effects of tuition increases on student happiness and institutional reputation. While raising tuition prices may be necessary to fund these worldwide programs, it may also discourage prospective students and reduce satisfaction levels, particularly among international students (Doutor & Alves, 2024). As a result, universities should balance fee hikes with extra support services, scholarships, and open information about the value gained through increased internationalization efforts. This method will help maintain high student satisfaction levels and the institution's reputation while growing its global reach.

6. Conclusion and Implications

The study reveals a direct correlation between student happiness and the worldwide competitiveness of Thailand's higher education institutes (HEIs). Teaching quality, teacher-student interactions, college activities, infrastructure, tuition fees, curriculum, institutional climate, and academic resources are all important factors that substantially impact student satisfaction.

Moreover, the study highlighted the significance of strategic initiatives implemented at the institutional level, such as tailored student services and significant curriculum innovation, in improving the international competitiveness of Thailand's higher education industry.

Research on university competitiveness, an emerging area of academic inquiry, focuses on the obstacles universities encounter regarding resources, environment, and internal management. This study goes beyond conventional research methods by emphasizing practical aspects and situating colleges within the framework of market competitiveness. This study aims to provide solutions to boost Thailand's competitiveness in the higher education environment, with a specific focus on improving student happiness. An essential strategic advice is to develop a complete quality framework and revolutionize the notion of Higher Education Institutions (HEI). Universities should prioritize talent growth, focus on establishing a strong foundation in teaching, and seek to build a reputation for high competitiveness. In light of the swift globalization of degree programs since 2010, Thai universities have the challenge of maintaining a delicate equilibrium between student enrollment and the quality of education. This calls for an inventive approach to university management that places a higher emphasis on quality rather than sheer enrollment figures.

Universities should incorporate the concept of internationalization into every facet of their operations, ensuring that educational concepts, materials, techniques, and quality assurance procedures align with global norms. This encompasses enhancing academic collaboration with international institutions, performing innovative research, and promoting engagement in global initiatives. Thai universities' practice of raising tuition fees for overseas students as a means of generating immediate revenue may undermine trust in the long term. Consequently, they should prioritize sustainable development. Attracting international students necessitates striking a harmonious equilibrium between the process of internationalization and the preservation of distinctive national traits. The primary objective of internationalization is not simply to integrate foreign elements but rather to foster globally competitive individuals and generate research with worldwide influence. External publicity is essential for bolstering a university's soft power, increasing its popularity, and enhancing its appeal.

Declarations

Author Contributions. All authors have read and approved the published version of the article.

Conflicts of Interest. The authors declared no conflict of interest.

Funding. The authors received no financial support for this article.

Data Availability Statement. The data can be supplied by the corresponding author upon request.

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