Current Situation, Problems and Countermeasures of Journalism and Communication Educational Research in China

Based on Data Analysis (2000-2014) of CNKI

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Abstract—**This paper takes the characteristics of title, author, references, and publication year in the literature of related journalism and communication educational researches in China as the research object, adopts knowledge mapping to describe and evaluate the current situation and development tendency of journalism and communication subject education, conducts comprehensive and visual analysis on the studies, presents their front edge, hotspots, knowledge base and cooperation network and clarifies the relationship and interaction between various studies.**

Keywords—journalism and communication educational research; cooperation network; knowledge mapping

I. INTRODUCTION

In the past fifteen years, the talent team, research institute, funding project of research fund of journalism and communication educational researches have achieved great development, most directly reflected in the number of literature achievements in educational research of this discipline. Based on the theory of knowledge mapping, this paper analyzes the related content of journalism and communication educational researches in CSSCI recorded by CNKI and published by core journal of Peking University from 2000 to 2014, understands the development situation of journalism and communication educational research in China in the fifteen years, views the existing problems in this research field, and adopts the method of knowledge mapping to construct visual "knowledge graph" of journalism and communication educational research in China from three aspects, namely, evolution course and characteristics at different stages, tendency of the related subjects and knowledge flow, subject and cooperation network of journalism and communication educational research.

II. DATA SOURCES AND RESEARCH METHOD

A. Concept Analysis

Journalism and communication educational research takes the education of journalism and communication as main object of study. It is a kind of cognitive activity that people adopt scientific approaches to analyze the phenomenon of journalism and communication education, reveal its essence and explore its law according to the objective needs of development of journalism and communication, and it runs through the development of journalism and communication. However, the manifestations of educational scientific research results are diverse, and the most important forms have educational survey reports, educational experiment reports and academic papers.[1] Because the concept and limit of journalism and communication education will change with the development of history, its research scope will be very broad. All the content of the teachers, educational objective, curriculum research, learning behavior, teaching evaluation, investigation, methodology, research report and so on related to journalism and communication belong to the scope of journalism and communication educational research. This paper explores re-studies of the achievements of journalism and communication educational research that have been obtained, especially the re-studies that take academic papers of journalism and communication educational research as the representative results.

B. Data Sources

This paper takes Chinese core journals recorded in CNKI of China Academic Journal Network Publishing Database from 2000 to 2014 as the sources of journal (including Chinese core journal of Nanjing University and Chinese core journal of Peking University). To publish the scientific achievements, scholars in the field of education discipline need to experience the process of publication and then their works can be officially recognized by the outside world. There exist delay between the time when database includes literatures and the time when literatures are published openly, that is, the time when CNKI includes literatures will be 2 or 3 months after the literatures are published openly, in other words, the literatures published in December, 2014 will be included by CNKI in March, 2015. Therefore, in order to comprehensively collect literatures and obtain more data information, the deadline of final collection for this research is December 2015, and finally the number of the valid articles is 3431 in total. (Retrieval mode: the title is "journalism", "communication", "media" or "intermediary" and the theme is "education", and the above method is the most extensive scope of journalism and

communication; or the title respectively is "broadcasting and television", "advertising", "edition and publication", "network and new media", "digital publishing" and the theme is "education", and the above method is the scope of professional classification.)

C. Research Method

This research will adopt knowledge mapping analytical method of scientific metrology and use quantitative approach to analyze the related document literatures of journalism and communication educational research with the help of information technology. The mapping drawn by Citespace II, STATA, UCINET, Netdraw and other analysis software in this paper will take the following aspects as the main content: exploring the frontal hotspot issues of journalism and communication educational research, grasping the subject development process of this subject educational research, judging the adjacent disciplines and interactions that affect subject education, and selecting key scholars or research institutes and analyzing the features of cooperation network.

III. KNOWLEDGE MAPPING ANALYSIS OF JOURNALISM AND COMMUNICATION EDUCATIONAL RESEARCH

A. Hotspots and Frontal Analysis of Journalism and Communication Educational Research

By using the keyword selection on the parameter setting of Citespace software as Network Node Types, this paper conducts co-occurrence analysis for the keywords in the related documents recorded in CNKI and obtains the co-occurrence network mapping of keywords of journalism and communication educational research. There are 226 keyword nodes and 252 ligatures in the co-occurrence network mapping of keywords. In the 3,431 literatures from 2000 to 2014, there are 226 keywords with a frequency of more than 3 times. The interpretations are as follows:

1) Characteristics of hotspots evolution of journalism and communication educational research: First, the hotspots of macro-construction and development orientation of this subject, such as studies on journalism, theoretical researches on communication sciences, studies on media literacy education and so on, have been got great concern in the new century, and have been continued and affected the emergence of other hot spots. In the mapping, the high-frequency keywords of journalism and communication educational research that have emerged for more than 100 times are: journalism education, journalism major, journalism talents, journalism and communication education, news institutions, editing and publishing major, media literacy education, editing and publishing science, communication talents, media convergence, transformation of education, curriculum setting and so on, and the above keywords are involved with the following themes: "major", "talents", "teaching", "theory" and "curriculum".

Second, the significance of teaching research in journalism and communication subject education has been gradually promoted, and the keywords related to this phenomenon

appear more and more frequently in various stages and they are obviously affected by the development of communication technology. Mass-communication, television news, edition and publication in high-frequency keywords are produced based on the study for traditional mass media of communication. However, with the rapid development of the Internet, media convergence and new media emerge in the keywords in 2008, after that, all-media appears in the high-frequency keywords in 2011 and We-Media comes out in the high-frequency keywords in 2014.

2) Frontal subject analysis for journalism and communication educational research: Research front is reflected by the literatures in the co-citation matrix of literatures and the burst terms used in the citing articles or the clustering of burst terms, which specifically refers to the use of "burst terms detecting" algorithm to determine the concepts in research front[2]. Its fundamental principle is to count the vocabulary frequencies in the titles and abstracts of the papers in the relevant fields and to determine what are the hot words in the research front according to the growth rate of these words. After adopting clustering analysis to analyze and study some terms simultaneously appearing in a literature, the "co-occurrence network graph of research front terms" in a certain field can be drawn. The data sources used in this section come from the database of Chinese Social Sciences Citation Index (CSSCI). The burst terms clustering mapping of journalism and communication educational research front can be obtained after running the software, and the node label in the mapping represents the field of journalism and communication educational research front. The use of Term analysis is more in-depth to the text content than the keyword analysis, and the reflected information is more comprehensive.

Through the analysis of background data, it can be concluded that media literacy education, new media, discipline construction, editing and publishing major, media integration, journalism, curriculum setting, globalization, and communication psychology rank in the top few places of high burst rate. All the keywords that have burst number involve the following categories: the first is the curriculum and teaching research covered by the research category of higher education, such as discipline construction, curriculum setting, teaching reform, teaching mode, and so on. This is the basic fields that journalism and communication must pay attention to as an independent discipline in higher education in China, and it solves the big problem in the macroscopic direction of discipline development. The second is the training and construction of students majoring in journalism and communication subject, such as editing and publishing major, postgraduate education, compound talents, advertising education, education mode, teaching content, the development of journalism and communication major in local universities, and so on. This is the middle level of the educational research in this subject. The third is about the academic and scientific research in journalism and communication major, such as media literacy, media integration, journalism, globalization, communication psychology, communication studies, all-media, news history, journalistic professionalism, research methods, and so on, and the fields covered by these keywords are the

most specific micro-knowledge theory systems in subject education. From the above content, it can be seen that the themes of journalism and communication educational research front have the following characteristics:

a) Exploration and reconstruction of subject theory frontier: Journalism and communication is dually affected by the development of media technology and the change of social environment. The content and major division of subject education will not stay in the inherent situation, and its content will inevitably intersect and integrate with humanities and social sciences, such as sociology, economics, social psychology, political science and philosophy and so on, and the influence of technology will make natural sciences such as information technology have close contact. Just under this tendency, the frontier of journalism and communication educational research has put emphasis on discipline construction and teaching reform. It has derived the theme on media literacy when paying attention to the perspective of people's information use and socialization, and derived the frontiers of theoretical education, such as communication psychology and network communication, when putting emphasis on phenomenon of communication and media development.

b) Interdisciplinary integration of major setup and orientation of talent training: The differences between the emerging media and its media technologies make journalism and communication education have the theory and reality to divide majors. As required by all-media, subject education should be innovated in teaching idea. On the basis of majors, the relevant knowledge will be "constructed" into student's knowledge system. Therefore, from around 2010, media integration, new media and all-media have become the theme of the journalism and communication educational research frontiers, which are constantly updated with the communication technology.

c) Lack of teacher's special research: The teacher is the main body to implement subject curriculum, an important participant in the curriculum reform, and also a practitioner of curriculum teaching and one of the decisive factors of final effect. However, there are quite a few researches on teachers in the frontiers of journalism and communication educational research in China. The existing researches on journalism and communication teachers are mostly scattered in the literatures of other themes. The special researches on teachers in the frontiers of educational research in this subject is almost blank, so there are a lot of space and problems to be further explored in the field of teacher research.

B. Intellective Base Analysis of Educational Research of Journalism and Communication Education

Intellective Base refers to the citations of literatures that contain glossary of terms of research front, in fact, they reflect the knowledge absorption and utilization of concepts in research front in the scientific documents. This papers uses Citespace software to select Cited References as network Node Types, conducts literature co-citation analysis for the literatures, obtains the knowledge mapping of literature co-

citation of journalism and communication educational research, takes author citation frequency (Frep≥6) as the standard after adopting backstage data to analyze and count the mapping, selects the literatures ranking in the first 20 places and finally obtains the document lists with high-frequency citation.

From the mapping interpretation and data analysis, it can be seen that the characteristics of intellective base of educational research of journalism and communication education are as follows:

1. The scholars of journalism and communication educational research in China are basically college teachers who are engaged in research and teaching activities, and its main intellective base is mainly based on this subject. However, the practitioners of journalism and communication education are not only the teaching institutions of colleges and universities, but also the media industry in a broader sense. Because the professional concept of the discipline must be carried out in the practical activities of the industry, the professional education goal can be finally completed. Therefore, as a discipline with strong practicalness and applicability, journalism and communication educational research needs cooperation between the education and the industry, however, at present the main body of journalism and communication educational research in China predominantly is teachers in the field of higher education.

2. The theoretical perspective of knowledge system that is widely adopted within the discipline is not broad enough. The theoretical system of journalism and communication educational research is not much blended with other disciplines, and lacks theoretical genes of other related disciplines. The highly cited literatures of journalism and communication educational research is concentrated in these fields, such as theoretical research of communication, theoretical research of journalism and media literacy education. Only The Structure of Scientific Revolution written by Thomas Kuhn does not belong to journalism and communication discipline, therefore, the intellective base of educational research in this subject is relatively simple, and the "interdisciplinary" integration reflected in the research front has not yet appeared in the construction of intellective base.

C. Cooperation Network Analysis for Main Body of Journalism and Communication Educational Research in China

The most significant form of scientific research cooperation is the cooperation between researchers to publish papers, and the research on the cooperation situation of papers is an important entry point to analyze the status of scientific research cooperation. The number of collaborative papers and its cooperation status of journalism and communication educational research can reflect the characteristics of their cooperative research. Social network analysis is a set of norms and methods for analyzing social relationship structure and its attributes. It takes the formed relationship between different actors (such as individuals, groups, organizations) as the main research object, not the actors themselves, that is, the research object of social network analysis is relational data, not attribute data in traditional statistical sense[3]. This paper adopts social

network analysis to explore and analyze the collaboration relationship of authors of journalism and communication educational research. The STATA developed by America Computer Resource Center is adopted when the co-occurrence matrix of co-authorship is constructed, and this software can be used as statistical analysis software for analyzing and managing data.

From the obtained cooperation network mapping, it can be seen that the whole connectivity of authors of journalism and communication educational research in the fifties years is relatively low. The density of cooperation network is 0.0164, and this numerical value shows the loose network connections and insufficient information flow and academic collaborations between authors. Many middle nodes have no connection with other nodes, which are formed by two authors who conduct cooperation to publish papers. This cooperation network belongs to the typical cooperation between teachers and students or between colleagues. Through the social network analysis that the author has cooperated, it can be found that the cooperation network with relatively high analysis index of closeness centrality and betweenness centrality in the field of journalism and communication educational research has two big characteristics: the first is that the research needs to be completed by the teamwork due to the cooperation network combined by the scope and methods of educational research; the second is campus cooperation network completed by well-known scholars in the field of journalism and communication who lead colleagues or students.

By using the institute selection on the parameter setting of Citespace software as Network Node Types, this papers conducts co-occurrence analysis for the institutes in the related documents recorded in CNKI and obtains the co-occurrence mapping of institutes of journalism and communication educational research. In the mapping, the larger nodes represent the institutes that have published the largest number of articles and they are: Communication University of China, Renmin University of China, Fudan University, Huazhong University of Science and Technology, Wuhan University, Sichuan University, Jinan University, Tsinghua University, Hebei University and Henan University. The overall density of the whole network is only 0.0003, therefore, cooperation degree between institutions is very low and the condition of academic exchange of educational research is alienated.

Through the social network analysis cooperated by institutions, it can be found that the cooperation frequency of scientific research institutions is low and the academic cooperation is loose. Although the number of published researches and papers is generally increasing, it just is the intra-institutional cooperation, and no large-scale inter-institutional cooperation has appeared. The central effects of a few high-level scientific research institutions in the entire cooperative network are very significant, such as Renmin University of China, Communication University of China, Huazhong University of Science and Technology, Wuhan University, and so on, but most scientific research institutions still stay in marginal status. In drawing the network mapping cooperated by scientific research institutions, this paper finds that 480 institutions have published articles to participate in journalism communication educational research in the past 15 years, but only 54 institutions have more than 10 papers published, so there is a huge gap between research level and input level.

IV. CURRENT SITUATION AND EXISTING PROBLEMS OF JOURNALISM AND COMMUNICATION EDUCATIONAL RESEARCH

A. The Evolution of Journalism and Communication Educational Research Hotspots Continuously and Dynamically Reflects the Change of Disciplinary Structure, but the Theoretical Property and Technicality of Its Achievements Remain to Be Improved

1) The continuous dynamic evolution of research hotspots reflects constant change of disciplinary structure: The change of the various research topics is refection of integral structure evolution of the discipline -- journalism and communication that research scope of the discipline is constantly expanding, the number of research hotspots is increasing and the fields related to the hotspots is scattering. There is a developing trend of differentiation and detailing in research topics. For example, the research hotspots in the field of communication change with the development of times, that is, in the beginning, the main research topic is mass communication, and then, a number of detailed topics gradually emerge, such as organizational communication, international communication, communication psychology and network communication. In addition to being influenced by the development of the discipline itself, the internal structure of journalism and communication is also greatly influenced by the development of social and media technologies. Every transformation of the communication paradigm driven by media evolution will cause lag of journalism and communication education behind the technical development for a period of time or to some extent.

2) The theoretical property and technicality of research achievements of hotspots remain to be improved: Although the research topics of journalism and communication educational research in China are widely distributed in all aspects of education field, there is still a lack of innovation and breakthrough in theoretical research, and basic theoretical research is far enough. Compared with other humanistic and social science, the discipline has a relatively short development history. As a result, the research on journalism and communication education has been focusing on the fundamental problems of disciplines, and the research achievements are mostly those based on description and summary but lacking systematicness and theoretical property. This is the objective historical factor that influence the evolution of disciplinary research.

B. The Evolution of Journalism and Communication Educational Research Front Is Characterized by Contemporaneity and Cross Fusion with Research Hotspots but Its Research Perspective Lacks Indigenous Innovation

1) The evolution of the educational research front is characterized by contemporaneity: Under the influence of the changing media technology environment, in journalism and communication education, the media ethics and values education remain unchanged, while the educational idea, curriculum content, training mode, etc. are changing with times. For example, the advent of research fronts of the "Globalization & Journalism and Communication Education", "New Media Research" etc. is closely related to the background of the times.

2) The evolution of the educational research front is characterized by cross fusion with research hotspots: In hot research areas attracting high attention from scholars, it is easy to gather collective wisdom to find out problems and create new knowledge. For example, the "media literacy", a hot research topic since 2000, through many years of accumulation and development, has constantly generated and developed new research fronts such as new media literacy and new development of foreign media literacy education, and these research fronts have also constantly led new research hotspots, so the two influence and promote each other to facilitate the development and innovation of journalism and communication educational research.

3) The educational research perspective lacks indigenous innovation: As Chinese journalism and communication is gradually developed on the basis of the introduction of western theories, the research tradition or knowledge genealogy is still in the process of forming, so the resource of research tradition or knowledge genealogy is relatively limited. Except the research in the journalism and communication history of China, there is a lack of indigenous innovation in research front of the journalism and communication. Only by broadening the academic horizon and starting from the nature and domain of discourse of local problems can we create an independent academic paradigm.

C. The Theoretical Horizon of Knowledge Hierarchy of Journalism and Communication Education Is Not Broad Enough, Which Is in Contrast to the "Interdisciplinary" Reality of the Discipline Itself

By making the literature co-citation knowledge mapping of the journalism and communication educational research, this research analyzes the knowledge base of the discipline research. The scholars of research in journalism and communication education in China are mostly college teachers engaged in research and teaching, and the journalism and communication educational research mainly focuses on the discipline, so the theoretical horizon of knowledge hierarchy widely adopted inside the discipline is narrow and the discipline barely integrates with other disciplines and lacks theory genes of other related disciplines. As a result, the current situation of the discipline education reflected by the research results is greatly different from the reality of the journalism and communication as a "interdisciplinary" discipline "integrating with multiple disciplines". At present, there is no stable and influential major academic school in the field of journalism and communication education in China. The theoretical research of the whole discipline is relatively insufficient in continuity and systematicness, whose main content is guided by the introduction of western knowledge and the specific problems in China, showing weak accumulation of the research achievements.

D. Lack of Cooperation Among Researchers of Journalism and Communication Education

1) There is a lack of information communication and academic cooperation among journalism and communication education researchers: The cooperation relationship among them mainly is teacher-students cooperation or cooperation between colleagues. The reason for this is related to the applicable methods of the educational research of the discipline, that is, highlighting qualitative and differentiating research, lack of the research requiring team cooperation, such as experimental survey, or lack of the research paradigm with unified standard.

2) Among research institutions, they barely cooperate with each other and the academic cooperation is rather loose: Moreover, most cooperation is internal cooperation, and no large-scale cooperation between institutions is found. In the entire cooperative network, only a small number of high-level research institutions are in the center, while most research institutions are still on the edge, so there is a huge gap in the research level and investment between them.

Journalism and communication educational research needs to broaden the cooperation and communication channels so as to, through scientific research cooperation, strengthen the construction of discipline education research team. Only multidisciplinary, multi-area, multi-level, multi-type cooperative research can effectively promote the overall development of the journalism and communication, and can effectively facilitate the development of professional teachers of journalism and communication and the enhancement of the talent training quality.

V. CONCLUSION

A. Suggestions to Journalism and Communication Education Researchers

1) Changing research methods and concepts: The development of journalism and communication has been greatly influenced by the revolution of communication technology. Under this background, the educational research of this discipline is required to make change, that is, in terms of research method, putting emphasis on empirical research to break through the traditional disciplinary partitionment standard based on media types; in terms of research concepts, focusing on the types of contents of communication and introducing the theories of other social sciences and natural

sciences, such as economics, management science, sociology and information science to study the emerging media, the "perpetual motion machine" for discipline innovation.

2) Broadening the research horizon, and starting from the nature and field of the local problems to create independent academic paradigm: In the era of new media, the research topics of journalism and communication education should take consideration of humanistic themes such as human involvement, communication and ethics, so the journalism and communication education research needs to strengthen the research in comprehensive quality including the relationship between social cognition and social cognition, media analysis, etc. In addition, to strengthen research tradition, we cannot be limited to the research tradition or knowledge spectrum of the journalism and communication itself, but should focus on the whole research tradition or knowledge spectrum including the humanities and social science.

3) Strengthening research on the field of teachers: The professional quality, knowledge and ability of teachers are at the core position in discipline construction, so the research in issues relating to teachers should be strengthened in the research of the discipline education, and only in this way, can it be more in favor of the development of professional teachers of journalism and communication and the enhancement of the talent training quality.

B. Suggestions to the Administrative Departments of Journalism and Communication Education

1) Encouraging the cooperation between the educational circles and the industry in policy and management system: In the field of journalism and communication, much knowledge is characterized by high practical direction, so in addition to strengthening the cooperation between the researchers, it should also strengthen cooperation between theory researchers and corresponding professionals in the practice domain, but at present, no matter the cooperation between scholars or institutions, in the education field of journalism and communication, there is a lack of participation of professionals from the field of practice domain. The influential official measures of China at present stage is to bring the departments of media and the media industry into the higher media education via the method of "mutual contribution" which, according to present situation, breaks through the traditional media education to some extent and reflects the active exploration of China's higher media education in the era of all media.

2) Improving the talent introduction and assessment system of colleges and universities: At present, in the management system of colleges and universities, talent introduction or assessment requires quantitative criteria of academic degree and diploma, research paper and projects, but such criteria are not so much applicable to industry talents, so to improve the reform in journalism and communication

teaching faculty, the education administrative department should improve the management system.

3) Facilitating the formation of academic community: At present, there is no a true sense of academic community in the education field of journalism and communication in China. Therefore, in the current educational environment and the educational administrative system, the responsible departments are supposed to facilitate the formation of academic community. For example, they can integrate the teacher resources of colleges and universities to organize regular academic forums and seminars to study the major problems and the front topics in the discipline.

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