## Open Data Services in the Library: Case Study of the Shanghai Library

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#### **ABSTRACT**

The opening and sharing of data are gaining momentum in the era of big data. Libraries have been actively involved in the research and practice of open data. At present, the related research in Chinese libraries is still in progress, which mainly focuses on the introduction of the abroad practices, or on the construction of open data platforms. This paper introduces and analyzes the Shanghai library open data service and provides a useful reference for the open data service of Libraries in China. For the future development of the Shanghai library open data services, this paper puts forward some measures and suggestions that include metadata work, website construction, legal protection, and developer community training.

#### **KEYWORDS**

Open Data, Open Data Services, Shanghai Library

#### INTRODUCTION

With the advent of the big data era, open data has become a worldwide wave (*Jiang*, 2015). Since the U.S. government's open data portal was launched in May 2009, open data movement has been springing up rapidly around the world (*Li*, 2015). The report, named "Open data: An engine for innovation, growth and transparent governance", was submitted to the European Parliament by the European Commission in November 2010, and set the strategy of coping with big data challenges based on open data" (*Yu*, 2014). In September 2011, Brazil, Indonesia, Mexico, Norway, Philippines, South Africa, Britain, and the United States jointly signed the Open Data Statement at the UN General Conference, and established the Open Government Partnership (OGP). In June 2012, as the first portal in China, the Shanghai municipal government's open data service was open to the public. By August 2017, 53 countries and 165 regions opened their government's open data, 75 countries joined the OGP (*Data. gov*, 2017), and nearly 20 local governments launched their open data platforms in China. Under the global wave of open data, as an indispensable part of the society, libraries are actively involved in open data research and practice, and face the changes and challenges of the times with an open concept and attitude. The open data service of Shanghai library (located at Shanghai in China, for

DOI: 10.4018/IJLIS.2021010101

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its location see Figure 1) is one of the cases of open data practices of libraries at home and abroad. On the basis of the detailed introduction of the case, the paper puts forward some suggestions on its development through the comparison and analysis of the open data cases in foreign libraries.



Figure 1. The location of Shanghai Library

#### Literature Review

For open data, there is no uniform standard definition yet (*Ma &Pu*, 2016). The definitions from Wikipedia (*Wikipedia*, 2017), the British Open Knowledge Foundation (OKF) (*Open data handbook*, 2017), and The World Bank (*World Bank group*, 2017), etc. have been widely used at home and abroad. In addition, the open data principles presented by The Open Data Charter have been more widely recognized. So the paper does not repeat the details of these definitions and principles.

The open data services of foreign libraries are mainly based on bibliographic linked open data, including British, American, German, French, Swedish, Spanish, Hungarian, Finnish, Korean, and other national libraries, and the OCLC, the European digital library, and others. (*Xia*, 2015). At present, many institutions have released large scale related datasets, such as WorldCat.org, Europeana of the European Union Digital Library, the Library of Congress, and the British Library, etc. to arouse the public's attention to the added value of these data. With the increasing number of datasets exposed through the unified interface, the research obstacles of digital humanities and data science will also be reduced, and the public will also benefit from the convenience brought by integration (*Sande & Verborgh & Hochstenbach*, 2017). In 2008, the Swedish National Library published the Swedish Union Catalog LIBRIS, thesaurus and authority files as linked data, and LIBRIS became the first Union Catalog published as linked data as a whole (*Zou& Hu*, 2016), providing a lightweight API based on HTTP to support different data access formats such as MARC-XML, Dublin Core, JSON,

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