

Article

Exploring High-Quality Institutional Internationalization for Higher Education Sustainability in China: Evidence from Stakeholders

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Abstract: The current study explored high-quality institutional internationalization for promoting sustainable development of higher education in China, from stakeholders' perspectives. We assessed students' and faculty members' satisfaction regarding factors involved in the internationalization of higher education institutions. We recruited 498 students (undergraduate students and graduate students) and 209 faculty members (research track and administration track) and assessed their satisfaction with institutional internationalization initiatives in multiple dimensions, including international courses, research, cooperation and services. The results revealed that student satisfaction with institutional internationalization was influenced by four factors: international faculty resources, international curriculum, international services, and international campus. Of these factors, international faculty resources had the greatest influence, and international campus had the least influence. Teachers' satisfaction was influenced by international services, international research, and international cooperation, of which international services had the greatest influence and international cooperation had the least influence. Based on the current results, we suggest that national and local government should promote institutional internationalization in the post-epidemic era, and that Chinese-foreign academic cooperation should be enhanced for both students and faculty members.

Keywords: comprehensive internationalization; internationalization of higher education; China's higher education institutions; higher education; internationalization



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1. Introduction

The internationalization of universities is an important part of the sustainable development of China's higher education with the development of quality education as its core. In other words, the internationalization quality of universities is directly related to the sustainable development quality of higher education in China. In recent decades, higher education institutions (HEIs) in China have actively committed to international projects involving a wide range of activities, such as attracting and engaging foreign students and scholars, expanding study abroad and student and faculty cross-border academic exchanges, building international research collaborations, expanding language learning and regional studies, and engaging in international development [1]. Internationalization of HEIs involves the movement of students and scholars across borders. In addition, internationalization is a process by which HEIs strive for increasingly global learning among students and faculty, by engaging in dialogue and strategies for promoting the internationalization of colleges and universities [2]. The internationalization of higher education in China has developed rapidly. In particular, the number of Chinese students studying in China has been increasing, the structure has been gradually improved, and China has become the largest destination of overseas students in Asia. By 2020, a total of 589,200 international students were studying in Chinese colleges and universities, an increase of more than

10 percent for two consecutive years. Among them, 241,500 were degree students, accounting for 49.38 percent, a year-on-year increase of 15.04 percent.

Meanwhile, the internationalization of universities and colleges holds various contextual meanings, which vary in scale and scope depending on their specific purpose, institutional missions, institutional starting point, programmatic frame of reference, and clientele groups [3,4]. Thus, in HEIs, promoting and conducting internationalization should be contextualized to prepare various stakeholders to engage in creating international products, services, and ideas in an increasingly borderless and interdependent world [5]. However, there is currently a dearth of research examining both students' and faculty members' satisfaction with the implementation of the internationalization of HEIs in China to promote sustainable development of education. Thus, the current study used B University as a case to explore the dimensions that contribute to the satisfaction of students and faculty members regarding the internationalization of HEIs, including their satisfaction with specific dimensions, and the ways in which differences in variables (e.g., for students: grade, major; English proficiency; international programs; for faculty members: position, degree, publication, major) influence their attitudes and perceptions. B University is a comprehensive world-class university, which has a reasonable structure and excellent quality. There are 3437 faculty members, among whom 2313 are full-time teachers, 93% of whom have doctoral degrees and 19% of whom have overseas degrees. B University actively participates in the national strategy of opening to the outside world and has extensive international exchanges and cooperation. In 2020, B University issued the Global Development Strategic Plan, which established the strategic vision of building a global community of academic excellence, a community of education innovation, a community of youth development, and a community of universities with social responsibility. It has established cooperative relations with nearly 500 universities and research institutions in more than 40 countries and regions.

Thus, this study is divided into several sections: the first section explores the internationalization for promoting sustainable development of higher education; the second section focuses on the institutional internationalization of HEIs in China; the third section explores the internationalization of B University in China; the fourth section offers the methods to assess stakeholders' satisfaction with institutional internationalization initiatives in multiple dimensions, including international courses, research, cooperation and services; the fifth section analyzes the findings and also offers conclusion and remarks in this study.

2. Internationalization for Promoting Sustainable Development of Higher Education

Sustainable development of the internationalization of higher education is a strategic policy and guiding program that focuses on internationalization of education and provides direction guidance, theoretical support, goal guidance, and division of responsibilities for higher education to develop an international focus [6]. According to the theory of strategic management, university internationalization strategies can be divided into project-type and organization-type strategies [7,8]. The project-type strategies refer to the international student and faculty's academic projects, activities, and other various international behaviors. The organization-type strategies refer to the institutional based-intercultural academic exchange and communications cross different regions. Furthermore, these strategies can be divided into the "internationalization Rubik's cube" development strategy based on the characteristics of institutional management, the internationalization cycle strategy mode based on the development process path, and the internationalization influencing factor model based on the internationalization development factors [9]. The basic elements of college internationalization development strategies include the strategic situation and implementation background analysis, strategic mission and target, strategic content and implementation methods, and strategic guarantee measures. The development strategy of internationalization of education in China has gradually matured, and its strategic elements have been enhanced [10]. China's educational reform and the opening strategy have entered a new stage of development. China should strengthen educational exchanges

with other countries in the world and expand education opening-up. With the new changes of the global economy and society and the new pattern of the development of national diplomatic situation, the educational reform and opening strategy are facing a new situation. In particular, the outbreak of COVID-19 has had a fundamental impact on international educational exchanges and cooperation traditionally characterized by the movement of people. The internationalization of HE in China has specific historical, political, cultural, and social contexts. It has entered a historic leap stage. During this period, under the influence of various internationalization policies, China's higher education opened to the outside world to an unprecedented height and carried out multi-dimensional, diversified, and multi-level educational cooperation and exchanges with other countries in the world.

In 2015, the State Council issued the Plan for Promoting the Construction of World-class Universities and Disciplines, which closely combined the internationalization strategy of higher education with the construction of "Double First-class." In addition, this plan proposed future-oriented development strategies for introducing high-quality foreign educational resources, carrying out joint talent training and research cooperation, creating an international teaching and research environment for collaborative innovation, and participating in the formulation of international education rules and the unification of standards. In 2017, the Ministry of Education, Ministry of Finance, National Development and Reform Commission issued a directive to progress the development of first-class university and first-class discipline measures for provisional implementation, and to implement the construction of double top. In addition, the directive proposed specific requirements, emphasizing the need to engage in the forefront of international science and technology development, international influence, and increase the overall strength of the key strategic points of education internationalization. Moreover, it outlined the development of a selection program for first-class universities and first-class disciplines based on internationally recognized standards of schools and disciplines [11,12].

The core of the sustainable development of internationalization of higher education is the opening of higher education to the outside world. This core concept encompasses several more detailed concepts, such as comprehensive internationalization and local internationalization [13,14]. These concepts together constitute the essence of the internationalization development strategy of colleges and universities. Internationalization of higher education refers to the process of integrating the values, objectives, systems, practices, research outputs and evaluation systems of higher education into the international community, involving cross-cultural communication and the global flow of educational resources at the level of individual institutions and the country. Cross-border education elements can be used to promote configuration and cooperation of education systems in cultivating international talent with international vision and practical ability. Ultimately, this approach seeks to provide high-quality human resources for globalization of the knowledge economy, to achieve overall social welfare promotion education targets, and to promote proactive, equal communication and two-way cooperation for the internationalization of higher education. The International Association of Universities, which is part of UNESCO, has developed an authoritative definition of internationalization of higher education, describing it as an educational process that combines trans-national and trans-cultural perspectives and fields with three core functions of universities: innovation, scientific research, and social services. The internationalization of higher education can be divided into the global level and the individual level [15,16]. The internationalization of higher education at the global level refers to the participation of various countries, regions, educational institutions, non-educational institutions, and international organizations in the global distribution of educational resources and teaching management affairs, the construction of a global education system, and cross-cultural knowledge exchange [17]. The internationalization at the individual level takes university administrators, teachers, and students as core subjects and realizes the internationalization development of universities through the global flow of educational elements, such as educational concepts, curriculum design, faculty members, student groups, educational investment, operation

modes, management systems, and evaluation technology. In practice, internationalization of higher education includes internationalization of teaching concepts, teaching content, talent flow, scientific research cooperation, and educational technology resources. Research on internationalization of higher education in China began to develop gradually after the reform and opening [18]. At present, there are three levels of the higher education internationalization systems: epistemological belief systems, structure-functional systems, and normal-motion systems. The doctrine of the development of higher education internationalization strategies involves the development of an international level of teaching practice as the carrier, learning from each other and practicing open inclusive education concept as the core, and building a scientific and efficient international higher education management mode as the goal of colleges and universities [19].

3. The Institutional Internationalization of HEIs in China

There is conceptual and empirical literature examining the internationalization of HEIs in China, including theoretical debates about understanding the internationalization of China's HEIs and practical discussion on governmental policies and institutional stakeholders' involvement. Some theoretical studies have identified the conception of the internationalization of China's HEIs [19]. In addition to studies of the conceptual understanding of the internationalization of HEIs in China, global trends and government policies have been explored to clarify the exogenous forces involved. Examining institutional stakeholders' involvement also contributes to understanding the internationalization of HEIs in China. Professors' and students' relationships, language barriers, isolation of international and Chinese students, and lack of internship opportunities. In some places, regional hubs attract students from surrounding countries. There are also some challenges and difficulties encountered by students and faculty members in China's HEIs throughout the process of internationalization. The Chinese HEIs Strategic Planning Survey was conducted to examine the strategic planning regarding the differentiation of Chinese HEIs [20].

Institutional internationalization refers to a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of HEIs. This process shapes institutional ethos and values and touches the entire higher education enterprise. It is essential that institutional leadership, governance, faculty, students, and all academic service and support units embrace it. Internationalization is an institutional imperative, not just a desirable possibility. Thus, the current study examined institutional internationalization to examine the dimensions that influence the satisfaction of students and faculty members regarding the internationalization of HEIs, separately. For students, international faculty resources, international courses, international services, and international campuses served as four dimensions for assessing satisfaction regarding institutional internationalization of specific universities or colleges [21]. Using a student-centered pedagogical conceptual framework, institutional internationalization promotes students' internationalization-related cognition, including international courses and curricula. Recruiting international faculty members is considered to diversify HEIs as part of a conscious effort to combine international, intercultural, and global academic resources into specific HEIs for creating an active engaging academic community in a globalized world. Hence, institutional internationalization is regarded as a process of internationalization, spreading throughout specific HEIs, and affecting a broad spectrum of different stakeholders.

In addition to attracting international faculty, building an international campus environment is recognized as a flexible practical path with various missions and specific goals to produce uniquely tailored responses to the challenges and opportunities in relation to trends for creating institutional internationalization. For faculty members, institutional internationalization is focused on constructing complex processes, such as international faculty development, international curriculum design and delivery, international instructional design, student diversity and faculty diversity, international research and scholarship, and international training. This process can also be considered as an internal commitment to internationalization of HEIs, integrating institutional policy and international practice.

For faculty members, dimensions of international research, international cooperation, and international service are key indicators to examine their satisfaction regarding the internationalization of HEIs [22]. In the domain of faculty development, the implementation of institutional internationalization related to teaching, learning, and services fundamentally shapes the institution's external frames of reference, partnerships, and relations. Ultimately, the goal of institutional internationalization concentrates on transforming a local, regional, or national scholar or researcher into an international and global academic platform to promote their international academic capacities and skills. Institutional internationalization should be consistent with institutional circumstances, including expanding faculty and student engagement, integrating international academic development into core institutional missions, expanding who supports and contributes, and promoting interconnection. Thus, there is no single optimal model for all HEIs, and the process should focus on the integration and infusion of internationalization into core institutional missions and values. In a knowledge-based society, the core concept of institutional internationalization should focus on the sharing of knowledge and its translation into innovation for wider global society. Institutional internationalization focuses on transforming from individual academic competencies to strategic cross-cultural partnerships through diverse academic exchange, research collaborations, joint bidding on research and projects, and dual or joint degrees. It is also driven by international academic research, global scholarship, and international reputation, such as study abroad opportunities, dual and joint international degrees providing faculty exchange and graduate education (see Figure 1).

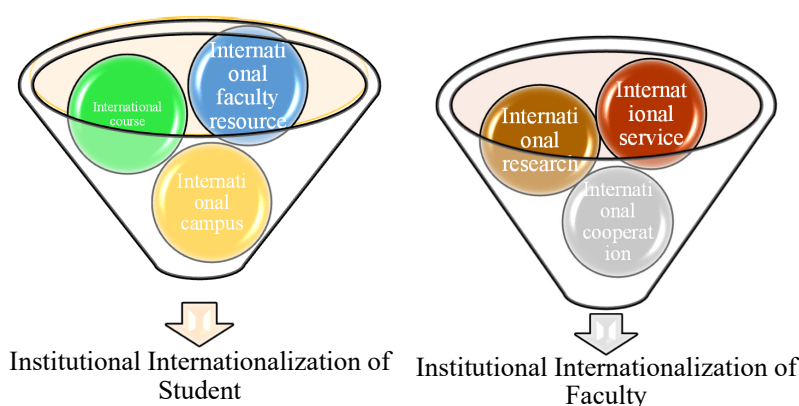


Figure 1. The dimensions of institutional internationalization of student and faculty.

4. The Internationalization of B University in China

University B consists of two campuses (including four campuses). The main Campus has more than 24,000 full-time students, while another campus was officially approved by the Ministry of Education in 2019, with more than 3600 postgraduate students. The university consists of 3 academic departments, 27 colleges, 2 departments, 11 research institutes and 4 academies. It has a collection of 4.9 million books and 9.7 million e-books. The comprehensive discipline strength of University B ranks among the top in China. There are 77 undergraduate specialties, 38 first-level disciplines authorized for master's degree, 32 first-level disciplines authorized for doctor's degree, and 28 post-doctoral research stations. There are 38 disciplines covering 10 discipline categories, forming a comprehensive discipline layout. Regarding identifying the efforts of the internationalization, the institutional initiatives of internationalization at B University involve various dimensions of international courses, international research, international cooperation, and international services, which can be summarized into relevant practices such as reaching memoranda of understanding (MOUs) with foreign HEIs, expanding cross-border visits, offering international courses, building academic joint research centers, recruiting foreign faculty members, and engaging associations or alliances of HEIs. B University has actively engaged in building international communication and partnership by establishing MOUs with foreign

HEIs. As of 2021, B University established 157 MOUs at the institutional level worldwide, including 42 effective MOUs in Europe (59.52% in Southwest Europe, 23.81% in Central and Eastern Europe, and 16.67% in Nordic Europe), and 34 in the Americas (64.86% in the United States and 17.65% in Canada). In addition, 73 effective MOUs were established in Asia and Africa, with Japan and Korea accounting for the majority of these (43.84% in Japan and 28.77% in Korea), followed by Southeast Asia (15.07%), Central Asia (4.11%), and South Africa (4.11%). Eight MOUs were established in other regions. B University also launched a series of cross-border visits to expand international discourse and engagement. For international visits at the institutional level, until 2020, B University conducted 66 foreign visits, covering 28 countries worldwide. Among these, B University conducted 50 visits to foreign universities, three visits to foreign government agencies, four visits to foreign educational associations and groups, and one visit to a foreign embassy. Regarding visits to Hong Kong and Macao, 533 people visited Hong Kong and Macao, including 274 students and faculty members. Regarding visits to Taiwan, a total of 346 faculty members and students visited Taiwan. Taiwan Normal University visited B University twice, and 22 students and faculty members from Taiwan Political University visited B University. Offering international courses also contributes to supporting faculty and students to understand the latest concepts and practices of university governance of world-class universities for expanding their international vision and promoting international awareness.

In addition to providing international courses, building joint research centers between B University and academics at foreign universities also plays a significant role in accelerating the internationalization of B University. In 2018, the Joint Research Center for Educational Quality between B University and V University in the United States was established in accordance with a cooperation agreement to carry out cooperative research, student training and academic exchanges focused on accelerating the quality of higher education. Moreover, B University actively created and participated in various associations and alliances of universities, such as the China-South Asia and Southeast Asia Association of Universities, the Alliance of Green Universities, the Beijing-Hong Kong University Alliance, and the China-EU Humanities and Arts Education Alliance. B University initiated series of plans for recruiting foreign faculty members, such as the “One belt and one road” scheme, the High-end Foreign Exchange Project, the International Academic Masters Campus Plan, and the Overseas Distinguished Faculty Project. Thus, in the current study, we sought to refine the dimensions of international courses, international research, international cooperation, and international services to identify initiatives for internationalization of HEIs, by summarizing the initiatives undertaken by B University as a case study of an HEI in China.

5. Methods

We collected the data from May to August 2021. All the participants signed the questionnaire agreement forms. Six graduate students and two senior researchers engaged in the collecting data process. The random sampling approach was used in this study. The questions were created by expert focus group and preliminary interview with selected students and faculty members. We assessed students’ and faculty members’ satisfaction on dimensions that promote the internationalization of HEIs. We recruited 498 students (45% undergraduate students and 55% graduate students) and 209 faculty members (86% research track and 14% teaching track) and assessed their satisfaction with institutional internationalization initiatives of multiple dimensions, including international courses, research, cooperation, and services. We conducted exploratory factor analysis using SPSS 20.0. The students and faculty members came from 11 majors: education (25%), literature (12%), English (18%), law (16%), mathematics (11%), philosophy (8%), Chinese (3%), politics (3%), society (2%), computer science (1%), and environmental science (1%). Of the faculty members, 30% were lecturers, 26% were associate professors, and 44% were professors. Factors were extracted using principal component analysis. We specified an oblique rotation method (Oblimin) that allowed for the testing of correlations among factors. To identify the optimal solution, we implemented the following criteria. First, factors had to have

eigenvalues greater than 1. Second, the scree plot had to have a point at which the slope of the curve clearly leveled off (i.e., the “elbow”), which indicates the number of factors in the optimal solution. Third, the selected items had to have a primary loading of 0.40 or above. Fourth, the discrepancy between the primary and secondary factor loadings for a given item had to be 0.20 or above. To evaluate the model fit, several fit indices were included: Chi-square value, comparative fit index (CFI > 0.90), root mean square error of approximation (RMSEA < 0.08), and standardized root mean-square residual (SRMR < 0.08) (Kline, 2015).

6. Findings

6.1. For Students' Satisfaction with Institutional Internationalization

In exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (KMO = 0.92) and the test of test of sphericity ($\chi^2 = 259.254$, $df = 231$, $p < 0.001$) indicated that the use of EFA was appropriate (Gorsuch, 1983). The scree plot suggested four factors for students, which explained 66.36% of the total variance. Twenty-two items were retained. For teachers. The KMO measure of sampling adequacy (KMO = 0.78) and the test of test of sphericity ($\chi^2 = 1082.746$, $df = 78$, $p < 0.001$) indicated that the use of EFA was appropriate (Gorsuch, 1983). The scree plot suggested three factors for teachers, which explained 63.98% of the total variance. Seventeen items were retained. For the associations between covariates and factors, Table 1 shows the pathway coefficients for associations between covariates and factors among students. Male students reported higher levels of international faculty resources (factor 1) and international campus (factor 4) than female students. Students who majored in literature reported lower levels of international faculty resource (factor 1) and international campus (factor 4) than students who majored in science. Higher English ability was positively associated with international faculty resources (factor 1), international services (factor 3), and international campus (factor 4). Students who participated in exchange projects reported higher levels of international campus (factor 4) than students who did not. Students who had English publications reported higher levels of international faculty resources (factor 1) and international courses (factor 2) than students who did not.

Table 1. Students' Satisfaction Survey of Comprehensive Internationalization ($n = 489$).

	Factor 1			Factor 2			Factor 3			Factor 4		
	<i>b</i>	<i>p</i>	β	<i>b</i>	<i>p</i>	β	<i>b</i>	<i>p</i>	β	<i>b</i>	<i>p</i>	β
Gender vs. female	0.21	0.004	0.14	0.13	>0.05	0.10	0.05	>0.05	0.04	0.19	0.021	0.12
Grade	0.01	>0.05	0.01	−0.05	>0.05	−0.06	0.04	>0.05	0.04	−0.06	>0.05	−0.06
Major vs. science	−0.21	0.003	−0.14	−0.01	>0.05	−0.01	−0.09	>0.05	−0.06	−0.24	0.003	−0.15
Rank	−0.01	>0.05	−0.02	0.03	>0.05	0.05	−0.02	>0.05	−0.03	0.01	>0.05	0.02
English	−0.11	<0.001	−0.20	−0.03	>0.05	−0.06	−0.08	0.010	−0.16	−0.15	<0.001	−0.25
Exchange vs. no	0.08	>0.05	0.08	0.12	0.019	0.14	0.07	>0.05	0.07	0.15	0.014	0.14
Publication vs. no	0.21	0.038	0.11	0.20	0.037	0.12	0.15	>0.05	0.08	0.02	>0.05	0.01
Conference vs. no	0.08	0.212	0.06	0.09	>0.05	0.08	0.05	>0.05	0.04	0.04	>0.05	0.03
R^2	0.08, $p = 0.002$			0.07, $p = 0.013$			0.03, $p > 0.05$			0.09, $p = 0.001$		

$\chi^2 = 766.943$, $df = 346$; RMSEA = 0.051 with 90% CI [0.046, 0.056]; CFI = 0.927; SRMR = 0.051.

Table 1 shows the path coefficients of the correlations between covariables and factors among students. $p < 0.05$ indicates significant acceptability, and β indicates regular and positive correlations. As shown in the figure, male students were more satisfied with international teacher resources and the international campus than female students. Satisfaction with international faculty resources and the international campus was lower among literature majors compared with science majors. Higher English proficiency was positively correlated with satisfaction with international faculty resources, international services, and the international campus. Students who participated in exchange programs reported higher satisfaction with the international curriculum and international campus compared with students who did not participate in exchange programs. Students with English publications reported higher satisfaction with international faculty resources and international curriculum compared with students without English publications. Table 2

shows the path coefficients of correlations between covariates and factors among teachers. As shown in the figure, the level of satisfaction among teachers was negatively correlated with international cooperation. In addition, there was a negative correlation between teacher grade and international cooperation. Teachers with English publications reported higher satisfaction with international services and international research compared with those without English publications. The degree of teachers' participation in international affairs was positively correlated with international scientific research.

Table 2. Faculty Members' Satisfaction Survey of Institutional Internationalization ($n = 209$).

	Factor 1			Factor 2			Factor 3		
	<i>b</i>	<i>p</i>	β	<i>b</i>	<i>p</i>	β	<i>b</i>	<i>p</i>	β
Gender vs. female	−0.02	>0.05	−0.02	0.01	>0.05	0.004	0.02	>0.05	0.03
Occupation vs. teaching	0.06	>0.05	0.02	−0.32	>0.05	−0.09	−0.35	>0.05	−0.16
Level	0.01	>0.05	0.01	0.00	>0.05	0.00	−0.08	0.018	−0.22
Project	−0.05	>0.05	−0.09	−0.03	>0.05	−0.04	−0.02	>0.05	−0.04
Rank	−0.02	>0.05	−0.04	−0.07	>0.05	−0.11	−0.10	0.010	−0.26
Degree vs. national	−0.09	>0.05	−0.08	0.03	>0.05	0.02	0.06	>0.05	0.07
Exchange vs. no	−0.11	>0.05	−0.10	0.14	>0.05	0.10	0.07	>0.05	0.09
Publication vs. no	0.19	0.038	0.20	0.47	<0.001	0.37	−0.01	>0.05	−0.01
Conference vs. no	0.20	>0.05	0.19	0.35	0.009	0.24	0.004	>0.05	0.004
R^2		0.09, $p > 0.05$			0.38, $p < 0.001$			0.11, $p = 0.025$	

6.2. For Faculty Members' Satisfaction with Institutional Internationalization

Table 2 shows the pathway coefficients for associations between covariates and factors among teachers. Position was negatively associated with international cooperation (Factor 3). Rank was associated negatively with factor 4. Teachers who had English publications reported higher levels of international services (factor 1) and international research (factor 2) than teachers who did not. Because the four characteristic values were all greater than 1, the four common factors were selected as first-level indicators. Among them, the variance explained by the factors indicated that international faculty resources had the greatest contribution rate and influence on student satisfaction, with a variance contribution rate of 44.08%. International campus had little influence on the contribution rate of students' satisfaction with internationalization, and the variance contribution rate was 5.24%. In terms of specific index selection and common factor division, the degree of association between common factor and specific variable index was expressed by the factor load value. The larger the factor load value, the more information the factor contains regarding the corresponding original scalar index. The first common factor was international teacher resources, including the guiding significance of international academic journals, the influence of international academic exchanges on the teachers' cross-cultural abilities, English interactive teaching between teachers and students, teaching interactions between students and foreign teachers, teachers of English to students in cross-cultural learning with the help of a degree, improving the capacity of teachers with international backgrounds, satisfaction with academic guidance, the students themselves, and teachers with international academic background. Among them, students' satisfaction with the academic exchange and guidance of teachers with international academic backgrounds (3-6) was a second-level factor with substantial influence and strong explanatory ability. The second common factor was the international curriculum, with English curriculum evaluation on the basis of knowledge of learning content (including concept, definition, and content), the results of evaluation on the basis of the results of learning content of skills assessment, the results of the learning content evaluation, overall curriculum evaluation, the satisfaction with the course grade method, satisfaction with interactions with international course teachers, and secondary indexes such as frequency and effectiveness. Among them, the evaluation of the related results of knowledge-based learning content (including concept, definition, and content) (2-3) was a secondary indicator with greater influence and strong explanatory ability. The third common factor was international service. This included digital information portals, such as course systems and teaching systems, as well as the internationalization of financial systems for scholarships, international digital information

portal/query systems (dormitory, print, canteen, campus ID), international employees at the school, cross-cultural management and services, international affairs personnel, and secondary indicators such as cross-cultural management and service ability. Among them, the intercultural management and service ability of the international department staff (4-3) was the secondary indicator with the strongest explanatory ability. The fourth common factor was international campus, including the information and knowledge provided by the international campus exchange, the international campus culture, the overall quality of the internationalization of campus cultural environment and other secondary indicators, among which the internationalization quality of campus culture (5-4) was the secondary indicator with the strongest explanatory ability (see Tables 3 and 4).

The eigenvalues of the three items were all greater than 1, and these three items can be selected as common factors. As can be seen from the variance explained by the factors, international services had the greatest impact on teachers' satisfaction, with a variance contribution rate of 30.3%. As shown in the figure, the eigenvalues of the three items were all greater than 1, and these three items can be selected as common factors. As can be seen from variance explained by the factors, international services had the greatest impact on teachers' satisfaction, with a variance contribution rate of 30.3%. In contrast, international cooperation had little impact on teachers' satisfaction with internationalization, with a variance contribution rate of 12.06%.

Specific indices were divided by factor load value. First, public factors for international services, the financial reimbursement system, application of scientific research system, international rules and procedures of the international level, the internationalization of management and service level satisfaction, internationalization training (international academic reporting, international exchange, special training at home and abroad, and foreign language training) satisfaction, international campus culture, and the degree of internationalization of campus secondary indexes. Among them, international campus (3-9) had the strongest explanatory ability. The second common factor for international scientific research, including satisfaction with international research results, satisfaction with international academic exchanges, teachers' cross-cultural research ability, the internationalization of teachers' scientific research level, and other secondary indicators, including teachers' scientific research level of internationalization (5-) explained ability, and had the strongest influence on the common factors. The third common factor was international cooperation, including building scientific research at the university for international partnership initiatives, applying for other international visiting scholars at the university, applying for other projects at the university, international academic exchange programs, and secondary indexes, such as short-term academic exchange programs (3-6). A strong ability to engage in examinational cooperation had little impact on teachers' satisfaction with internationalization. The variance contribution rate was 12.06%. Specific indices were divided by the factor load value. The first public factor for international service, including financial reimbursement systems, application of scientific research systems, rules and procedures at the international level, satisfaction with the internationalization of management and service level, satisfaction with internationalization training (international academic reporting, international exchange, special training at home and abroad, and foreign language training), international campus culture, the degree of internationalization of the campus, and secondary indexes. Among them, international campus (3-9) had the strongest explanatory ability. The second common factor for international scientific research, including the international research results satisfaction, satisfaction with international academic exchanges, teachers' ability to conduct cross-cultural research, the internationalization of teachers' scientific research level, and other secondary indicators, including teachers' scientific research level of internationalization (5-) explained ability and had the strongest influence on the common factors. The third common factor was international cooperation, including building and conducting scientific research at the university for international partnership initiatives, applying for other international visiting scholars at the university, applying for other projects at the university through international academic exchange

programs, and secondary indexes such as short-term academic exchange programs (3-6) strong ability to explain (See Appendix A).

Table 3. Students' Satisfaction towards Institutional Internationalization ($n = 489$).

	Loadings on Specific Factors			
	International Faculty Resource	International Course	International Service	International Campus
3-1. Do you think it is helpful or instructive for your development to publish academic papers in international journals?	0.64			
3-2. Do you think that faculty members in your department who often participate in international academic exchanges have better cross-cultural teaching ability?	0.52			
3-3. Are you satisfied with the academic research/teaching interaction between faculty and students who teach in English in your department or major?	0.71			
3-4. Are you satisfied with the academic research/faculty-student interaction between full-time foreign faculty/part-time foreign faculty/short-term guest faculty in your department or profession?	0.69			
3-5. Do you think faculty members teaching in English in your department can help you to promote your cross-cultural learning ability?	0.69			
3-6. Are they satisfied with the academic communication and guidance of teachers with international academic background?	0.88			
3-7 Overall speaking, are you satisfied with your daily interaction with faculty members with international academic background?	0.85			
3-8. Do you think that the internationalization level faculty members in your department or major will help you improve your cross-cultural learning and skills?	0.78			
2-2. Your overall evaluation of English course		0.67		
2-3. Your evaluation of the results related to the knowledge-based learning content (including concepts, definitions, content)?		0.90		
2-4. Your evaluation of the results of the skill-based learning content of the course		0.87		
2-5. Your evaluation of the results of the thinking-based learning content		0.81		
2-7. Your overall assessment of the (No. 2-6) that you have chosen		0.68		
2-9. Are you satisfied with the scoring methods of the international courses that you have attended?		0.49		
2-1. Generally speaking, are we satisfied with the frequency and effectiveness of faculty-student interaction in international courses?		0.59		
4-1. Do you think that the course selection system, teaching system and scholarship financial system of digital BNU (information portal) have the international level (international advanced level in your opinion)?			0.74	
4-2. Do you think that the digital service/inquiry system (dormitory, printing, canteen, campus card) of the school digital BNU (information portal) has the international level (you think the international advanced level)?			0.70	
4-3. Do staff in the international department of the school have the ability of cross-cultural management and service?			0.88	
4-4. Do staff in international affairs have the ability of cross-cultural management and service?			0.82	
5-2. Are you satisfied with the information and knowledge provided by BNU for your International Campus exchange this semester? (For example, international academic reports, international exchanges, and new information)				−0.66
5-3. Do you feel that BNU hold an international campus culture?				−0.86
5-4. In your opinion, what is the overall quality of internationalization of the campus cultural environment of BNU?				−0.88
Eigenvalue	9.70	2.22	1.53	1.15
Variance explained by the factor	44.08%	10.11%	6.93%	5.24%
Cronbach's α of the factor	0.90	0.89	0.86	0.86
Bivariate correlations				
Factor 1	1.00			
Factor 2	0.47	1.00		
Factor 3	0.47	0.31	1.00	
Factor 4	−0.52	−0.36	−0.39	1.00

Table 4. Faculty Satisfaction towards Institutional Internationalization ($n = 209$).

	Loadings on Specific Factors		
	International Service	International Research	International Cooperation
3-3. Are you satisfied with your current international research achievements?		0.84	
3-7. Overall, are you satisfied with your international academic exchange activities?		0.85	
3-8. Do you think you are a scholar with cross-cultural academic research ability?		0.58	
3-9. How satisfied are you with the internationalization level of your scientific research?		0.87	
4-1. Do you think that the financial reimbursement system in your university has advanced international level?	0.68		
4-3. Do you think that the university's scientific research declaration system/system, rules, procedures, and procedures have advanced international level?	0.68		
4-6. How satisfied are you with the internationalization level of management services of BNU?	0.77		
5-2. Are you satisfied with the internationalization training provided by BNU? (For example, international academic reports, international exchanges, special training at home and abroad, foreign language training, etc.)	0.69		
5-4. Do you feel that BNU has an international campus culture? (Does the campus of BNU have the concept of cross-cultural understanding, tolerance, equality, and pluralism?)	0.77		
5-5. How satisfied are you with the internationalized campus of BNU?	0.85		
3-4. Will you actively seek partners in scientific research cooperation with other international universities?			0.60
3-5. Will you actively apply for the Visiting Scholar Program of other international universities (long-term project over December)?			0.88
3-6. Will you actively apply for academic exchange programs in other international universities (short-term projects 6 months to 3 months above)?			0.90
Eigenvalue	3.94	2.81	1.57
Variance explained by the factor	30.30%	21.63%	12.06%
Cronbach's α of the factor	0.84	0.82	0.75
Bivariate correlations			
Factor 1	1.00		
Factor 2	0.17	1.00	
Factor 3	−0.05	0.25	1.00

7. Conclusions and Discussions

Students' satisfaction was influenced by four factors: international faculty resources, international curricula, international services, and international campus, among which international faculty resources had the greatest influence and international campus had the least influence. Teachers' satisfaction was influenced by international services, international research, and international cooperation, among which international services had the greatest influence and international cooperation had the least influence.

The current study identified specific secondary indicators that had a substantial impact. Student satisfaction was strongly influenced by satisfaction with academic exchange programs and guidance of teachers with international academic backgrounds, the evaluation of related results of knowledge-based learning content (including concept, definition, and content), the ability of cross-cultural management and service of staff in the inter-

national department of the school, and the quality of the internationalization of campus culture. Teachers' degree of satisfaction was strongly influenced by the international campus, teachers' international level of scientific research, and their enthusiasm for applying for short-term academic exchange programs. Among students, male students had higher satisfaction with international teacher resources. In addition, campus literature majors had lower satisfaction with international teacher resources. Students with higher English language ability had higher satisfaction with international teacher resources, international services, and international campus. Students who participated in exchange programs had higher satisfaction with international courses and international campus. Students with English publications reported higher satisfaction with international faculty resources and international courses. Among teachers, teacher level and teacher rank were negatively correlated with satisfaction regarding international cooperation. Teachers with English publications reported a higher level of satisfaction with international service level and international research level, and teachers who actively participated in international affairs exhibited a higher level of satisfaction with international scientific research.

This study contributes on offering both the theoretical and practical analysis of exploring high-quality institutional internationalization from stakeholders' perspectives (students and faculty members). However, there are some limitations in terms of the sample size. For future studies, more sample universities, including both national and local levels, could be added to enlarge the sample diversity. More stakeholders, such as parents, leaders or alumni could be invited to assess the institutional internationalization development, contextually. In addition, the comparative studies on different countries 'stakeholders' perceptions of creating high-quality institutional internationalization can be also another meaningful theme.

The current findings are related to other papers in the field of institutional internationalization. Many studies also indicated that stakeholders' perception of institutional internationalization is of significant to promote the international development of various higher education institutions, theoretically and practically [23–30]. Based on the current results, we propose that both national and local government should promote the institutional internationalization in the post-epidemic era, and that Chinese-foreign academic cooperation should be enhanced for students and faculty members. In addition, it will be important to strengthen the institutional international higher education quality assurance management system in China. Building solid institutional internationalization development will be necessary to attract international talent and comprehensively strengthen cross-border mobility. In addition, various international courses need to be strengthened to support students to receive more international academic knowledge and competency. For faculty members, international academic research projects will be critical for systematically strengthening interdisciplinary global cooperation [31–38].

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Appendix A

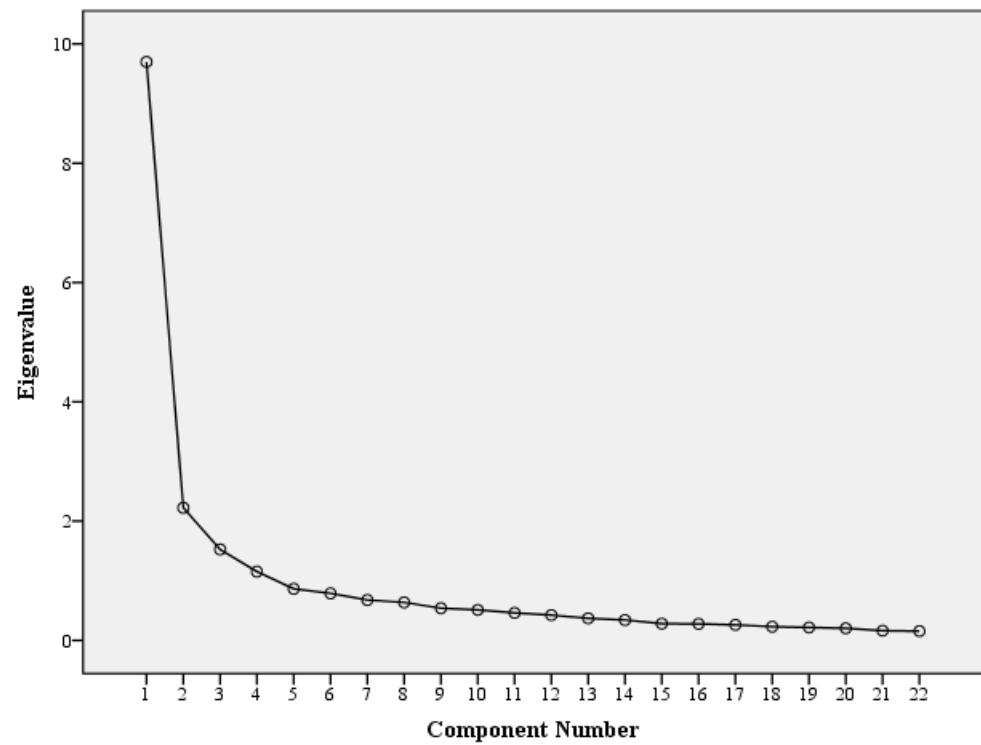


Figure A1. Scree plot for students ($n = 489$).

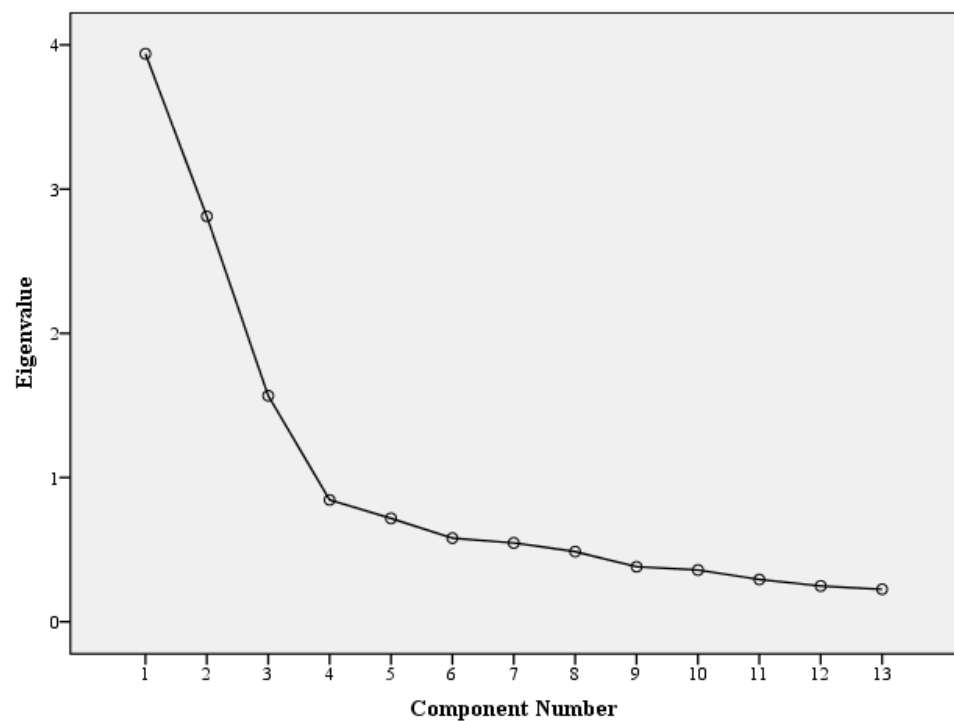


Figure A2. The scree plot for the exploratory factor analysis of faculty satisfaction teachers ($n = 209$).

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