

Journal of Science Education

ISSN 0124-5481



The Academic Prospect of Contemporary Higher Education Postgraduates: Thematic Evolution, Stage Characteristics and Reflection on Problems

Yi Zou^{a†}, Xueyang Gao^{a†}, Xiaoyan Wu^a, Huijuan Yang^{b*}

- ^a School of Physics and Electronic Technology, Liaoning Normal University, Dalian, China
- ^bNormal College & School of Teacher Education, Qingdao University, Qingdao 266071, P.R. China

ARTICLEINFO

Keywords:
higher education
Graduate thesis
Academic orientation

ABSTRACT

Higher education is a discipline that emerged in China in the late 1980s, with a large-scale postgraduate training system. Taking a broad view of the academic orientation of the graduate theses of the discipline of higher education in China from 2000 to 2019, it is conducive to mining the theme evolution and stage characteristics of the discipline, reflecting on the problems in the development of the discipline, and promoting the construction of higher education with its own characteristics based on China's position. In this paper, we first use the bibliometric method to survey the academic landscape of graduate dissertations in higher education. Then, LDA and TF-IDF data mining technologies are used to analyze the graduation thesis text of higher education graduate students, to deeply explore the academic orientation and research theme change trend of the discipline. Finally, the visualization of keyword co-occurrence is carried out to form a knowledge map of four stages of keyword co-occurrence. The academic orientation of different stages of higher education is expounded in depth from the research stage of various types of university construction of higher education, and the stage of entrepreneurship education emergence, and the problems in the development process of higher education are reflected.

1. Introduction

China's higher education research officially emerged as a discipline in the late 1980s, and has achieved great development. As of 2018, there are more than 20 doctoral and master's authorization points in higher education nationwide. The large-scale postgraduate training system has trained professional and technical talents for the discipline construction of higher education. There are 8765

2. Academic Prospect of Postgraduate Thesis of Higher Education in China

This part uses CNKI as the retrieval tool, uses the "doctoral and master's degree" retrieval in the "advanced retrieval", defines the discipline name as "higher education", the time span is limited to 2000-2019, and the retrieval time is September 6, 2020. A total of 8691 graduate dissertations in higher education were obtained, including 8077 master's dissertations and 614 doctoral dissertations. The earliest postgraduates' theses of this discipline included by CNKI in 2000 were only 3, and then increased year by year. In 2004, there were more than one hundred and 155 theses, and then continued to increase. The

largest increase was in 2007 (670 theses), and reached the peak in 2008 (783 theses). After that, there was a slight decline, and it tended to fluctuate around 500-600 theses. In 1983, higher education was included in the discipline of pedagogy as a secondary discipline. In 1984, Xiamen University established the first master's degree program of higher education. However, before 2000, it was in the exploration stage of the discipline system of higher education, and the master's and doctor's degree programs were also in the initial stage of construction. Therefore, there were few master's and doctor's theses in this discipline. After 2000, the early construction was basically completed and gradually began to flourish. The Opinions of the General Office of the Ministry of Education on Further Strengthening the Construction of Higher Education Research

dissertations with the name of higher education in the doctoral dissertation database of CNKI. A general survey of the master's and doctoral dissertations of higher education from 2000 to 2019 is conducive to mining the theme evolution and stage characteristics of higher education, reflecting on the problems in the development of higher education in the past two decades, and providing ideas for building a theoretical system of higher education with Chinese characteristics.

[†] Yi Zou and Xueyang Gao Share the first authorship

^{*} Corresponding author: Huijuan Yang. Email: yanghuijuan806@163.com Accepted 31 Dec. 2021, Available online 30 Nov. 2022 0124-5481/© 2021 Journal of Science Education. All rights reserved.

Institutions, issued in 2004, stimulated and promoted the construction of higher education research institutions in colleges and universities (Guicang Ye, & Luting Ma, 2018), promoted the surge of master's and doctoral theses in 2007, reached the peak in 2008, then fell back slightly, and gradually entered a state of fluctuation and balance.

Through the metrological visualization analysis function of HowNet, we can analyze all the above search results and get the theme distribution and keyword distribution of the master's and doctoral theses in higher education from 2000 to 2019. The general distribution is that the research topics are mainly concentrated in vocational colleges (245), Chinese universities (225), comparative studies (150), research universities (147), Chinese higher education (146), influencing factors (146), graduate education (141), local universities (135), etc; The key words mainly focus on questionnaire (838), talent training (730), master's degree thesis (627), college enrollment expansion (618), specialty setting (509), learning process (491), teaching effect (400), etc. In order to facilitate the observation of the first 30 topic words and keywords, take the number of papers they appear as the weight, make the corresponding word cloud map, and get Figure 1 and Figure 2. It can be found that the master's and doctoral theses of this discipline mainly focus on higher vocational colleges, higher education, and college students, pay attention to the discipline theory and construction of higher education itself, research on the influencing factors of discipline development, university structure and types, and attach importance to the research on talent training, student learning process and master's degree thesis in colleges and universities.



Fig.1: Word cloud diagram of the top 30 high-frequency keywords



Fig.2: Word cloud diagram of the top 30 high-frequency keywords

Then, the high-frequency keyword co-occurrence network obtained from the measurement visualization analysis is analyzed.

The interaction between talent cultivation and other highfrequency keywords was the most frequent (795 times), with the interaction between specialty setting and talent cultivation ranking first (220 times), followed by undergraduate education, college enrollment expansion and talent cultivation, 112 times and 90 times respectively; The interactive research between the questionnaire survey and other high-frequency keywords followed the talent cultivation (728 times), in which the interactive research between the learning process and influencing factors and the questionnaire survey was more prominent, 146 times and 110 times respectively; Then there is the interactive research between major setting (655 times) and college enrollment expansion (424 times) and other high-frequency keywords. To sum up, talent training is the core field of higher education, and questionnaire survey is the most widely used research method. The purpose of any education is to cultivate excellent talents, and higher education is no exception, so it is undoubtedly in line with the law of development that talent training becomes the main research direction, but it can also be found that the current research direction of higher education is generally biased towards the ontology research of higher education, lacking the epistemology and methodology research of higher education. Therefore, it is necessary to break the path dependence of the discipline research and realize the progress from multi-dimensional and multidimensional theoretical system to problem oriented and applied path exploration.

3. Deeply explore the academic orientation of China's higher education graduate students

In order to further explore the academic orientation of higher education, this paper uses the LDA theme model to analyze the paper text data of higher education graduate students in the past 20 years. At the same time, in order to explore the change and development trend of the theme of the postgraduate thesis of higher education in recent 20 years, TF-IDF method is used to calculate the keyword weight of each year.

3.1 The mainstream academic theme of higher education postgraduates

LDA topic model is a topic generation model based on potential Dirichlet distribution. In this model, a series of topics generate each text in the form of polynomial distribution, and then each word is sampled from these topics in the same manner of polynomial distribution, thus forming the process of generating text around the topic in this model (Xiaobo Tang, & Kun Xiang, 2014). According to the characteristics of the text data of postgraduates' theses in higher education, the LDA theme model is adjusted and combined with some parameters to overcome the problem of insufficient text and difficulty in subdividing similar fields. Finally, the theme analysis results in Table 1 are obtained. The five themes focus on graduate education, college teachers, college curriculum and system, entrepreneurship education and college management, teaching characteristics and school running methods.

Table 1 LDA Theme Analysis of Graduation Thesis of Higher Education Postgraduates

Topic 1	Topic 2	Topic 3	Topic 4	Topic 5		
Master's Degree 39.88	Young teachers 18.76	Course 18.00	Entrepreneurship education 16.57	Entrepreneurship 14.74		
Teachers 25.89	Teaching 15.85	Humanities education 14.69	Teacher student relationship 13.11	Autonomous learning 11.70		
Postgraduate education 25.64	University teachers 15.46	Academic power 13.26	Management 12.85	College counselors 11.47		

Teaching quality 21.34	General education 14.89	Master of Education 11.65	Professional degree 11.63	Chinese foreign cooperative education 10.83
Higher vocational colleges 19.75	College teachers 13.47	Credit system 11.58	Campus culture	Applied talents 9.49
Student evaluation of teaching 16.93	University Constitution 12.29	Higher vocational education	Core competitiveness 10.56	Classroom teaching 9.48
Mental health education 12.78	Research University 10.72	Evaluation 10.62	Curriculum 10.38	Faculty 9.33
Moral Education 10.94	College Teachers 10.01	9.99 in higher vocational colleges	School enterprise cooperation 9.74	Discipline setting 9.30
Independent college 10.85	Employment of college students 9.50	College students 9.18	Regional Economy 8.91	Talent cultivation 8.03
Discipline 10.35	Postgraduate 9.08	Higher Education 8.60	Teaching management 8.33	Vocational colleges 7.51

3.2 The implementation approach is vague and not in place

TF-IDF is a method of extracting text feature words. Its calculation method is simple and widely used. The main idea of TF-IDF is that the weight of the feature word in the document is that the frequency of the feature word in the document is inversely proportional to the number of documents containing the feature word. It not only considers the word frequency in the document where the feature word occurs (local document), but also considers the relationship with the word frequency of all documents (global document), so it has a strong horizontal differentiation performance (Yongxin Jiang, & Aili Sun, 2009).

In order to find out the characteristics of changes in research orientation, TF-IDF value data of keywords in each year were combined into a data set for 2010-2019. Due to the complexity of the data, the top ten keywords of TF-IDF values in five years with equal intervals are plotted in Table 2. According to the analysis of Table 2, in 2003, the integration of higher education resources became the focus of attention, and the hardware upgrading and capital investment of colleges and universities were valued; In

2007, the types and forms of research in institutions of higher learning were more abundant and diversified. Higher vocational colleges and higher vocational education have become the focus of research; In 2008, the State promulgated the Measures for the Establishment and Management of Independent Colleges. Later, most of the attention paid to independent colleges was focused on the research of college teachers and talent training in 2011; In 2015, the research focused on the development of local application-oriented universities, and the higher education system was gradually improved; In 2019, the research focused on the background of the new era and the construction of new engineering subjects, and paid attention to the research on scientific research, social services, talent training and other comprehensive functions of universities to support their innovation driven development. In addition, the Ministry of Education released the National Undergraduate Education and Teaching Quality Report (2018), and the graduate students also increased their attention to undergraduate students.

Table 2 LDA Theme Analysis of Graduation Thesis of Higher Education Postgraduates by Year

2003	2007	2011	2015	2019
Combined universities 0.225	Higher vocational colleges 0.191	College teachers 0.112	Postgraduate 0.146	Undergraduate 0.159
Traditional culture 0.091	Postgraduate education 0.108	Independent College 0.102	Local universities 0.137	Postgraduate 0.142
Popularization of higher education 0.080	National defense education 0.106	Master 0.093	mooc 0.136	Talent cultivation 0.142
Mathematical model 0.077	Higher vocational education 0.100	Talent cultivation 0.084	University of Applied Technology 0.133	New Era 0.130
Effectiveness analysis 0.077	Research University 0.091	Postgraduate education 0.080	Culture mode 0.087	Normal student 0.124
Higher Education Legislation 0.077	Private colleges 0.083	Course 0.076	Learning input 0.083	Innovation and entrepreneurship education 0.108
College Student Apartment Park 0.077	Agricultural universities 0.079	US 0.076	Young teacher 0.082	New Engineering 0.098
Community oriented moral education 0.077	Curriculum 0.079	Investigation 0.076	College teachers 0.082	Local universities 0.098
Moral Education Goal 0.077	College teachers 0.078	Talent training mode 0.074	Independent college 0.082	Integration of production and education 0.098
College teachers 0.077	Academic occupation 0.075	Young teacher 0.072	University Constitution 0.078	Learning gain 0.098

In addition, in order to facilitate the observation of the overall change trend of important keywords, ten keywords that can best represent higher education research are selected based on the co-occurrence frequency, TF-IDF value and the correlation with the subject, their TF-IDF values are extracted, and a broken line chart is drawn with the change of years. It can be seen from Figure 3 that research universities were first concerned. 2005 was the heyday of their research in this field, then began to fluctuate and decline, and disappeared after 2015; Higher vocational education is also an early research field, but researchers have paid close attention to it for a short time, only in 2004, 2007 and 2008;

Postgraduates, independent colleges, entrepreneurship education, talent cultivation and undergraduates have been in an intermittent state in the development process. The research span of the first three is 2004-2017, 2005-2016 and 2009-2019 respectively, while the last two started in 2008 and 2012 respectively. They did not return to zero before 2019, but showed an upward trend; It is noteworthy that entrepreneurship education is very popular in 2017-2018; However, college teachers, higher vocational colleges and local colleges have maintained a high degree of popularity for a period, and they are still concerned by 2019.

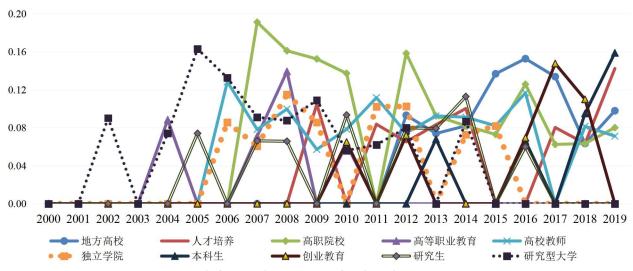


Fig.3: Trend of Research Orientation of Higher Education in Recent 20 Years

It can be vaguely seen from the above figure that higher education has certain stage characteristics in the development process. In order to deeply explore its stage characteristics, the period from 2000 to 2019 is divided into four stages. By using CNKI to search, it can be found that there were 298 graduate theses in the discipline from 2000 to 2004, 2746 from 2005 to 2009, 2899 from 2010 to 2014, and 2748 from 2015 to 2019. The number of papers in the first stage is very small, which is at the primary stage of discipline construction, and no professional discipline research group has been formed. The overall number of papers in the last three stages is not much different, which has entered the stage of stable development. However, their research focuses are different. Therefore, data mining technology is used to analyze the paper text data in each stage, and the keyword cooccurrence in each stage is visualized, The knowledge map of keyword co-occurrence is obtained to facilitate the observation of the relationship between keywords, as well as the research topics of each stage.

4. Research stage of various colleges and universities: based on the research on the construction of research universities and private colleges and universities

The theme of the graduate thesis of higher education discipline in 2000-2004 focused on the evaluation system of teaching quality, the development strategy of colleges and universities, the mathematical model of moral education, the management mode and team of colleges and universities, the promotion strategy of core competitiveness, the practice and thinking of private colleges and universities, etc.

Research focus I: research on teaching quality evaluation system. For example, Dong Haiyan discussed the teaching quality evaluation index system with Chinese characteristics, tried to establish a teaching quality assurance system from the whole process of teaching, and formulated an internal assurance manual for teaching quality, trying to directly apply it to the practice of teaching quality assurance in Chinese undergraduate universities (Haiyan Dong, 2004); Li Juan made an in-depth analysis of the three teaching elements that restrict the teaching quality of private schools, including teachers, students, and professional courses. She not only summarized the achievements, but also analyzed the problems, and put forward improvement measures on this basis (Juan Li, 2003).

Research focus II: research on the development strategy of colleges and universities. For example, Chen Jianqun believes that

it is necessary and feasible to achieve leapfrog development in Chinese universities. In the process of implementing leapfrog development, it is important to focus on strategies (Jianqun Chen, 2004); Wang Qianxin believes that only by establishing a long-term development strategy, building a scientific and systematic strategic framework, formulating feasible strategic goals and measures with scientific strategic thinking, and focusing on cultivating the core competitiveness of the school, can vocational colleges have competitive advantages, form distinctive school running characteristics, and achieve sustainable development (Qianxin Wang, 2004).

Research focus III: Research on the teaching mode of moral education. For example, Zhong Hong proposed a goal system concept, set China's college moral education goals to adapt to the new century from four levels: the basic goal, the leading goal, the core goal, and the highest goal, and believed that the moral choice is the link that runs through the college moral education goal system (Hong Zhong, 2003). Xiang Xueyong put forward a new idea of college moral education under the background of network culture: emphasizing the systematisms and service of network moral education; Build a website model with complete functions, so that it can establish an all-round close relationship with college students' study and daily life; Integrate network education resources and strengthen the construction of moral education workers (Xueyong Xiang, 2003).

Research focus IV: Research on the internal governance system of colleges and universities. For example, Tan Jie put forward her own preliminary idea of establishing a college level teaching management model in colleges and universities: by discussing and analyzing the connotation, characteristics, principles and management process of college based teaching management, she proposed to build a "college college department three-level organizational system, a school college two-level operating mechanism, and a college level teaching management model based on the college" (Jie Tan, 2004). Deng Xuelin put forward the main countermeasures to promote professionalization of the management team of Chinese colleges and universities: to implement the full employment system and form a competitive, mobile and open selection mechanism; Establish a people-oriented evaluation system and a sound mechanism for employing people based on actual achievements; Establish a salary management system based on school conditions, and fully form an incentive mechanism of "excellent pay for excellent work"; Strengthen the training and development of university management

human resources, and build a learning organization (Xuelin Deng, 2004).



Fig.4: Research hotspots in the research stage of various types of university construction (2000-2004)

5. The improvement stage of discipline construction system: based on the research on various college courses and teaching

In 2005-2009, the theme of the graduate thesis of higher education discipline focused on the professional development of teachers in higher vocational colleges, the discipline construction of research universities, the quality of graduate education, general education courses, the talent training mode of higher vocational education, the mental health of college teachers and students, the training mode of master's degree graduates, the independent college running mode, etc.

Research focus I: research on teachers' professional development in higher vocational colleges. For example, Ye Xiaoming believes that the solution to the problem of teachers' professional development in higher vocational colleges lies in: establishing a scientific concept of teachers' development and creating an atmosphere for teachers' development; Reforming and perfecting the system of teachers' professional development in higher vocational colleges; Constructing learning organization to promote teachers' professional growth; Build a team of "double qualified" teachers (Xiaoming Ye, 2008). Xu Hongmei put forward the professional development goal of building the internal professional structure of ability oriented higher vocational teachers at the theoretical level, that is, the professional development of higher vocational teachers should be driven by the sense of self professional development, led by the development of teachers' ability, guide the development of teachers' knowledge and educational beliefs, and put forward some specific suggestions to promote the professional development of higher vocational teachers at the practical level (Hongmei Xu, 2007).

Research focus II: research on discipline construction of research universities. For example, Liu Zhifeng took pathology, a national key discipline of Central South University, as an example to demonstrate the feasibility of the development path of key disciplines from comparative advantage to competitive advantage (Zhifeng Liu, 2009); Li Hua explored the subject construction of China's research

universities from different perspectives, put forward countermeasures and suggestions to strengthen the subject construction of China's research universities, and analyzed the subject construction management model of China's research universities (Hua Li, 2007).

Research focus III: research on the quality of postgraduate education. For example, Tian Junrong provided reasonable suggestions to solve the problems in the evaluation of the quality of China's graduate education by analyzing the progress and problems in the evaluation of China's graduate education quality (Lunrong Tian, 2008); In view of the practical needs of the current development of postgraduate education in China and the new requirements of the development of society, economy, science, technology and culture on the quality of postgraduate education, Chen Yao combined with the successful experience of foreign postgraduate education, adopted literature analysis, data query and comparative analysis, summarized the key quality impact factors, and proposed corresponding quality assurance strategies, Try to build a graduate education quality assurance system that is suitable for China's national conditions and the practical needs of the development of graduate education, provide assurance for the quality of China's graduate education, and promote its sustainable and healthy development (Yao Chen, 2006).

Research focus IV: general education curriculum research. For example, Xia Shan compared general education courses in Chinese and American universities, analyzed the characteristics of general education courses in American universities, summarized the differences between general education courses in Chinese and American universities, and put forward the curriculum theoretical assumption of "domain integration" of general education in Chinese universities (Shan Xia, 2006); Huang Ruiqing tried to build a general education curriculum system suitable for agricultural majors in Chinese universities from the perspective of society (market), teachers and students, and professional characteristics, with the goal of cultivating high-quality agricultural talents in the new era (Ruiqing Huang, 2006).



Fig.5: Co-occurrence of research hotspots in the improvement stage of discipline construction system (2005-2009)

6. Exploration stage of talent training mode: based on the research on the training mode of master's degree students

In 2010-2014, the theme of the graduation thesis of higher education discipline graduate students focused on professional degree graduate education, talent training mode of independent colleges, academic power and administrative power, young teachers' teaching ability, postgraduate innovation ability, postgraduate training mode, entrepreneurship education, etc.

Research focus I: research on professional degree postgraduate education. For example, Chen Jing believes that we should explore the path of the development of professional degree graduate education in China from five aspects: positioning, legislative protection, power balance, model innovation, and structural reorganization (Jing Chen, 2013); From the micro and macro dimensions, Sun Mengyao proposed micro strategies and macro suggestions to improve full-time professional degree education services and improve the satisfaction of full-time professional degree graduate education services (Mengyao Sun, 2014).

Research focus II: research on talent training mode of independent colleges. For example, Liu Yao used literature analysis, case analysis, micro and macro analysis and other research methods to conduct a theoretical analysis of the talent training model of independent colleges in China, and comprehensively analyzed the status quo of the talent training process of independent colleges (Yao Liu, 2014); Shen Guobin discussed the principles of the talent training mode of independent colleges in terms of talent training objectives, positioning and development

planning, specialty setting, curriculum setting, teacher team building, teaching methods and quality assurance system (Guobin Shen, 2012).

Research focus III: Research on the relationship between academic power and administrative power. For example, Huang Shuai, taking postgraduate education as the main content, focused on understanding the specific problems between academic power and administrative power in the management practice of graduate students in Chinese universities through text analysis and interview survey on the basis of existing theoretical views, and proposed operable and targeted solutions (Shuai Huang, 2012); Li Conghao believes that it is necessary to objectively recognize the reasonable existence of university administrative power in the university. At the same time, it is also necessary to recognize the heterogeneity of bureaucracy in university management, so as to achieve the unity of substantive legitimacy and formal legitimacy (Conghao Li, 2012).

Research focus IV: research on young teachers' teaching ability. For example, Yan Yanan investigated the basic situation of young teachers' teaching ability in three colleges and universities in Inner Mongolia Autonomous Region of China by taking empirical research as the main research method and taking the form of questionnaires and informal interviews (Yanan Xi, 2014); Smart Enron studies the current situation and influencing factors of young teachers' teaching ability in Chinese universities, discusses the development experience of foreign young teachers' teaching ability, and finds effective strategies for the development of young teachers' teaching ability in Chinese universities (Anran Zhi, 2013).



Fig.6: Co-occurrence of research hotspots in talent training mode exploration stage (2010-2014)

7. The Emergence Stage of Entrepreneurship Education: Exploration Based on Innovation Education in Higher Vocational Colleges

In 2015-2019, the themes of the graduate thesis of higher education discipline focused on the postgraduate of higher education, the charter of modern universities, entrepreneurship education curriculum, university construction under the background of "double first-class", administrative power and academic power, teaching mode of local universities, talent cultivation of higher engineering education, professional development of university teachers, etc.

Research focus I: research on postgraduate of higher education. For example, Liu Changle investigated, analyzed and explained the professional identity of 145 full-time postgraduate students majoring in higher education in five universities in Hunan Province from the four dimensions of cognition, emotion, behavior and will, mainly through questionnaires and supplemented by open interviews (Changle Liu, 2015); Sun Yi used the methods of literature analysis, content analysis, mathematical statistics and comparative research to statistically analyze the research theme, research level and the use of research methods of the dissertation, explore the positive aspects and influencing factors of the topic selection orientation of the master's degree thesis of higher education in the past decade, and put forward countermeasures and suggestions to optimize the topic selection quality (Yi Sun, 2018).

Research focus II: research on the constitution of modern universities. For example, Liu Hui believes that the construction of the university charter and modern university system should fully respect Chinese history and culture, effectively absorb foreign advanced and universal experience, and combine with China's actual conditions to launch around the concepts of Party committee leadership, rule by law, president responsibility, professors' scholarship, democratic management, university

autonomy, academic freedom, and social participation (Hui Liu, 2015); Lu Suying believes that the constitution of higher vocational colleges has the function of carrying, guiding and improving the system of higher vocational colleges. The school running concept and characteristics of higher vocational colleges determine the particularity of the constitution construction of higher vocational colleges. The constitution of higher vocational colleges must reflect the social, professional and market characteristics in the development process of higher vocational colleges (Suying Lu, 2015).

Research focus III: research on entrepreneurship education curriculum. For example, Li Yanyan proposed countermeasures and suggestions for the smooth development of entrepreneurship education courses from the aspects of entrepreneurship education concept, curriculum system, curriculum teaching conditions, teachers, curriculum management, evaluation, etc. (Yanyan Li, 2015); Relying on the guiding ideology of entrepreneurship education curriculum, Hu Yue put forward practical suggestions on how to carry out entrepreneurship education in colleges and universities from the aspects of entrepreneurship education concept, curriculum, teacher management, teaching methods, innovation evaluation, etc. (Yue Hu, 2016).

Research focus IV: exploration of university construction under the background of "double first-class". For example, Xu Run believes that the construction of educational disciplines in normal universities should be closely combined with the construction of "double first-class" strategic first-class disciplines, and should be closely combined with the opening and internationalization of national "the Belt and Road" major strategic education (Run Xu, 2018); Rong Xiaofei believes that in the new historical period when the country vigorously advocates and promotes the construction of "double first-class", the Council has played an important role in the government, society and universities, becoming an important driving force for the construction of "double first-class" (Xiaofei Rong, 2018).



Fig.7: Co-occurrence of research hotspots in the emerging stage of entrepreneurship education in higher education (2015-2019)

To sum up, from 2000 to 2019, higher education has achieved rapid development, realizing the transformation of higher education values from increasing infrastructure to focusing on teaching quality, teaching staff, postgraduate training, university system construction, and from extension development to connotation development; The collaborative education model of industry, university and research, which is parallel to research and application universities and coordinated by the central and local governments, has gradually matured; The Chinese characteristics of higher education with the background of new engineering and new era are becoming more and more obvious. The contents of innovation and entrepreneurship education, graduate education and other disciplines are expanded. The comprehensive performance ability of universities in cultural inheritance, social services, talent training and scientific research is enhanced, and the quality of higher education is constantly improving. However, data analysis also shows that there are still the following problems in the research on higher education: graduate students have less research on the theoretical system, discipline organization and cognitive consensus, and the research method is single. Research on strengthening the quality assurance of higher education from the construction of hardware facilities, the construction of teachers, training programs, teaching and research and other educational system mechanisms in colleges and universities is lacking, and

there is a lack of discussion on the comprehensive practical problems that are both academic and technical. Therefore, there is still a way to go for higher education to really take the position of a discipline. "No matter from the process of the development of higher education at home and abroad, or from the perspective of the problem areas involved in modern higher education, higher education does not belong to pedagogy, especially not to pedagogy developed from children's pedagogy. The future development of higher education must be liberated from the secondary discipline framework of pedagogy, and the construction of higher education as a primary discipline should be regarded as the discipline development goal" (Yingqiang Zhang, 2011). Therefore, we should encourage postgraduate theses in higher education to enhance the discussion of the theory of higher education and practical issues, adopt multiple research methods such as text analysis, qualitative and quantitative research, increase the research on academic groups and administrative subjects, expand the scope of research objects, and improve the quality of postgraduate theses in higher education. Finally, based on China's basic national conditions, higher education should strive to build a theoretical system and knowledge logic of higher education with its own characteristics, establish discipline self-confidence, and form a discipline group of higher education with Chinese characteristics and Chinese style.

References

Guicang Ye, Luting Ma. (2018). Persistence and Transcendence: A Co word Analysis of China's Higher Education Studies from 1980 to 2017. Journal of the National Institute of Education Administration, (02): 89-95.

Xiaobo Tang, Kun Xiang. (2014). Hot spot mining based on LDA model and microblog popularity. Library and Information Work, 58 (05): 58-63.

Yongxin Jiang, Aili Sun. (2009). Analysis of disciplinary characteristics of core journals of graphic information science based on tf-idf method. Information and Data Work, (01): 89-92.

Haiyan Dong. (2004). Research on Internationalization of Evaluation Indicators and Guarantee System of Undergraduate Teaching Quality in China. Nanjing University of Technology.

Juan Li. (2003). Research on the Teaching Quality of China's Private Colleges and Universities. Shantou University.

Jianqun Chen. (2004). Research on Leaping Development Goals and Implementation Strategies of Colleges and Universities. Central South University.

Qianxin Wang. (2004). Research on the Development Strategy of Higher Vocational

and Technical Colleges. Huazhong University of Science and Technology. Hong Zhong. (2003). Research on the goal of moral education in Chinese universities in the new century. Central South University.

Xueyong Xiang. (2003). College Moral Education in the Context of Network Culture. Central South University.

Jie Tan. (2004). Research on College Level Teaching Management Model of Secondary Colleges in Colleges and Universities. Central South University. Xuelin Deng. (2004). Research on the Professionalization of Chinese University Management Team. Hunan University.

Xiaoming Ye. (2008). Research on the Professional Development of Teachers in Higher Vocational Colleges. Huazhong University of Science and Technology. Hongmei Xu. (2007). A Case Study on the Professional Development of Teachers in Private Higher Vocational Colleges. Nanjing Normal University.

Zhifeng Liu. (2009). The development path of key disciplines in China's research universities: from comparative advantage to competitive advantage. Central South University.

Hua Li. (2007). Research on Discipline Construction of China's Research University. Xi'an University of Electronic Science and Technology.

Junrong Tian. (2008). Research on the Progress, Problems and Countermeasures of Graduate Education Quality Assessment. Wuhan University of Technology. Yao Chen. (2006). Research on the Quality Assurance System of Postgraduate Education in China. Wuhan University of Technology.

- Shan Xia. (2006). A Comparative Study of General Education Courses in Chinese and American Universities and Its Implications Hunan Agricultural University.
- Ruiqing Huang. (2006). Research on the curriculum system of general education for agricultural majors in Chinese universities. Hunan Agricultural University.
- Jing Chen. (2013). Research on the Development of Professional Postgraduate Education in China. Southwest University.
- Mengyao Sun. (2014). Research on the Quality of Education Service for Full time Professional Degree Postgraduates. Nanchang University.
- Yao Liu. (2014). Research on Talent Training Mode of China Independent College. Hunan Normal University.
- Guobin Shen. (2012). Research on Talent Training Mode of China Independent College. Suzhou University.
- Shuai Huang. (2012). A preliminary study on the positioning and relationship between academic power and administrative power in China's graduate education. Fudan University.
- Conghao Li. (2012). Research on the Legality of Administrative Power of Chinese Universities. Huazhong University of Science and Technology.
- Yanan Xi. (2014). Research on the influencing factors and promotion strategies of young college teachers' teaching ability. Shenyang Normal University.
- Anran Zhi. (2013). Research on the development of young teachers' teaching ability in Chinese universities. Nanjing University of Science and Technology.

- Changle Liu. (2015). Research on Professional Identity of Full time Postgraduates of Higher Education. Hunan Normal University.
- Yi Sun. (2018). Research on the topic selection orientation of China's master's degree theses in higher education in the past decade. Southwest University.
- Hui Liu. (2015). Research on the Relationship between University Constitution and the Construction of Modern University System. Nanchang University.
- Suying Lu. (2015). Research on Constitution Construction of Higher Vocational Colleges Based on Modern University System. Wuhan University of Technology
- Yanyan Li. (2015). Research on the Curriculum of Entrepreneurship Education in Local Colleges and Universities Shandong Normal University.
- Yue Hu. (2016). Research on entrepreneurship education curriculum in the context of mass entrepreneurship and innovation. Chongqing Normal University.
- Run Xu. (2018). Research on the Construction of Educational Discipline of Normal University under the Background of "Double first-class". Shaanxi Normal University.
- Xiaofei Rong. (2018). Research on the role of university council in the construction of "double first-class". Chongqing University.
- Yingqiang Zhang. (2011). Transcending the dispute between "discipline theory" and "research field theory" -- Reflections on the direction of discipline construction of China's higher education. Peking University Education Review, 9 (04): 49-61+184.