

Construction of Internationalization Evaluation Index System of Medical Universities in Guangdong Province

Song Xuejie, Lee Keok Cheong and Tang Guoping

Abstract – Since the beginning of the 21st century, with the development of economic globalization and information technology, education internationalization, as a theme vigorously advocated by major universities around the world, has become an important yardstick for measuring the quality and level of a university (Mao Jianqing, 2021). Due to the increasingly frequent movement of the global population as well as the pressure and destruction of the ecological environment brought by the rapidly developing economy, the speed, intensity and destructiveness of diseases have also been continuously increased (Zhou Yanping, 2019), such as COVID-19, which has been raging all over the world since 2020. All these requires current medical universities to strengthen international cooperation, share the resources and information, provide more comprehensive medical knowledge and advanced medical skills and set higher international assessment standards for the medical students, so that they can meet the global requirements of medical and health care in the face of new disease challenges. Thus, the internationalization of medical education has also attracted more and more attention worldwide (Zhang Haiying, etc. 2021). The researcher aims to construct an internationalization evaluation index system for medical universities in Guangdong Province based on the existing internationalization evaluation index systems and university rankings at home and abroad, as well as the guidance of the national and provincial policies. Through this internationalization evaluation index system, the researcher hopes to promote the medical universities in Guangdong Province to clearly recognize the level and advantage of their own internationalization development, find out the gaps, and

further clarify their goals and development directions in the post-epidemic era.

Keywords – Medical University, Internationalization, Evaluation, Index System, Post-epidemic era

I. INTRODUCTION

Since 1980s, under the influence of globalization in political, economic, social and cultural fields, internationalization has become an inevitable choice for higher education (Zhang Yingqiang, Jiang Yuanmou, 2020). Furthermore, medical universities integrate three functions of medical teaching, scientific research and clinical applications, their educational quality and level will directly determine the development and progress of human health care (Cui, 2022). Professor Hans De Wit (2002) once pointed out that "if internationalization is to be evaluated to promote the development of higher education, then internationalization needs its own indexes." The evaluation index system of university internationalization can measure the development degree of a university internationalization through some quantitative indicators (Wu Wenying, Dong Xiaomei, 2013). Recently, the internationalization of medical universities and related evaluation indexes began to be discussed widely in the field of higher education.

The three major international university ranking institutions QS, US News and Times, all regard internationalization as an important indicator for evaluating the overall level of a university. Among them, US News and QS give 10% weight to internationalization, of which the proportion of international teachers and international academics accounts for 5% respectively. Times gives a weight of 7.5% to internationalization, and international teachers, international academics and international scientific research account for 2.5% respectively (Liang Xinyi, 2019). The internationalization of higher education has also been taken as one of the important indicators for evaluating a first-class university in China (Zhao Bo, 2020). Recently, the

Song Xuejie, City University Malaysia, Malaysia (Email address: 741321325@qq.com).

Lee Keok Cheong, City University Malaysia, Malaysia (Email address: rizaeni@gmail.com).

Tang Guoping, Guangdong Medical University, China (Email address: tgp@gdmu.edu.cn).

classified evaluation has become a new trend for evaluating the internationalization of higher education, which aims to provide different reference standards for different types of universities, so as to avoid adopting the same index system to evaluate different types of universities at different levels, as well as producing unreasonable and unfair evaluation results". (Zhang Qi, 2019).

Since the global outbreak of COVID-19 in 2020, the cultivation of medical and health professionals has received more and more attention worldwide (Zhang Guiying, Deng Ling, Huang Yanshu, 2021). It is particularly important for the medical universities to strengthen international exchanges and cooperation in teaching, research and clinical applications, so as to jointly fight against the global public health crisis. Therefore, it is of great significance to establish an internationalization evaluation index system suitable for medical universities in Guangdong Province in order to better guide and improve the practice of medical education.

II. PROBLEM STATEMENT

Nowadays, the medical universities in Guangdong have increasingly strengthened their awareness of internationalization. They have adopted various ways to improve their internationalization level, such as sending teachers and students abroad for professional training, expanding the enrollment of international students, introducing international talents, integrating the curriculum with international standard and holding international academic conference, etc. However, according to the world university rankings, it can be found that there is still a gap between the medical universities in Guangdong Province and the world-class medical universities in some extent, and the degree of internationalization in teaching staff, talent cultivation, teaching methods and courses, scientific research, etc. still needs to be further strengthened. In addition, the researcher learned from literature research that there are very few studies on the internationalization of medical education, especially the internationalization evaluation of medical universities in the field of higher education research in China. To sum up, it is necessary and urgent to adopt a standard so as to evaluate the internationalization level of medical universities, and then grasp the status quo of the internationalization of these

universities, and it has important theoretical and practical significance.

However, the researcher finds that the existing internationalization evaluation index systems at home and abroad are not suitable or adaptive for evaluating the internationalization level of medical universities in Guangdong in some extent. Therefore, this research aims to construct an internationalization evaluation index system specifically applicable to the medical universities in Guangdong.

III. LITERATURE REVIEW

Taking "internationalization evaluation index" and "higher education / university / college and university" as the research theme, the researcher searched on CNKI website and found that since 2009, scholars have begun to study the evaluation index system of universities' internationalization. Most of the research results are concentrated in 2015-2016. Three doctoral dissertation and 27 master's dissertation related to the subject have been published. In the academic journal database, 58 journal articles have been published. The following is the trend chart of the number of papers published by CNKI until 2020 over time (see the figure below for details).

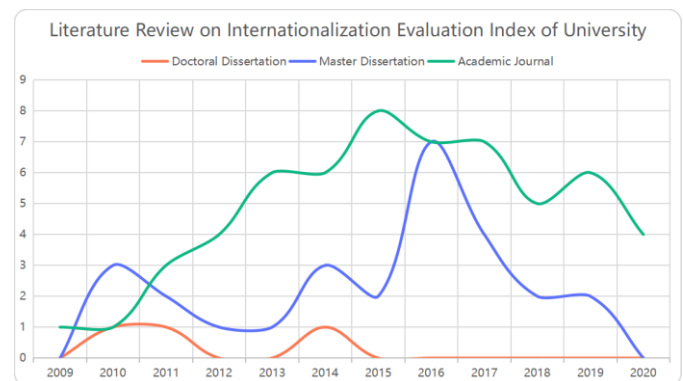


Figure 1: Literature Review on Internationalization Evaluation Index of University

Overview of Foreign Research

According to the level of organizer, the commonly used internationalization evaluation index systems in the world can be divided into the following four categories:

TABLE I: FOREIGN INTERNATIONALIZATION EVALUATION INDEX SYSTEMS

Foreign Internationalization Evaluation Index Systems					
Organizer	Name	Start Time	System Design	Index	Evaluation Method
International organization	IQRP	1995	Framework	7 first-level indexes 18 second-level indexes	Self-evaluation Peer-review
Academic Group	ACE	2001	Framework	6 first-level indexes 24 second-level indexes	Survey
	SIH	2005	Framework	9 first-level indexes	Self-evaluation Audit Expert Review
	CHE	2007	Model	186 indexes (Input and output dimension)	Self-evaluation
Evaluation Agency	NIAD-UE	2012	Framework	3 first-level indexes 10 second-level indexes	Evaluation by Agency Review
	AUQA	2008	Framework	7 first-level indexes 25 second-level indexes	Thematic Audit
University	Osaka	2004	Framework	8 first-level indexes 23 second-level indexes	Evaluation

Based on the study of the above four types of foreign evaluation systems, the researcher finds that most of these systems take the form of Review or Audit, focusing on the compliance and achievement of the internationalization development goals of colleges and universities. Besides, these systems encourage the universities to develop self-assessment and provide the corresponding manual and guidelines. However, most of them do not make judgmental conclusions about the universities, or the conclusions are rarely graded or ranked. The indicators are mainly divided into two levels, the first-level indicators are no more than 10 items, and the second-level indicators are from 10 to 20 items. Besides that, the indicators are mainly qualitative, and only a few are quantitative indicators or require quantitative data support. In general, the design ideas of indicators mainly involve four aspects of strategy, process, activities and results. In particular, the 8 indicators of international policy and strategy, organizational structure and management, support and services, curriculum and teaching, research and academics, student mobility, faculty and staff, partners and alliance are the more common core indicators for the international evaluation of foreign universities.

Overview of Research in China

In order to comprehensively and systematically understand the development status of higher education internationalization in China, domestic scholars have studied and discussed the internationalization indexes of higher education from the theoretical and practical levels. Through searching in CNKI database, the researcher found 66 related articles with the theme keywords of "university

internationalization, evaluation, indicator" and "higher education internationalization, evaluation, indicator". Main Chinese representative index systems for university internationalization evaluation are as follows:

TABLE II: MAIN INTERNATIONALIZATION EVALUATION INDEX SYSTEMS IN CHINA

Main Internationalization Evaluation Index Systems in China					
Name	Start Time	Organizer	System Design	Indicators	Evaluation Method
CIAIE	2015	Academic Group	Framework	8 first-level indexes 74 viewpoints	Questionnaire Survey
Southwest Jiaotong University	2013	University	Framework	Research/Ranking indexes: 10 first-level indexes 33 second-level indexes	Quantitative and Qualitative Evaluation
Sun Yat-sen University	2009	University	Framework	5 first-level indexes, 16 second-level indexes with specific weight	Questionnaire Survey

In addition, there are some internationalization evaluation index systems developed by provincial governments or some scholars. The researches in China can be roughly divided into five aspects: First, the research on the construction of the overall index of university internationalization evaluation; Second, the research on the construction of the internationalization evaluation index system of different types of universities, such as research universities, undergraduate colleges and vocational colleges; Third, the research on the construction of the internationalization evaluation index system of universities in different countries or regions, such as the universities in South Korea, Australia, or the universities in Shaanxi, Yunnan Province and Chongqing Municipality (Ma Yan, et, 2019); Fourth, case studies on domestic and foreign universities, such as Southwest Jiaotong University and Central China Normal University, etc.; Fifth, research on evaluation of different topics, such as graduate education, talent training or disciplines etc.

IV. METHOD

1. Through literature research, extensively collect the relevant documents and materials related to the internationalization of higher education, summarize and clarify its connotation, motivation and elements influencing the internationalization of universities.

2. Through comparative analysis, an in-depth study is made on 10 representative internationalization evaluation index systems for universities worldwide, such as IQRP,

ACE, SIH, AUQA, etc. Through analyzing their commonalities and combing with the educational practice of China's medical universities, a preliminary internationalization evaluation index system for medical university is established.

3. The questionnaire "Questionnaire on the Importance of Indexes in the Internationalization Evaluation Index System of Medical Universities in Guangdong Province"(Appendix 1) designed based on the preliminary evaluation system is sent to 76 participants who are the vice-president, the heads of International Office, the experts, administrators or teachers in the field of international exchange & cooperation or international education from universities and hospitals in China. This prediction questionnaire is designed as 5-point Likert Scale, which is used by the participants to assess every index, the scores range from 1 (completely unimportant) to 5 (extremely important). The researcher verifies the reliability and validity of the questionnaire by using SPSS software (Cronbach's Alpha, Exploratory factor analysis) .

4. Analytic hierarchy process(AHP) is used to construct a mathematical model and calculate the weight of each index at all levels, so as to establish an evaluation system with index weight.

V. CONSTRUCTION OF INTERNATIONALIZATION EVALUATION INDEX SYSTEM FOR MEDICAL UNIVERSITIES IN GUANGDONG PROVINCE

From the above methods, the researcher proposed the internationalization evaluation index system for medical universities in Guangdong province. The researcher verifies the reliability and validity of the questionnaire by using SPSS software. There are a total of 50 questions in this questionnaire. After being tested one by one, the Cronbach's α values of the 9 dimensions in this study are all >0.8 , indicating that the reliability of each item in this questionnaire is very stable. Moreover, the KMO values of the items under each first-level index in this system are all >0.5 , and Bartlett's test is statistically significant, that is, $P < 0.05$. Then the researcher uses factor loading coefficient to evaluate the structural validity of the index system. The factor loading coefficients of the items under each first-level index are all > 0.6 , reflecting the good structural validity of each first-level index.

Furthermore, based on the expert questionnaire, the Internationalization Evaluation Model of Medical Universities in Guangdong Province was established as follows:

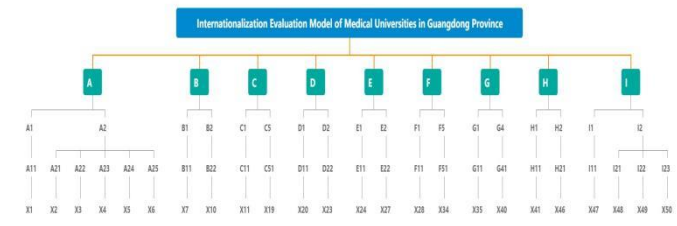


Figure 2: Internationalization Evaluation Model of Medical Universities in Guangdong Province

We can obtain the pair comparison matrix according to the survey results of the expert questionnaire, The maximum eigenvalue of the judgment matrix and its corresponding eigenvector are calculated according to the algebraic mean method. In order to judge the accuracy of the listed matrix, a consistency test was performed to calculate the consistency index CI and the consistency test ratio CR, where $CI = (\lambda_{max} - n) / (n - 1)$, λ_{max} is the maximum characteristic root of the matrix, and n is the order of the matrix. $CR = CI / RI$, RI is the mean random consistency index. $CR < 0.1$ proves that the judgment matrix has satisfactory consistency.

TABLE IV: MEANING OF a_{ij} SCALE 1-9

Scale a_{ij}	Meaning
1	C_i has the same effect as C_j
3	C_i is slightly stronger than C_j
5	C_i is stronger than C_j
7	C_i is significantly stronger than C_j
9	C_i is absolutely stronger than C_j
2, 4, 6, 8	The ratio of the influence of C_i to C_j is between the above two adjacent levels
1, 1/2, ..., 1/9	The ratio of the influence of C_j to C_i is the reciprocal number of the above a_{ij}

TABLE V: VALUE OF RAMDOM CONSISTENCY INDEX RI

n	1	2	3	4	5	6	7	8	9	10	11
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49	1.51

Through the above calculation method, the researcher obtains the weight of each index which is shown is the table below:

TABLE VI: WEIGHT OF EACH INDEX OF INTERNATIONALIZATION EVALUATION MODEL

Index	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀
Weight	0.1375	0.0544	0.0235	0.0088	0.0544	0.0117	0.0233	0.0225	0.0310	0.0223
Index	X ₁₁	X ₁₂	X ₁₃	X ₁₄	X ₁₅	X ₁₆	X ₁₇	X ₁₈	X ₁₉	X ₂₀
Weight	0.0229	0.0176	0.0135	0.0230	0.0040	0.0420	0.0031	0.0066	0.0082	0.0322
Index	X ₂₁	X ₂₂	X ₂₃	X ₂₄	X ₂₅	X ₂₆	X ₂₇	X ₂₈	X ₂₉	X ₃₀
Weight	0.0339	0.0204	0.0126	0.0197	0.0155	0.0153	0.0199	0.0175	0.0071	0.0105
Index	X ₃₁	X ₃₂	X ₃₃	X ₃₄	X ₃₅	X ₃₆	X ₃₇	X ₃₈	X ₃₉	X ₄₀
Weight	0.0020	0.0037	0.0042	0.0092	0.0507	0.0082	0.0323	0.0159	0.0812	0.0041
Index	X ₄₁	X ₄₂	X ₄₃	X ₄₄	X ₄₅	X ₄₆	X ₄₇	X ₄₈	X ₄₉	X ₅₀
Weight	0.0029	0.0014	0.0018	0.0029	0.0005	0.0056	0.0035	0.0088	0.0088	0.0175

Based on the above calculation and analysis, the researcher substituted the calculated values of TABLE VI into the established system and finally constructs the internationalization evaluation index system with weight for medical universities in Guangdong Province. The specific value are shown as follows:

TABLE VII: INTERNATIONALIZATION EVALUATION INDEX SYSTEMS OF MEDICAL UNIVERSITIES IN GUANGDONG PROVINCE		
First-level Index	Second-level Index	Third-level Index
Internationalization of Development Strategy (0.2903)	Development strategy (0.1375)	Whether there is a clear international medium and long term development plan, annual work plan and implementation plan (0.1375)
		Funds for faculty and staff to study abroad, participate in conferences, etc. (0.0544)
	Financial support (0.1528)	Funds for Chinese students studying abroad, competitions, and cultural exchanges (0.0235)
		Funds for scholarships, competitions, and cultural exchanges for international students (0.0088)
		International research project funding (0.0544)
		Expenditures for hiring foreign teachers (0.0117)
Internationalization of Organization & Management (0.0991)	Organization (0.0458)	Establish organizations or departments such as the Internationalization Working Committee/Leading Group to be responsible for the formulation, implementation and guarantee of the international development plans (0.0233)
		Set up an international specialized management organization and full-time staff (0.0225)
	Management mechanism (0.0533)	Have sound rules and regulations related to international exchanges and cooperation (0.0310)
		Whether the assessment system of each school/department

		contains international indicators (0.0223)
Faculty Internationalization (0.1409)	Faculty exchange (0.0405)	The number and proportion of faculty and staff studying and exchanging overseas (3 months and above) (0.0229)
		The number and proportion of faculty and staff studying and exchanging overseas (within 3 months) (0.0176)
	Overseas education experience and international participation of full-time teachers (0.0405)	The number and proportion of full-time teachers with more than 1 year overseas study/work experience (0.0135)
		The number and proportion of full-time teachers teaching in English (0.0230)
		The number and proportion of full-time teachers holding positions in international organizations/academic associations/international academic journals (0.0040)
		Whether the teacher evaluation and incentive mechanism reflect the emphasis on the background and experience of international exchanges and cooperation (0.0420)
	Teachers' evaluation (0.0420)	
	Foreign teachers (0.0097)	The number and proportion of foreign language teachers (0.0031)
		The number and proportion of professional foreign teachers (0.0066)
	Overseas high-level talents (0.0082)	The number and proportion of overseas high-level experts (0.0082)
Student Internationalization (0.0991)	Student exchange abroad	The number and proportion of students studying abroad for degrees (0.0322)

	(0.0661)	The number and proportion of students going abroad for short-term exchanges (0.0339)
	International students (0.0330)	The number and proportion of international students (degree students) (0.0204) The number and proportion of international students (non-degree students) (0.0126)
Teaching Internationalization (0.0704)	Discipline internationalization (0.0352)	The number of non-foreign language majors taught in foreign languages (0.0197)
		The number of majors accredited by foreign or international certification organizations (0.0155)
	Course internationalization (0.0352)	The number of online courses developed in cooperation with foreign universities (0.0153)
		The number of non-foreign language courses taught in foreign languages (0.0199)
Internationalization of Scientific Research (0.0542)	Incentive mechanism (0.0175)	Whether to establish an evaluation and incentive mechanism to encourage international academic cooperation (0.0175)
	Research platform (0.0071)	Laboratories/research centers/international scientific and technological cooperation bases established jointly with foreign universities or institutes (0.0071)
		Research Project (0.0162)
	The number of International scientific research projects invested by foreign funds (0.0020)	
	The number of foreign science and technology patents obtained (0.0037)	
	International conference (0.0042)	The number of organizing international conferences (0.0042)
	Paper publication (0.0092)	The number and proportion of papers jointly published with scholars from foreign countries (0.0092)
International Exchange & Cooperation (0.1924)	Foreign-related education projects	Sino-foreign cooperative education institutions/projects approved by the Ministry of Education (0.0507)

	(0.0912)	Establishment and running of overseas campus (0.0082) Double degree programs cooperated with foreign universities (0.0323)
	University Alliance (0.0159)	Join international university alliances or organizations (0.0159)
	Partners (0.0812)	The number of international cooperation agreements within the validity period of the current year (0.0812)
	Overseas visits (0.0041)	The number of overseas visiting groups received in the current year (0.0041)
Internationalization of Affiliated Hospital (0.0151)	International Medical Service Capabilities (0.0095)	The distribution of hospital departments, diagnosis and treatment procedures are marked and translated in foreign languages (0.0029)
		Set up international medical center (ward) (0.0014)
		The number and proportion of medical staff going to foreign hospitals or scientific research institutions for further training (0.0018)
	Clinical Practice (0.0056)	The number and proportion of medical staff with good English communication skills (0.0029)
The number of foreigners diagnosed and treated in the current year (0.0005)		
Internationalization of Service & Guarantee (0.0386)	Library (0.0035)	The number and proportion of clinical teaching staff with overseas education/work experience (0.0056)
		The number of foreign-language books and periodicals in the library (including electronic periodicals) (0.0035)
	Information Technology (0.0351)	Official website with multi-language version (0.0088)
		Student information and service management system in Chinese and English (0.0088)
		Sharing distance courses and teaching resources with foreign universities (0.0175)

Based on the weight of each index in the above AHP model, the comprehensive score evaluation model was established as follows:

$$Score = \sum_{k=1}^{50} \omega_k x_k$$

Figure 3: Comprehensive Score Evaluation Model

Where *Score* means the comprehensive score of evaluation object.

ω_k is the weight of the *k*th evaluation index.

x_k is the evaluation score of the *k*th evaluation index.

Through the establishment of this evaluation index system, we can conduct the comprehensive evaluation of internationalization for medical universities in future studies. It is believed that through the study on the overall internationalization development level of medical universities in Guangdong Province, we can provide more reasonable and adaptive strategies and directions for our future development.

VI. CONCLUSION

The COVID-19 epidemic has brought a serious impact on the internationalization of higher education around the world. (Philip Altbach, 2022) According to the internationalization evaluation index system established in this paper, the development of major internationalization evaluation indexes, such as development strategy, faculty, students, teaching, scientific research and international exchange & cooperation, have been greatly affected during the epidemic. As Professor Meide Hsu of the University of Toronto (2022) mentioned, the first impact of COVID-19 is the flow of students around the world. Professor Fazal Rizvi of the University of Melbourne (2022) also pointed out that "COVID-19 poses serious challenges to the internationalization of higher education, not only in terms of restricting the mobility of students and staff, but also in hindering the exchange and cooperation of academic research" .

Therefore, in the post-epidemic era, firstly, the researcher believes that the medical universities in Guangdong Province should focus on the main internationalization indexes, actively adjust the development strategy and the "14th Five-Year Plan" under the guidance of the "Belt and Road" initiative, take advantage of superior geographical

location of Guangdong Province and the attractiveness of medical majors to expand the exchanges and cooperation with the countries or regions along the Maritime Silk Road, and strive to establish branch campuses in these countries to jointly cultivate various medical professionals. Secondly, according to statistics, the overall social and economic development level of Guangdong Province has reached the standard of moderately developed countries (Dong Lingbo, 2020), medical universities in Guangdong should attract more outstanding international students to study for degrees in this province by strengthening the publicity and raising scholarships, etc., so as to further enhance their international influence. Thirdly, considering the current situation such as the sharp drop in the flow of international students and the obstruction of scientific research due to visa restrictions, border controls, university blockades, and language test delays in various countries under the epidemic (Liu Jin, Lin Songyue, 2022), medical universities in Guangdong province should make full use of information technology, improve online teaching infrastructure, develop online teaching courses and systems, improve online teaching quality and organize online international conferences, etc. to reduce the impact of the epidemic, and promote the internationalization development in the post-epidemic era.

REFERENCES

- Cheng Ying, Zhang Meiyun, Chu Yuanyuan. (2014). Data survey and statistical analysis of the internationalization development status of China's key universities[J]. *Higher Education Research*, 8.
- De Wit, Hans. (2022). "Building a New Model of Diversified and Sustainable Internationalization Development of Higher Education in the Post-pandemic Era"[J]. *Journal of Higher Education Management*, 16(01): 10
- De Wit, Hans. (2002). *Internationalization of Higher Education in the United States of America and Europe: A Historical, Comparative, and Conceptual Analysis*[M]. Westport, CT: Greenwood Press.
- Dong Lingbo. (2020). New Strategies for Internationalization Development of Higher Education in Guangdong under the Background of "Belt and Road Initiative"[J]. *Journal of Educational Development*, 95.
- Fazal Rizvi. (2022). Enhancing the Diversity of Higher

- Education Internationalization in the Post-pandemic Era[J]. *Journal of Higher Education Management*, 16(01): 9
- Li Yan. (2013). The internationalization Connotation and the selection of evaluation indicators of Chinese universities[J]. *Higher Education Development and Evaluation*, 5.
- Liang Xinyi. (2019). A Study of The Strategy of Private Colleges and Universities of Guangxi Under the Background of the Belt and Road[D], 4.
- Liu Jin, Lin Songyue. (2022). “Change” or “Unchanged” for Internationalization of China's Higher Education in the Post-epidemic Era[J]. *Journal of Higher Education Management*, 16(01): 11-13
- Liu Yan, Li Na. (2020, August). The Strict Judgement of Evaluation Index System of Higher Education Internationalization---based on the comparison of 9 evaluation index systems[J]. *Heilongjiang Researches on Higher Education*, 8(316), 77-80.
- Ma Yan, Wang Cong, Guo Wei. (2019). Internationalization of Higher Education: Performance Evaluation and Index System Construction--Taking Shaanxi Province as an Example[J]. *China Higher Education Evaluation*, 30(01): 42-47.
- Meide Hsu. (2022). The Internationalization Development of Higher Education in the Post-epidemic Era should Shift from Economic Drive to Cultural Understanding[J]. *Journal of Higher Education Management*, 16(01): 6
- Philip Altbach. (2022). COVID-19 Exacerbates Changes in the Internationalization of Higher Education[J]. *Journal of Higher Education Management*, 16(01): 1
- Wang Wei. (2012). Comparison and Enlightenment of Six International Evaluation Index Systems for Universities [J]. *Shanghai Education Assessment Research*, 28.
- Wu Mei. (2011). Comparative Research on the Evaluation System of University Internationalization Level[J]. *Higher Education Exploration*, (5):52-57.
- Wu Wenyong, Dong Xiaomei. (2013). Review and Comment on Researches about Universities' Internationalization[J]. *Journal of Beijing Union University*, 12.
- Zhang Haiying, Deng Ling, Huang Yanshu. (2021). Exploration and Practice of Sustainable Development of Educational Internationalization in Local Medical Universities under the New Situation--Taking Guangxi Medical University as an Example[J]. *Higher Medical Education in China*, (2):1.