Qualitative Research over Quantitative Research? Ethnography for Library Science in China

Jiayong Chen, Kuanghua Chen*

Department of Library and Information Science, National Taiwan University, Taipei, Taiwan.

Abstract
Different roles interact in libraries, where numerous activities, events, and stories unfold every day. To enhance library resources and services, in addition to digital humanities and digital libraries, sophisticated and socially insightful empirical research methods are necessary in library science to uncover the social reality beneath surface appearances. Quantitative research and qualitative research have different assumptions regarding epistemology, methods, and outcomes. Qualitative research focuses on the construction process of social facts. It is a method used in anthropology to gather and analyze data, seeking informative samples that offer depth and breadth. Ethnography is the traditional method of anthropology used to explore social and cultural phenomena. Chinese scholars noticed the social aspect of libraries. An increasing number of unobservable phenomena, unimaginable issues, and difficult research questions can be uncovered through qualitative research methods such as ethnography to address pertinent matters in the field of library science.

Keywords
Library Science, Ethnography, Anthropology, Qualitative Research

1. Introduction
Compared with previous humanities research, digital humanities refer to humanities research that can only be carried out with the help of digital technology, which has enabled the emergence of some unobservable phenomena, unimaginable issues, and difficult research in the pre-digital era (Hsiang, 2016). The concept of “digital library” emerged 20 years earlier than “digital humanities” (Zeng et al., 2000). In the past few years, the fruitful achievements of digitalization around the world have brought opportunities and challenges to the humanities. Both digital humanities and digital libraries use digital technology to conduct research and practice on cultural heritage that has become history.

The dramaturgy adapted into sociology from the theatre by Goffman (1959) regards the daily life of human society as a stage. All walks of life include the social appearance on the front stage and the social reality on the backstage. As an institution for information organization and reader service, the library is a stage where different roles such as readers, librarians, and vendors interact. The libraries are engaged in resource construction and reader services every day, and many activities, events, and stories happen. The social reality behind social appearances often requires media reporters or social science researchers to reveal it, and library science may require delicate and socially insightful empirical research methods to improve library resources and services.

2. Library science calls for empirical research
The main paradigm of library science research in China has long included descriptive research on expressing and explaining real library activities, and normative research that attempts to outline an ideal library and provide reference for the activities of real libraries. The lack of empirical research is the reason for the low status of library science in...
the field of humanities and social sciences in China (Qiu, 2008). Library science cannot be limited to the working methods, operation skills, and workflow in the library, and it is necessary to treat the library as an objective social phenomenon (Li, 2008). Since the end of the 20th century, Chinese scholars began to absorb the ideas of the Chicago School of Sociology (Huang, 1998), noticed the sociality of libraries, investigated libraries from the perspective of social sciences (Wang, 2003), and introduced empirical research methods of social science into library science, emphasizing the scientific research procedures, because only in this way can library science become a true science. Therefore, Chinese scholars of library science have begun to pay attention to empirical research, believing that empirical research is the foundation and main driving force for the development of library science, and it is also the method to overcome the dilemma of library science. However, empirical research needs long-term patience, accumulation, and teamwork, and few scholars have made outstanding contributions (Ye, 2017).

3. Debate between quantitative and qualitative research

The controversy between quantitative research and qualitative research has been discussed in European and American academia for many years, and qualitative research methods are gradually accepted (McLaughlin, 1991). The empirical research of library science in China is mainly based on quantitative research, and the debate on the quantity and quality of social science research abroad is of reference value to library science in China. Quantitative research and qualitative research have different assumptions in epistemology except for the different methods and results of collecting and analyzing data.

Habermas proposed the paradigm of quantitative research in 1968, which is called the "ladder of materialistic inquiry" (Habermas, 2015). As shown in Table 1, most positivism and biomedicine follow the fixed step-by-step research model of quantitative research.

<table>
<thead>
<tr>
<th>Table 1. Ladder of Materialistic Inquiry1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 9: Revise Hypotheses</td>
</tr>
<tr>
<td>Step 8: Conclusions</td>
</tr>
<tr>
<td>Step 7: Data Analysis</td>
</tr>
<tr>
<td>Step 6: Data Collection</td>
</tr>
<tr>
<td>Step 5: Sampling and Collection of Research Tools (Instrumentation &amp; Sampling)</td>
</tr>
<tr>
<td>Step 4: Research Design</td>
</tr>
<tr>
<td>Step 3: Hypothesis Formulation</td>
</tr>
<tr>
<td>Step 2: Literature Review</td>
</tr>
<tr>
<td>Step 1: Define Research Problem</td>
</tr>
</tbody>
</table>

Figures and Tables

Figure 1. Circle of Constructivist Inquiry2
Quantitative research follows the positivist method and was once considered as the only way to understand human nature and society (Kuper, 2000). The basic idea and spirit of social science positivism is to master the laws of mental world through scientific methods of experience and observation, thereby fully understand the relationship between human mind and behavior. Based on this, positivist researchers believe that human behavior and social life, like the objects of natural science research, can be studied as objects, and there is a causal relationship between phenomena, so the objectivity of discovery can be guaranteed through the common sensory ability of human beings. Positivism produces hypotheses through deduction, transforms the concepts in the hypotheses into variables and indicators that can be experienced by human common senses, and then quantifies them into data (Bryman, 2003). After the verification process, the hypothesis test becomes reliable knowledge, and it is considered as objective knowledge beyond personal subjective experience and belief.

Positivism has been in the mainstream of social science research for a long time, while Chicago School, which is famous for fieldwork, has not completely turned to positivism. The reason why qualitative research has been highly praised in many fields in recent years is that some scholars believe that quantitative research is widely used, and most of them lack of social insight, so it is necessary to introduce different research paradigms to break the deadlock (Hu, 1996). Qualitative research does not produce research results through statistics or other quantitative procedures, but more importantly, it has a different epistemology, which holds that people's understanding of the world they live in is constructed by filtering and selecting personal perception processes and personal interpretation. Human social life is the process and result of interaction. Any true understanding of social reality must be based on the subjective experience of people living in it. Researchers should master and understand people's subjective meaning and construction. In addition, because the research on people cannot exclude the influence of researchers' involvement, and the meaning and interaction vary from person to person, it can only be understood and cannot be controlled, copied, and verified. Therefore, for qualitative researchers, only qualitative research methods can fully obtain data closer to the truth, while some empirical studies such as questionnaires have scientific appearances, which may miss important data and the truth of the facts.

4. Library science needs qualitative research

Library science researchers in China don't familiar with qualitative research, and some mistakenly think that qualitative research is just to chat with a few people. Qualitative research focuses not on search for the universal laws or the inferential statistics of causal hypotheses but on the construction process of social facts and people's experiences and explanations in different or unique cultural contexts (Hu, 1996). In addition, qualitative research can make researchers feel learning and growth, directly participate in the social pulse, and find vitality and social value for academic research, which just echoes the role that library science should take root in the social pulse and assume social responsibility.

Qualitative research is an effective method for collecting and analyzing data in some academic fields for a long time, which is suitable for revealing the empirical connotation of people's experiences and exposing and explaining some little-known phenomena under the surface. Library science has a natural practice domain and provides researchers with fields of qualitative research. Facing libraries of different types, disciplines, and regions, readers of different ages, and ethnic groups, qualitative researchers can find suitable research topics with their theoretical sensitivity (Glaser, 1978). The selection of objects for qualitative research focuses on the rich connotation of information, and the sampling principle is to provide depth and breadth of diverse social facts (Patton, 1990). Quantitative research, on the other hand, pays attention to representativeness, tends to the random characteristics of the sample and the number required for inferential statistics, and uses samples that can represent the population and make inferences about the mother population as the sampling principle.

Qualitative research also has high demands for researchers, and some of them are consistent with the demands of libraries for librarians to face readers. Qualitative research studies people's lives, stories, behaviors, organizational operations, social movements, or interpersonal relationships, which requires researchers to be able to pull out of the studied situations, analyze the situations critically, notice and avoid personal prejudice, collect real and reliable data, and think abstractly (Hu, 1996). Therefore, qualitative researchers need theoretical sensitivity and social interpersonal skills. On the one hand, they can absorb previous experience and theoretical knowledge to explain what they have seen and heard; On the other hand, they can keep an analytical distance from what they know.
5. Ethnography in qualitative research

Under the paradigm of qualitative research, there are research traditions in different academic fields including symbolic interactionism theory, phenomenology, hermeneutics, grounded theory, anthropology, action theory, etc., and the traditions in most fields develop by learning from each other (Miller et al., 1992). Ethnography is the most traditional method in the field of anthropology, which aims to explore cultural phenomenon and explore the whole life, and attitude and pattern of a culture. Ethnographic researchers generally face unknown or mysterious societies or fields, discover the social reality constructed by people, master, understand, and discover people's meaning in society, and describe and explain it. Their main job is to discover knowledge rather than verify theory. In other words, from the researcher's point of view, the main purpose of ethnography is to understand another way of life in researchers’ eyes, to see the local people's own culture and views, as well as their relationship with life, and to understand their views on the world (Burgess, 2003).

Ethnographic researchers often need to stay in the fields for a long time, live alone in the circle of local people, and take the attitude of learning from local people. Only then can they truly grasp the social process in local daily life and obtain various data through multiple methods (Burgess, 2003). Ethnography not only emphasizes the subjective viewpoint of the researchers but also the process of observation, explanation, and inference can be subjective. Only in this way can researchers master the true meaning of daily life and truly understand the content and form of the social process by using ethnography (Hammersley, 2019). Therefore, ethnographic knowledge is generated interactively and jointly constructed by the researcher and the subjects. Relying on the comparison of two cultures or experiences, researchers understand and interpret the new experiences observed and learned in the studied world with their original life experiences, cultural values, and conceptual systems. In the whole process, researchers need to give up naive realism, always reflect on themselves, and have empathy.

6. Ethnography in library science

The use of ethnography by library science researchers began in 1998 when Seadle (1998) introduced ethnography to the field of library science. Nardi et al. (1999) used ethnography to study library ecology. Foster (2007), a librarian and anthropologist at Rochester University, led librarians to use ethnography to investigate undergraduate information behavior to improve library services. After that, ethnography was recognized by academia and industry at ACRL and IFLA conferences (Gui, 2015). Khoo (2012) collected 81 articles using ethnography in the field of library and information science, and found that most of them started in 2006, and 81.5% used participant observation to collect data. In recent years, ethnography has become popular in Western countries, while there are few cases of using ethnography in library science in China.

When Wang (2003) was doing a public welfare project on rural folk libraries in China, he carried out a field investigation of rural folk libraries, and found what researchers saw but journalists could not see from the materials. He suggested that researchers should not only keep the role of "outsider", but also actively play the role of "insider" (Merton, 1972) after entering the fields. Gui (2017) is a scholar who introduces and applies ethnography in library science in China. She holds that ethnography has a holistic research vision and a user-centered service concept and uses ethnography to investigate the academic behavior of freshmen in Shanghai University Library. Wang (2017) used ethnography to objectedively describe the status of the Wannan Medical College Library in users' minds and make recommendations to promote library use.

7. Conclusion

There are only a handful of library science studies using ethnography in China, and they are mainly used in the library field to describe user behavior and needs and to enhance and improve the quality of library services. Ethnography is a long-term method in qualitative research, and researchers need to go deep into the lives of specific cultural groups. Analyzing the collected data, which includes interviews, audio, video, documents, and objects, is challenging and requires qualitative researchers with advanced research skills. Therefore, the fieldwork and analysis work is more difficult to operate than other qualitative research methods, and the frequency of use is relatively low. It is necessary for the academic and industry fields of library science to carry out in-depth cooperation in theory and practice, uses social science methods to do empirical research, face unobservable phenomena, unimaginable issues, and difficult research, find representative readers with depth, breadth, and rich connotations, participate in the construction process of social facts in the library field, discover readers’ experiences and explanations under different or unique cultural
context, reveal the connotation of readers’ experiences in the process of using library and internet space, resources and services, and thus find out the real social needs for improving and enhancing library resources and services.

References