



CHALLENGES IN THE ADMINISTRATION OF SATELLITE UNIVERSITY CAMPUSES IN CHINA - A CASE STUDY BASED ON HARBIN INSTITUTE OF TECHNOLOGY, SHENZHEN

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Abstract:

Running satellite campuses in different locations is a regular feature in Chinese society nowadays due to the combined result of the complexities in enrolling students, the restricted scale of schooling, geographical limitations, and government policies. With the Reform and Opening-up, some of China's underdeveloped cities have become new economic engines. At the same time, their lack of higher education resources has limited their development. However, some colleges and universities have started satellite campuses to break through these limitations. The Harbin Institute of Technology (Shenzhen), co-founded by the Harbin Institute of Technology (HIT) and the Shenzhen Municipal Government, is a satellite campus of Harbin Institute of Technology. The paper summarised and sorted out the existing studies, interviewed the students of the Shenzhen campus of the Harbin Institute of Technology. Through studying the current situation, existing problems and their causes have been analysed. It was concluded that the current crisis facing the Harbin Institute of Technology (Shenzhen) revolves around the following points: brand awareness, school size, government policies, international situation, as well as faculty and campus management. Based on the research findings, it was recommended that Harbin Institute of Technology (Shenzhen) improve their brand marketing, expand the scale, train teachers further, upgrade risk management and research, and put forward concrete measures for several aspects of the negotiations.

Keywords: higher education, satellite university campuses, education management

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1. Introduction

Due to higher education's continuing development, universities worldwide have increasingly expanded to larger and more complex systems (Kyvik, 2004; Morphew, Fumasoli, and Stensaker, 2018; Teichler, 2004). In this context, satellite university campuses have been an increasingly common characteristic of higher education worldwide. Universities often established satellite campuses in places previously lacking a university (Altbach, 2012; Pinheiro, Charles, and Jones, 2016).

There has been a growing trend in establishing international branch campuses, which are satellite campuses of a parent institution located in an overseas country. For example, The University of Nottingham set up four campuses in the UK, apart from two international campuses in Malaysia and China. St. John's University has five satellite campuses around the USA, Italy, and France. The University of Southampton has a satellite campus in Malaysia, and New York University has three campuses in New York, Abu Dhabi and Shanghai. Higher education in China also follows the trend of opening satellite campuses. However, in contrast to opening international satellite campuses, as mentioned above, Chinese satellite campuses are mainly domestic satellite campuses in different cities.

The reasons for opening satellite campuses in China are twofold:

China's reform and opening-up dramatically influenced Chinese higher education in the 1990s. Market mechanisms have gradually penetrated the field of higher education. Recent years, university ranking mechanisms such as the QS World University Rankings and Times World University Rankings have also gained the public's and educators' attention; the competition between universities in higher education has become visible. Additionally, considering the traditional competitive fields such as admissions, employment, and academics, many universities in China have successively opened new campuses to support their development to expand their scale and increase their influence. Secondly, in urbanisation, some cities such as Shenzhen and Hangzhou have developed rapidly and have become new economic engines in China. In contrast, some other cities in China have fallen behind because of industry transformation and modernisation, such as Harbin and Shenyang. On the one hand, new emerging big cities need more educational resources; on the other hand, the cities with adequate educational resources do not have enough financial support due to their comparatively weak economic situation. In these circumstances, there is a demand for administering satellite campuses to meet bilateral needs.

This study focused on the case of Harbin Institute of Technology (Shenzhen) which was established under these circumstances, and is a touchstone for running satellite campuses in different cities. Its scale and experience are related to satellite campuses' development in Chinese and even Asian Universities. Harbin Institute of Technology requires that its Shenzhen campus's management level is comparable to its main campus. An added challenge is ensuring that the new training mode in different campus locations take root and adopt the same or higher education standard.

This paper employed questionnaires and interviews to obtain first-hand information, SWOT (Strengths, Weaknesses, Opportunities and Threats) and PEST (Politics, Economy, Social, Technology) analysis were employed for exploring the current status and problems in the Harbin Institute of Technology (Shenzhen). Furthermore, reconstructing educational strategies for satellite campuses provides feasible strategies for running higher education universities' satellite campuses.

2. Background

2.1 Overview of Running Satellite Campuses in China

A satellite campus's central feature is its distance from the city where the main campus is located, and the length varies greatly. Given the satellite campus situation in China, Xing Zhijie (2005) believes that local governments usually initiate setting up satellite campuses. Local governments' main reasons to introduce colleges and universities are as follows: cities' administrative level is raised. They hope to elevate the image, stature, and culture of cities by establishing colleges. Take Shenzhen as an example. Xing Zhijie stated that (2005) although there is barely any famous university native to Shenzhen, multiple top universities have established research institutes in the city. However, due to the favourable natural geographical environment, developed economic and social conditions, and preferential policies offered in many aspects such as academics, wages, housing, and so on, myriads of high-calibres students and professors from the three provinces in Northeast China have flocked to eastern and coastal areas with well-developed economies, which has led to a decrease in the number of elites who choose universities in Northeast (Zhang Yu and Liu Hehui, 2019).

Harbin Institute of Technology, as one of the top universities in Northeast China, has also been severely impacted by the brain-drain. Therefore, running schools in the southeast and coastal areas is also an essential measure for the Harbin Institute of Technology to maintain or even bolster its position in China's higher education. Harbin Institute of Technology (Shenzhen), co-founded by Harbin Institute of Technology (HIT) and the Shenzhen Municipal Government, is a satellite campus of the Harbin Institute of Technology. It is the first university under Project 985 and Project 211 stationed in Shenzhen to recruit undergraduates. Its predecessor was the Shenzhen Graduate School of Harbin Institute of Technology, which was established in 2002. Harbin Institute of Technology (Shenzhen) was positioned at the same educational level as a satellite campus. The reasons for the Shenzhen campus opening are not only an invitation from the Shenzhen government but also mutually beneficial and a win-win situation.

Running satellite campuses has been popular in China over the last ten years. However, in 2019, the Chinese Ministry of Education clarified that China's higher education should focus on lifting quality, not on excessive expansion. To target problems raised by the CPPCC (Chinese People's Political Consultative Conference) members including the blind development of universities, the bloated establishment of satellite campuses, and the overall or partial relocation of campuses. Satellite campuses that

emerged in the proliferation of colleges and universities have traditionally been discouraged and disapproved by the Ministry of Education due to concerns with satellite campuses' positioning, building strong faculties, funding adequacy, quality and educational level, and campus cultural heritage. It is unclear whether satellite campuses' development will be impeded without the Ministry of Education's support. As universities multiply their campuses' location, upgrading the new campuses' quality to the same or higher level of the school's original campus will be a significant challenge.

2.2 Higher Education Campus Model in China

According to the different formation methods, China's multi-campus universities could be classified into three types: Merged (合并型), expanded (扩展型), and compound (复合型) (Xu Kuihong, 2010).

a. Merged Multi-Campuses Universities

According to disciplines, merged campuses' central feature multi-campus universities are mainly characterised by the campuses' division, with distinct discipline boundaries between campuses. For example, Tsinghua University School of Medicine (Peking Union Medical College) and Peking University (Peking University Health Science Centre) maintained clear geographical and disciplinary distinctions after the parent university merger. The most obvious is Beijing Union University, which was formed by the merger of several university branches. Different courses were established on other campuses, with a pronounced geographic distance and professional gap.

b. Extended Multi-Campuses University

A comprehensive multi-campus university refers to the establishment of new campuses, such as Shanghai International Studies University and Shanghai Jiao Tong University, due to the increasing enrolment scales and the limited space for further development in the original campus. The original campus features are "extended" and built upon on the new campus, and the school district maintains close links with the main campus.

c. Compound Multi-Campuses University

A compound multi-campus university denotes a university formed by a combination of fields of study and their expansion, such as Chongqing University and Sun Yat-sen University.

Harbin Institute of Technology (Shenzhen) is a typical compound multi-campus university. The Harbin Institute of Technology is located in the northeast industrial base of the decline in their status and the demand for higher education policy guidance from Shenzhen development resources. Compared to the other higher education universities satellite campuses, Harbin Institute of Technology's satellite campus, Weihai, also has off-site campuses, with more mature off-site experience in higher education.

2.3 Issues of Running Satellite Campus in China

When it comes to the satellite campuses' problems, they are mainly divided into three main challenges: faculty, the relationship with the parent campus, and the schooling level.

In terms of faculty, it was stated that professors and teaching fellows at the Research Institute of Tsinghua University in Shenzhen and Peking University Shenzhen Graduate School face the need for commonplace travel between the main campus and satellite campus (Xing Zhijie, 2005). Additionally, some colleges and universities suffer from inadequate teaching staff on their campuses and communication difficulties with the other campus' staff (Dong Hui; Zhou Yong; Li Xiao, 2018). A mature teaching system has not yet been formed due to the late completion of the new campus. Due to the uneven allocation of teacher resources in the branch and main campuses, most of the new campuses' teachers are outsourced with a low pedagogical level. These two factors take a toll on teaching quality (Cheng Yao, 2008). Liu Kai (2018) investigated teachers' perspective on teaching in satellite campuses; it was uncovered that some teachers were too tired to deal with commuting. He also mentioned that teachers found it challenging to communicate and discuss with their colleagues; thus, it became more complicated to carry out teaching and research activities. Furthermore, school leaders often provide the prospect for off-campus investigations, exchanges, and studies to teachers in the parent campus, rather than those from satellite campuses (Liu Kai, 2018).

Regarding the relationship with the headquarters, Cheng Yao (2008) believes that attention should be paid to carrying forward the central campus culture in establishing satellite campuses. The spirit and culture are its souls, formed through the university's history and eventually established as a deep-seated culture recognised by its members. Given that the new campus is located far from the main campus, this spatial separation has brought many challenges and difficulties to the daily educational management. There are specific differences between multiple campuses in terms of the relationship with the parent campus. These differences lie in the level of schooling and research and the origin of the students. Given that many satellite campuses are too far away from the parent, students' sense of belonging and identity in the colleges and universities with satellite campuses is worth studying. Currently, research is mainly based on professional and educational identification, such as research on lifting college students' mining professional identity (Li Zhonghui et al., 2019) and its enlightenment to domestic universities and related research on self-esteem, self-identity and attribution tendency of vocational high school students (Zhang Yan et al., 2006). Nonetheless, the research on school identity and sense of belonging among different campuses is still non-existent.

Concerning the level of schooling, almost all schools have made it clear that satellite campuses are an integral part of the central school. Harbin Institute of Technology put forward the idea of a "Greater HIT system", hoping that the three campuses of Harbin, Weihai, and Shenzhen have the same mission, that is, committing itself in building HIT into a world-renowned, high-level university. That aside, it is irrefutable that the enrollment of these campuses is different from that of the parent

campus. For many satellite campuses, their undergraduate enrollment is different from that of the parent, evidenced by substantial differences in admissions scores (Xing Zhijie, 2005). Moreover, it was argued that most of the researchers took a stance on the new campus to explore how to promote satellite campuses while ignoring the relationship between the main campus and the new campus. Suggestions were also provided that the government should introduce corresponding incentive measures (Cheng Jie, 2018).

2.4 The Key and Strategy of Running Satellite Campus in Different Places in China

One of the keys of running satellite campuses is legislation; it has been highlighted by Zhang Duanhong (2019) that the establishment of satellite campuses should be regulated by law. Running satellite campuses requires large investments and it takes years to realise its progress; a standardised and regulated process can make it less risky. On top of that, he further suggested that local governments should thoroughly assess the interactive relationship between higher education and local economic and social development. Additionally, local governments need long-term and well-defined plans for developing higher education. Since a single local economic indicator is not sufficient to fully characterise the development stage of a region, local governments need to consider politics, economy, society, culture, technology, and ethnicity, and other factors together to formulate long-term plans for higher education geared into the local development through regional legislation. These plans can be enshrined into law, and thus irrational behaviour of local governments in higher education investment can be avoided (Zhang Duanhong, 2019).

In terms of strategies in running satellite campuses, the scholars mentioned earlier have put forth detailed questions and given their views, covering three aspects: teachers, the relationship between the parent campus and the schooling level. They have elaborated at full length on bringing up questions regarding satellite campuses at the macro-level. Still, almost all of their studies focused on multiple schools in a general manner, and case studies were lacking.

2.5 Significance

Compared with other higher education research topics, there is a shortage of studies specifically on satellite campuses (Fonseca and Bird, 2007; Rossi and Goglio, 2020). The existing studies on satellite university campuses mostly originate from the western world focusing on aspects following such as students' incentives, studying experience and features (McClelland and Daly, 1991); the experiences of the faculties working in satellite campuses (Nickerson and Schaefer, 2001; Wolfe and Strange, 2003) and the supply of university service (Lee, 2004). Specialised topics on Chinese university satellite campuses are also worth investigating since Chinese higher education has distinct features from the western world.

Most of China's current research has focused on macro-scale issues; there is a lack of case studies on satellite university campuses. Besides, most existing research was conducted before the Ministry of Education was explicitly opposed to running satellite

campuses in 2019. Assuming that the Ministry of Education supported running campuses in different places, prior recommendations were inconsistent with the Ministry of Education's primary position. Thus, the proposed measures, such as encouragement measures at the government level, were not realistic.

Besides, existing research on university satellite campuses in China is typically microscopically based on the schools' academic development and proposes policy studies, ignoring the students, especially undergraduates. There is a need for case studies focusing on the students' attitudes on satellite campus.

3. Methodology

3.1 Participants

Thirty undergraduate students were recruited from the Harbin Institute of Technology (Shenzhen) as participants for this study. All of the participants are domestic students from mainland China aged 17-23. They agreed to participate in this study voluntarily, letters of consent were signed before the interviews. Additionally, the participants were informed that the interview would be recorded in an audio format.

3.2 Materials

Apart from the letters of consent, the primary materials were questionnaires and semi-structured interview questions. The questionnaire included 30 multiple-choice questions; it was used to obtain the participant's general information, (such as gender, age, family background, etc.) as well as specific information about their perceptions on their school, Harbin Institute of Technology (Shenzhen), including majors, school facilities, accommodation, food, teachers, assessment, grant system, the employment situation of graduates, etc.

Apropos of the semi-structured questions for interviewing, there were seven questions in total concerning the reasons for choosing this university, perceptions on satellite campus and main campus, satisfactions on the campus and the city, insights of advantages and shortcomings of their campus.

3.3 Analysis

SWOT (Strengths, Weaknesses, Opportunities and Threats) and PEST (Politics, Economy, Social, Technology) analysis were conducted in this study.

4. Result and Discussion Based on the Survey and Interview

4.1 The Status Quo and Problems of Harbin Institute of Technology (Shenzhen)

The following section comprises selected quotes from the interviews and further analysis based on the selections concerning issues faced by Harbin Institute of Technology (Shenzhen). The quotes are translated extracts (the original interview was conducted in

Chinese) of the talks regarding different issues. The participants were anonymised by employing the initials of their names.

4.1.1 Admissions issues

a. Admissions Difference

The data published by Harbin Institute of Technology (Shenzhen) indicates that Harbin Institute of Technology (Shenzhen) has a gap of nearly or even more than 10 points on the enrollment baseline score in the 2019 college entrance examination; in comparison with another famous project 985 schools such as Sun Yat-sen University and Nankai University.

“Most of our classmates could go to Sun Yat-Sen University in Guangdong Province, but we chose the Harbin Institute of Technology (Shenzhen) in the end. Although it is a University under project 985 (a project with top schools list in China), we always feel that this version of university life is not complete.” J said.

“The enrolment scores of the students in our school are very uneven. The students with the highest scores could go to Tsinghua and Peking Universities (top 1 and 2 universities in China). In contrast, the student with the lowest score can only go to a regular university to distribute our scores. It is not fair that students who have very different scores can be accepted in the same school.” S said.

Based on the interview, it was revealed that there is a big difference in admission scores. The students hold a negative role in this since they feel upset about the admission difference among the students.

b. Enrolment Scales

“We now have 2,600 undergraduate students, which is more than 600 a year in terms of four classes, this is a microscopic scale for a Project 985 university.” Z said.

“Other similar level universities such as Sun Yat-sen University could enrol 7,000 undergraduates a year.” Y said.

“We all believe that reducing the enrolment scale will help the university control the admission scores and improve the admission line in Gaokao (Chinese college entrance exam). However, the small number of students make it impossible to have any student clubs; thus, we don’t feel connected. Sometimes we have to go to other universities to attend some activities, and our university life deteriorated. Although I am happy with the development of the Harbin Institute of Technology (Shenzhen) and the continuous improvement of its educational strength, if given another chance, I may have chosen a more historical university instead of Harbin Institute of Technology (Shenzhen).”

Although the enrolment number has been increasing, the enrolment scale of Harbin Institute of Technology (Shenzhen) is still too small compared to other schools. Harbin Institute of Technology hopes to educate more outstanding high-tech talents, and it is the right choice to prevent flooding enrollment from lowering student standards. But this may also make students think that this kind of university life is cut short. Balancing the scale of enrolment and the number of students, as well as improving the student experience, should be considered by the decision-makers of the Harbin Institute of Technology (Shenzhen).

4.1.2 Training Issues

a. Curriculum

Student S belongs to the second batch of students from the Harbin Institute of Technology (Shenzhen). He stated:

“As the second batch of students, our curriculum was optimised compared with the first batch of students, but this also means that some courses have been added or eliminated. Consequently, some seniors did not get credits for some courses on time. Due to the adjustment of the curriculum, there were some credit problems. I think adjusting the curriculum is a good thing, but it indeed leads to lots of inconveniences.”

M said, *“Choosing a course is like gambling because the school just opened, you don't know if your chosen course will be out of print.”*

The inconsistency of the curriculum in different grades may cause inconvenience to students. Additionally, tremendous curriculum changes are also disadvantageous for teaching fellows to prepare and design courses, accordingly, urging pressure on them. It is more efficient and beneficial to develop a well-organized and well-designed curriculum and only make slight changes.

b. The Guidance from the Supervisors from the Main Campus

Many well-known professors have teaching and supervising tasks, along with scientific research tasks on both campuses. Considering the great distance between Harbin and Shenzhen, this often causes geographical restrictions.

Student L said:

“My supervisor was a well-known scholar in our Harbin campus, he is based in Harbin. He only comes to Shenzhen to conduct research or attend important meetings. I can mainly communicate with him via call, but I think this is far from enough. I can't beg him to go back to Shenzhen specifically for me, so I think I chose the wrong mentor.”

“My supervisor spends most of his time in Harbin. Although he is very well-known, and it is a huge glory to be an assistant in his laboratory for me, it is challenging for me to have

the opportunity to get in touch with him. Although there are teachers based in the Shenzhen campus, they have just graduated with a PhD degree, not as famous as my current professor." H said.

It is contradictory that students who choose experienced scholars as supervisors based in Harbin face the problem of face-to-face communication. In contrast, teaching staff from Shenzhen campus might lack teaching and supervision experience; they also have less academic resources compared with veteran scholars from Harbin.

c. The Quality of the Teaching Staff in Shenzhen Campus

"I think some of our teachers are young and lack experience. I went to the official website to search for the teachers' information, and I found that most of them in Shenzhen campus just graduated from their doctorate study. Sometimes I think they don't have much teaching experience. Sometimes I feel that I did not learn a lot from some teachers, not all teachers have this problem, but I prefer experienced teachers." S said.

Young teaching staff could bring vitality to a university. However, it was also complained by some students that some young teachers lack teaching experience. In this case, the Shenzhen campus could consider recruiting more experienced teaching staff, offer new teachers training, and invite experienced external lecturers from other universities.

d. Restrictions on Majors and Lack of Options

"The reason I slightly regret it is because I feel that the majors currently offered by the school are not suitable for me, and the school's undergraduate majors are very scarce. The transfer of majors is restricted, which annoys me. I may go to an ordinary 985 Project University. It will be much better. After all, there are many opportunities and options." Student N commented.

New campuses or universities usually have the problem of lacking options or opportunities for students. In this case, students might feel troubled, thus leading to unfavourable perspectives. The possible solution is cooperating with other universities in the same region to provide more studying choices for students; it is also essential to develop its majors and studying areas to give more options for the students.

4.1.3 Employment and Further Studies

a. Controversy over Diploma

"Starting from the 2018 intake, our graduation certificate will be distinguished from the Harbin parent campus and the Weihai campus. I am glad, after all, our scores are much

higher than theirs. I don't want them to drag us back. It might sound selfish, but this determines our future path, so we must be cautious." P Said.

"I can't help worrying. If our graduation certificate shows the Shenzhen campus, will our job search, especially the work of state-owned enterprises, be affected? Those companies that strictly follow the universities on the lists to recruit, they think we are Harbin Institute of Technology. Isn't it part of the HIT? Doesn't this involve the issue of the independent branch school?" E worried.

The difference among various campuses affects the students' feelings. In this instance, other campuses' different diplomas belonging to the same parent university might be controversial. If Harbin Institute of Technology (Shenzhen) separates from the Harbin main campus, it may lose many previous advantages. There are many questions about applying for exams for civil servants and state-owned enterprises, and whether students are concerned about whether studying abroad should be treated equally. Since overseas universities could recognise the parent campus diploma, whether the three credentials issued by different campuses will be recognised equally is still unclear.

4.1.4 Management Issues

a. Management of Enrollment

Young universities often face the dilemma of having to reduce the scale of enrolment to ensure that the standard of the students is consistent. However, reduced enrolment often sacrifices the campus experience of students. It is mainly evidenced by the lack of student activities. Compared with other large-scale schools, young schools would lack internship opportunities and job opportunities. But the flood of enrollment will reduce the school's admission line, which is hugely detrimental to the school's development. Therefore, this will be an essential consideration for university administration.

b. Small Campus

S complained:

"Our university is smaller than my high school. I became disappointed when I arrived here. Because it is so different from the university that I imagine: big campus, big classrooms, big libraries with abundant resources, now I am used to this small campus, but I still dream one day I could study in a 'real' university."

Harbin Institute of Technology (Shenzhen) campus used to be Shenzhen Research Institute of Harbin Institute of Technology, it covers a narrow and small area. The small size of the campus may affect its enrollment and further influence students' access to the school's infrastructure. However, most of the students agreed that the campus infrastructure is complete. Some interviewees also argued that the campus is too small, and most of the teaching buildings are under construction, which will affect their

undergraduate study and life. It might be difficult to expand the campus due to financial concerns; nevertheless, it is essential to improve the school facility to make its campus space's best use.

c. Internship Issues

"Although there is a Science and Technology Park next to us, I am an economics student. I can hardly find an internship suitable for myself within a radius of ten kilometres. It may be very friendly to science and engineering, but for me, the commuting time for the internship is excruciating." F claimed.

Harbin Institute of Technology (Shenzhen) is adjacent to the Shenzhen Science and Technology Park and borders Tsinghua and Peking University's Shenzhen campuses. Apart from science and engineering-related majors, most students find it challenging to look for internships. In such circumstances, it is proposed that the Harbin Institute of Technology (Shenzhen) should build up more resources for their students. For example, they can cooperate with different corporations for students' internships, helping students develop their employability, offering career and internship consulting opportunities.

In summary, Harbin Institute of Technology (Shenzhen) has only been established for six years. Compared with other universities that have developed for decades, it is still immature. The staff team's management and reform also tend to be younger, and some rules and regulations are not complete. The Ministry of Education has also clearly stated that it does not support higher education institutions to run satellite campuses. Compared with other ordinary universities in terms of policy and development, they are subject to the Ministry of Education's relevant policies, Shenzhen City, and its main campus.

4.2 SWOT Analysis

4.2.1 Strengths

a. Prestigious University Effect

Harbin Institute of Technology is a well-known prestigious university in China, a member of the C9 Alliance, and has a significant influence in the country. It is the first member of the China Nine Schools Alliance (C9) to recruit undergraduates in Shenzhen, it is also a member of the national "985 Project" universities and Double First-class University Plan. It is in a leading position in China in high-tech fields such as aerospace and remote sensing technology. As Harbin Institute of Technology (Shenzhen) has a prestigious reputation from its inception, the Harbin Institute of Technology label can provide it with a good image and brand advantage.

b. Geographical Advantages

From a macro perspective, Harbin Institute of Technology (Shenzhen) is adjacent to Guangzhou and Shenzhen, with the Greater Bay Area as its development base, and across the Hong Kong river. Relying on the upgrading of the Greater Bay Area's industrial structure and the Greater Bay Area's development opportunities, it has an important geographical location. Harbin Institute of Technology (Shenzhen) is near Tsinghua University Shenzhen campus, Shenzhen Research Institute, Peking University Shenzhen Research Institute, and the many Industrial Parks and science and technology enterprises, to facilitate the sharing of knowledge.

c. Shenzhen Government Policy Support

The Shenzhen Municipal Government has been vigorously supporting the development of the Harbin Institute of Technology. In February 2002, the Shenzhen Municipal Government and Harbin Institute of Technology signed a City-school Cooperation Agreement to co-found the "Harbin Institute of Technology Shenzhen Graduate School". Tsinghua University Shenzhen Graduate School and Peking University Shenzhen Graduate School also moved into Shenzhen University City together. In May 2014, the Ministry of Education approved the Shenzhen Graduate School of Harbin Institute of Technology to prepare for undergraduate education. The Shenzhen Municipal Government and Harbin Institute of Technology signed a new cooperation agreement to build "Harbin Institute of Technology (Shenzhen)" with a complete higher education system based on the Shenzhen Graduate School of Harbin Institute of Technology. It also provided a colossal capital investment and policy support to the establishment of the Harbin Institute of Technology (Shenzhen).

4.2.2 Weaknesses

a. Not Well-known

According to interviews, most students said that the Harbin Institute of Technology (Shenzhen) popularity is shallow, and its popularity is currently limited to Guangdong Province and some large cities. Some state-owned enterprises and government agencies do not have the Harbin Institute of Technology (Shenzhen) on the school recruitment lists. For further studies, foreign universities are generally not aware of the existence of this school. In the future class of 2022, students will get an independent diploma, which is different from other campuses.

b. Subject Restrictions

Harbin Institute of Technology (Shenzhen) is a science and engineering university, which is a disadvantage compared with other universities that have comprehensive fields of studies.

c. Non-support of National Macro Policy

The Ministry of Education believes that for the problems of running schools in different places during the expansion of colleges and universities, "The relocation of colleges and universities involves major changes in the running of colleges and universities and significant adjustments in the layout of higher education. We have always been cautious about this". This is an essential risk for Harbin Institute of Technology (Shenzhen).

4.2.3 Opportunities

The Rise of China's "Smart" Manufacturing: "Smart Manufacturing (ZhiZao)" is an advanced manufacturing system that integrates technological innovation, model innovation, and organisational innovation under changes in market demand. It is a variety of advanced manufacturing systems such as integrated manufacturing, lean production, agile manufacturing, virtual manufacturing, and networked manufacturing. The Shenzhen neo-manufacturing base in China is booming. Huawei and Tencent in Shenzhen represented by the Chinese high-tech companies are looking for top talent. There are great opportunities for all universities in Shenzhen, including the Harbin Institute of Technology (Shenzhen).

4.2.4 Threats

a. Competition from Surrounding Schools

Shenzhen University City focuses on the three representative universities of liberal arts, sciences, and engineering. In addition to the Harbin Institute of Technology (Shenzhen), Peking University Shenzhen Graduate School and Tsinghua University Shenzhen Graduate School are all present in the city. Harbin Institute of Technology (Shenzhen) is also facing competition from Hong Kong universities. Increased competition is a fundamental challenge for the Harbin Institute of Technology (Shenzhen).

b. New Threats from US Sanctions

The United States has added 33 Chinese companies and institutions including Qihoo 360, Harbin Institute of Technology, and Harbin Engineering University to the "entity list". These companies and organisations will be banned from the use of U.S.-based companies without specific approval from the U.S. government. Technology products will be prohibited from purchasing parts from American companies without the permission of the US government. This deeply affects the scientific research and studying areas of science and engineering.

4.3 PEST Analysis

4.3.1 Politics Factors

The Shenzhen government pays attention to the Harbin Institute of Technology (Shenzhen) to provide a good political environment for development. However, since the Ministry of Education has publicly stated that the Ministry of Education has always

disapproved of the establishment of remote university campuses, which it will not approve in principle. Failure to support remote schooling may bring certain risks. These policies have increased political uncertainty.

4.3.2 Economic factors

Shenzhen is located at the forefront of the Pearl River Delta and adjacent to Hong Kong. As the link and bridge between Mainland China and Hong Kong, it is an important transportation hub in the coastal areas of South China. The development base in Shenzhen provides more economic opportunities for the Harbin Institute of Technology. Still, the Sino-US trade war and the social turbulence in Hong Kong may harm the financial situation.

4.3.3 Social Factors

Shenzhen is a city of immigrants. Even people from different races, languages, cultural backgrounds, beliefs, and customs live in the same city. They are tolerant, respectful, and live in harmony. They can find suitable soil for their survival and development, and they are more diverse and open. For the Harbin Institute of Technology, there are more possibilities and opportunities there.

4.3.4 Technical Factors

The degree certificate and graduation certificate will be separately marked as Harbin Institute of Technology (Shenzhen) starting from 2022 graduates, different from the main campus and Weihai campus. The pros and cons of an impact at the technical level of this factor also remain to be seen.

In summary, the current situation facing the Harbin Institute of Technology (Shenzhen) revolved mainly around the following considerations:

- a. Brand Awareness,
- b. School Scales,
- c. Government Policies and International Situation,
- d. Faculty and Campus Management.

5. Strategy Suggestions

The Harbin Institute of Technology (Shenzhen) should start from branding, gradually enriching the enrolment methods, expanding the scale of enrolment, develop more of wide-ranging disciplines, and at the same time strengthening the construction of infrastructure, improving the learning environment, and increasing the level of teaching staff and administrative management services. Specific suggestions are as follows:

5.1 Specific Measures for Brand Marketing

Brand marketing enables customers to form a cognition of corporate brands and products through marketing. If an institution wants to gain and maintain a competitive advantage

continuously, it must build a high-quality marketing concept. The most advanced marketing is not to establish a vast marketing network, but to use brand symbols to create an invisible marketing network into the hearts of the public and deliver products to consumers. Make consumers recognise the product when they choose to consume and acknowledge it when investors decide to cooperate. Harbin Institute of Technology (Shenzhen) should establish a brand and build a high-quality Shenzhen campus reputation. Strengthen its visibility and influence through online and offline integration. Strengthen ties with government enterprises and increase their recognition and influence. In the long run, Harbin Institute of Technology's (Shenzhen) popularity still has room for improvement. The management should take the lead in working and communicating well with the government and enterprises to promote the Harbin Institute of Technology (Shenzhen) on the recruitment list. Branding on social media as well as university ranking websites are also worth considering. All of these methods are aiming at improving its recognition and influence, further to benefit students and faculty.

5.2 Specific Measures for Scale Expansion

Although Harbin Institute of Technology (Shenzhen) currently has a complete college system, its undergraduate enrolment majors have yet to be developed. It is suggested that the Harbin Institute of Technology (Shenzhen) should expand the diversity of fields of study and majors, recruit high-quality teachers, and promote the expansion of the disciplines of study.

For 2023, Harbin Institute of Technology (Shenzhen) will reach 900 teachers. Students will reach 10,000 people. The Harbin Institute of Technology (Shenzhen) needs to expand the size of enrolment, seek high-quality students, diversify the sources of students, promote a complete school system, and try to improve student learning and life experience.

In addition to the expansion of the enrollment scale, infrastructure construction should also be strengthened to ensure the students' quality of life in the campus to offer them better studying experience.

5.3 Specific Measures for Teaching Staff Management

The university should hire experienced and capable teaching staff to promote the development of study fields and optimise its curriculum. When it comes to newly recruited teachers lacking experience, teacher training should be provided to make sure their teaching quality. Because it deeply affects students' studying experience and school reputation.

Furthermore, the formation of the management team needs to be strengthened and a world-class campus management team should be built. To promote the further development of the school, offering better working experience for staff and better studying experience for students; the student management system, staff management system as well as school resources management system shall be optimised.

6. Conclusion and Summary

By investigating the current perception of undergraduate students at the Harbin Institute of Technology (Shenzhen) via survey and interviews, this paper analysed the existing problems in detail and proposed possible solutions. Through SWOT and PEST analysis, the satellite campus's advantages, disadvantages, opportunities, and threats were discussed. It is concluded that Harbin Institute of Technology (Shenzhen) currently has a series of problems in enrolment, training, and management. Furthermore, the Harbin Institute of Technology (Shenzhen) is currently facing the following challenges: Brand Awareness, School Scale, Government Policies, International Situation, Faculty and Campus Management.

According to the existing challenges, suggestions for the reconstruction of future development strategies were made, and specific improvement measures were proposed. The suggestions are as follows: branding and marketing; expanding the scale and enhancing teaching faculty; improving risk management; putting forward concrete measures for the discussed problems and challenges. The suggested strategies could also be implemented by other Chinese institutions running satellite campuses.

Conflict of Interest Statement

The authors declare no conflict of interests.

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