Who Gets Hired by Top LIS Schools in China?

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Abstract. In this study, we provide evidence and discuss findings regarding talent flow and intellectual diversity in library and information science (LIS) using a faculty hiring network of 274 full-time faculty members from 7 top LIS schools in China. We employ three groups of data items, including the universities they got Ph.D., their Ph.D. programs, and whether their graduation schools are iSchools. We use these to develop a descriptive analysis of the community's educational backgrounds. We show that faculty members in Nankai University are the most diverse, while Wuhan University, Nanjing University, Renmin University of China, and Peking University are experiencing intellectual inbreeding. Wuhan University has sent the largest number of talents to other LIS schools. Top LIS schools in China prefers those who graduated from LIS schools and more than half of the faculty members at each of the top 7 LIS schools graduated from iSchools. Overall, LIS faculty educational backgrounds analysis has considerable value in deriving credible academic hiring and revealing talent flow within the field.

Keywords: Intellectual Diversity, Talent Flow, LIS School.

1 Introduction

Faculty has become a central proxy for institutional quality. The increasing volumes of Ph.D.s gradually became an indispensable source for universities in nearly every job market. Most prominent schools publicly claim to strive for faculty diversity. However, one question that often shrouds this statement is how diverse the faculty in top library and information science (LIS) schools is as compared to the reality the community is claimed to represent.

A large number of studies in the field of quantitative studies of science have been devoted to this question: several studies attempted to analyze the educational backgrounds of iSchool (refers to a group of university academic units that are dedicated to

the study of information) faculty members. Wiggins and Sawyer [1] assessed the intellectual diversity of iSchools by analyzing the PhD programs where iSchool faculty members received their doctorates. Based on the educational backgrounds of faculty members in each iSchool, they divided iSchools into four groups: Computational, Library & Information, Sociotechnical, and Niche. More recently, Luo [2] studied the interdisciplinarity of iSchools by analyzing iSchool faculty members' online profiles and survey data collected from 135 iSchool faculty members. Besides, some studies attempted to examine the research of iSchools faculty members by using journal publication data [3, 4, 5].

However, very few studies have been taken to analyze the landscape of talent flow of LIS schools, especially in other countries. In order to bridge this gap, the present study aims to investigate where the full-time faculties of 7 top Chinese LIS schools assessed by Fourth Round of China Discipline Ranking got their Ph.D. Specifically, our goal is twofold. First, we examine intellectual diversity in academia derived from faculty hiring networks. Second, we examine network structures of faculty talent flow to understand intellectual inbreeding (if any) in Chinese LIS schools. Our methodology and some initial results are reported in this poster. The next step of our work is discussed by the end of this proposal.

2 Materials and Methods

2.1 Choice of Data Set

We chose the data from Fourth Round of China Discipline Ranking. It's an overall assessment by China Academic Degrees & Graduate Education Development Center (CDGDC) upon first-level disciplines—disciplines with the rights to grant doctor degree and master degree, according to "Degree Granting and Talent Training Course Catalogue" released by the Academic Degree Committee of the State Council and the Ministry of Education. Initiated in 2002, the once-in-four-year Discipline Ranking has completed four rounds of assessment. It is recognized as one of the most authoritative subject ranking by Chinese academia.

The fourth round of assessment is the latest one, it is started in April, 2016, and published on December 18th, 2017, ranging in 95 first-level disciplines, including 7449 specific disciplines from 513 units. According to the principle of "Accurate Calculation and Distinctive Presentation", disciplines ranked above 70% in an overall scoring will be published in the order of nine levels. We chose the schools ranked A+, A-, and B+ ("A" did not appear in the assessment) in Library Information and Archives Management Discipline as our target group, which we call "top LIS schools" in this research.

Data was collected in September 2019. September was chosen for data collection so that each top LIS school had time to update their websites with faculty changes for the academic year. Specifically, we selected Wuhan University, Nanjing University, Renmin University of China, Peking University, Nankai University, Central China Normal University, and Sun Yat-sen University. We determined where the listed full-time faculty received their doctor's degrees, while adjunct professors, visiting professors, and retired professors were out of consideration when selecting the data source.

2.2 Data Collection and Analysis

The data collection was a three-step process. The primary focus of the data collection process was on faculty members' Ph.D. programs as described by the individuals themselves on the official websites of selected LIS schools. Next, for those who did not mention their education background, we retrieved their Ph.D. program information in their publications. In the third step, we retrieved ProQuest Digital Dissertation Library and Wanfang Data as completion tools.

For each full-time faculty, the following data items were obtained: the universities they got Ph.D., their Ph.D. programs, and whether their graduation schools are iSchools. As iSchools is a relatively young and developing organization, while some of the professors graduated before iSchools was born, we just check the status quo of their graduation schools. In addition, professors graduated with master's degree have been removed from our data set for the sake of accuracy. We divided their Ph.D. programs into four groups according to Wiggins' classification scheme [1], namely, Computer Science & Engineering, Library, Information & Archive, Sociotechnical, and Other.

| University | Full-time faculty | Without Ph.D. | Unknown | Sample |
|---------------------------------|-------------------|---------------|---------|--------|
| Wuhan University | 80 | 1 | 4 | 75 |
| Nanjing University | 57 | 2 | 10 | 45 |
| Renmin University of China | 39 | 0 | 4 | 35 |
| Peking University | 28 | 2 | 0 | 26 |
| Nankai University | 17 | 3 | 0 | 14 |
| Central China Normal University | 52 | 0 | 4 | 48 |
| Sun Yat-sen University | 33 | 2 | 0 | 31 |
| Total | 306 | 10 | 22 | 274 |

Table 1. Final Sample of full-time faculties in Chinese top LIS schools.

3 Preliminary Findings

3.1 Universities Where Professors got Ph.D.

Fig. 1 shows universities where full-time faculties got their Ph.D. and Fig. 2 shows the talent flow in these 7 LIS schools. We notice that the faculty members in Nankai University are the most diverse. The majority of professors in Central China Normal University graduated from Wuhan University, which is a distance benefit. At the same time, Wuhan University, Nanjing University, Renmin University of China, and Peking University are experiencing intellectual inbreeding.

We also find that Wuhan University has sent the largest number of talents to other LIS schools, this may due to the fact that iSchool at Wuhan University is the best LIS school in China. However, as a prominent university and a well-known iSchool in

China, Nankai does not perform well in talent flow, one reason might be the small volume of this iSchool, another reason might be the LIS research landscape in China, that is, LIS research in southern China is prospers which needs further investigation.

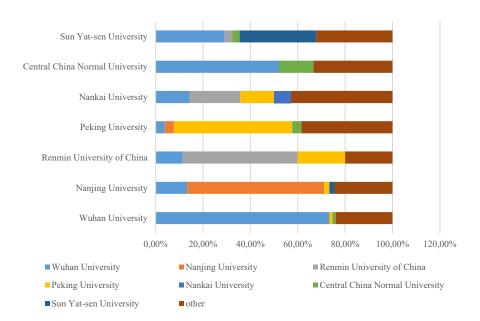


Fig. 1 Ph.D. programs of professors.

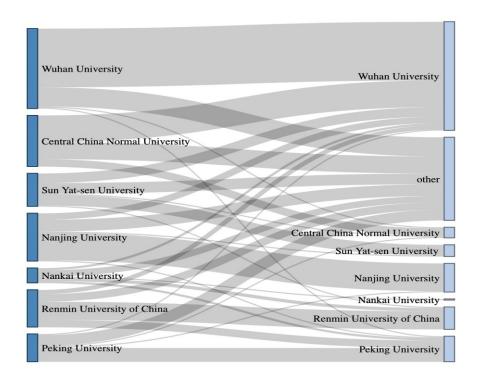


Fig. 2 Talent flow in LIS community.

3.2 Ph.D. Programs of Professors

Fig. 3 shows the Ph.D. programs where the professors graduated from. We figure out that top LIS schools in China prefers those who are graduated from LIS schools. One exception is Central China Normal University, nearly 30% of the professors got Ph.D. from computer science and engineering, this might be the reason why this LIS school could rank highly, while its host university is not in the tier 1 list.

Among those who are graduated from other Ph.D. programs, 7 of them studied history, who do research in ancient books after graduation; 3 studied law, which might be related to intellectual property issues in library science; 3 graduated from mathematics schools, which might be explained by our contemporary data-driven mode of scientific practice.

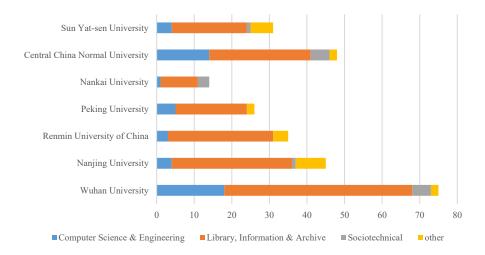
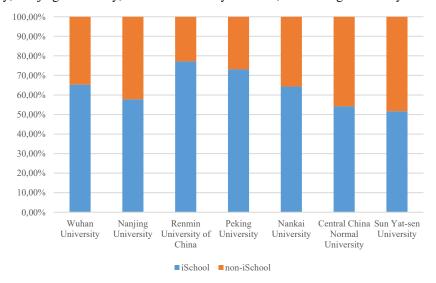


Fig. 3 Ph.D. programs of professors.

3.3 iSchool Coverage

As Fig. 4 shows, more than half of the faculty members at each of the top 7 LIS schools were graduated from iSchools, which might be able to be explained by the recognition and reputation of iSchools in this community. We could also witness that iSchools graduates occupy apparently more positions than non-iSchools graduates in Wuhan University, Nanjing University, Renmin University of China, and Peking University.



 $\textbf{Fig. 4} \ iS chool \ coverage \ of LIS \ faculty \ members.$

4 Conclusion and Future Work

In this project, we aim to analyze the educational backgrounds top LIS school faculty members in China. Our initial results suggest that the faculty members in Nankai University are the most diverse, while Wuhan University, Nanjing University, Renmin University of China, and Peking University are experiencing intellectual inbreeding. Wuhan University has sent the largest number of talents to other LIS schools. Top LIS schools in China prefers those who graduated from LIS schools and more than half of the faculty members at each of the top 7 LIS schools graduated from iSchools.

In the next step of this project, we will investigate other flow patterns of top Chinese LIS professors, i.e., the study flow, employment flow and workplace flow. Another exciting direction is to find out the critical factors affecting top Chinese LIS full-time faculties flow so that we could gain better knowledge about a brief history of community development and intellectual diversity in Chinese top LIS schools.

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