

Investigations on Reference Books Held in Japanese Public Libraries

Nozomi Nomura
College of Knowledge
and Library Sciences,
School of Informatics
s1111539@u.tsukuba.ac.jp

Shunsuke Arai
Graduate School of Library,
Information and
Media Studies
syun0201@gmail.com

Keita Tsuji
Faculty of Library,
Information and
Media Science
keita@slis.tsukuba.ac.jp

University of Tsukuba
1-2 Kasuga, Tsukuba-city, Ibaraki-ken 305-8550, JAPAN

Abstract— In this study, we investigated (1) which reference books are held in Japanese public libraries, (2) how many times they are used in reference records in Collaborative Reference Databases, and (3) which reference books are difficult to find in libraries, despite their usefulness. The results showed that there are several reference books which are frequently used in reference records but are not held in many libraries.

Keywords—Reference books; Reference services; Public libraries; Collaborative Reference Databases

I. INTRODUCTION

“Future Libraries — Toward Information Base which Supports Local Community — (Report)” published by the Ministry of Education, Culture, Sports, Science and Technology in Japan [1] points out that Japanese public libraries do not hold enough reference books, which hinders reference services. However, few studies have been performed to determine which reference books are actually available at the library and which are not. Sugie (2007) [2] investigated five libraries in the *Kanto* area to determine which health science reference books are being held. Although she studied reference books, the focus was limited to the health science field. On the other hand, Oba et al. (2012) [3] investigated what books Japanese libraries hold (5,716 public and university libraries), but the investigation was not limited to reference books, and they investigated only books that were published in the first half of 2006. As we will show later, many reference books were published before 2006.

Using this knowledge, we investigated what reference books are being held in Japanese public libraries by using Calil API [4] and OPAC of libraries. Calil API can perform cross-library searches among Japanese public, university, and special libraries.

In addition, we investigated reference records in the Collaborative Reference Database [5] (maintained by Japanese National Diet Library) and noted how many times our sample reference books were used in the reference records. We assumed that the frequency at which a reference book was used in the records correlates with the book’s importance. Based on

this assumption, we will show which reference books libraries are lacking despite the book’s importance.

II. SAMPLE LIBRARIES AND REFERENCE BOOKS

A. Sample Libraries

There are 47 prefectures and 57 prefectural libraries in Japan. Eight prefectures contain multiple prefectural libraries, and we excluded such libraries from our investigation target (they are *Saitama*, *Chiba*, *Tokyo*, *Kanagawa*, *Fukui*, *Wakayama*, *Osaka*, and *Kagoshima* prefectures). We excluded them due to the possibility that they might be sharing collections of materials between each prefecture, and each library is overseeing materials belonging to special fields (for instance, in Kanagawa prefecture, Kanagawa Prefectural Library oversees books in the social science and humanities fields, while Kanagawa Prefectural Kawasaki Library oversees books in the natural science and engineering fields). Concerning these libraries, it is difficult to place blame on any one of them that does not hold particular reference books. Therefore, we excluded from our sample the libraries in the previously mentioned eight prefectures and will leave them for future research.

From the remaining 39 prefectural libraries (there is only one prefectural library per prefecture), we randomly chose 20 libraries. We reduced the number of sample libraries to reduce investigation costs.

B. Sample Reference Books

We randomly selected sample reference books from those listed in *Reference Books as Information Sources: New Edition* [6]. Masao Nagasawa, the book’s first author, is a representative researcher of reference services; the book is very popular among Japanese librarians. There are several guidebooks from which to select sample reference books [7]; however, we will reserve these options for future research.

Reference Books as Information Sources: New Edition consists of eight chapters; we randomly chose five reference books from each chapter ranging from chapter 2 to 8. With five reference books chosen from seven chapters, we ended up with

35 sample reference books. We excluded chapter 1, because it did not contain five books that met our criteria (to be explained later).

We limited our selection of sample books to those that have ISBNs (we mention our use of Calil later). In addition, to keep our investigation simple, we did not choose multi-volume books with multiple ISBNs. These will all remain for future research.

III. HOW TO CHECK WHETHER OR NOT THE LIBRARIES HOLD THE BOOKS

We used the following three methods to examine which reference books Japanese public libraries held: (1) by ISBN via Calil API, (2) by ISBN via each library's OPAC, and (3) by titles via OPAC. With these three methods, we expect to minimize the error regarding libraries that do not hold the books despite the fact that they actually have them. We conducted these retrievals from April 17, 2014, to April 23, 2014.

A. Retrieving Books by Calil API based on ISBN

Calil API is a free Web service that can perform cross-library searches concerning Japanese public, university, and special libraries (As of April 27, 2014, it can search 6,530 libraries) [9][10]. Although Calil API is a powerful tool, it only allows us to search books by ISBN. Therefore, we first collected ISBNs of sample reference books by using: (1) OPAC of University of Tsukuba, (2) CiNii Books (maintained by National Institute of Informatics), and (3) OPAC of Japanese National Diet Library [11][12][13][14][15]. We then retrieved the sample reference books by Calil based on their ISBNs. We used Calil because of the reduced retrieval cost. If we retrieve all the books by each library's OPAC, the investigation will be much more labor intensive.

B. Retrieving Books by OPAC based on ISBN

Unfortunately, Calil sometimes fails to find books. Therefore, we used each library's OPAC when Calil reported that the books were not held in the library. We retrieved sample reference books by OPAC based on their ISBNs.

C. Retrieving Books by OPAC Based on Titles

Some OPACs do not allow ISBN search, and others sometimes fail to find books through an ISBN search. Therefore, we also retrieved books by their titles. Since title search is more complicated than ISBN search, we will explain in detail below how we retrieved books by their titles.

First, we used MeCab, the Japanese morphological analyzer, and decomposed the titles into words and POS-tags. We then selected the following nine combinations of nouns in titles and used them as search keywords: (1) the first four nouns, (2) the first three nouns and the last noun, (3) noun and the last two nouns, (4) the first noun and the last three nouns, (5) the last four nouns similarly, (6) the first three nouns, (7) the first two nouns and the last noun, (8) the first noun and the last two nouns, and (9) the last three nouns. If the title was too

short to extract four nouns, we tried all the noun combinations as search keywords.

IV. THE NUMBER OF TIMES BEING USED IN REFERENCE RECORDS

Collaborative Reference Database includes reference records reported by various Japanese libraries, such as public libraries and university libraries. As of March 19, 2013, 350 libraries are registered. We collected 62,328 reference records on March 19, 2013, and identified the titles of reference books used to answer the reference questions. As previously mentioned, we calculated the frequency at which our sample reference books were used in the records and noted that these frequencies related to the importance or usefulness as reference books.

V. RESULTS

A. How Many Libraries Hold the Books and How Many Reference Records Used Them

Table 1 displays the number of libraries that hold the sample reference books and how many times the books were used in reference records. We can see in Table 1, for instance, that 17 libraries have *Rovere French-Japanese Dictionary*, published by Shogakkan, and the ratio is 85.0% (=17/20). In addition, that book was used three times in the reference records. Note that all the sample reference books were published between 1951 and 2003. Therefore, as we previously mentioned, the results by Oba et al. (2012) are limited concerning reference books.

The reference book that was least held in libraries was *The Bible, The New Interconfessional Translation Concordance* (Shin-Kyodoyaku-Seisyo-Concordance), and the ratio at which it was held was 20.0%. The second-least-held books were *Encyclopedia of Japanese People* and *Pandect of Journal in Meiji Era*, whose ratios were 60%. Note that the former *Encyclopedia of Japanese People* appeared 66 times in reference records, which was the largest amount among sample reference books. If we assume that the frequency of appearances in reference records represents a book's importance, libraries should consider holding *Encyclopedia of Japanese People*. By the same logic, libraries should also consider holding *The Complication of Pandect of the State of a Country in Showa Era* (although it was used 17 times in the reference records-the third-highest frequency-the number of libraries that hold it remains at 15, or 75.0%).

B. The Number of Holdings in Each Library

Additionally, we investigated how many reference books our sample libraries hold and displayed these results in Table 2. We can see in Table 2, for instance, that Hokkaido Prefectural Library holds 28 reference books, and the ratio is 80.0% (=28/35).

The highest holding ratio is 97.1%, recorded by Hiroshima Prefectural Library and Fukuoka Prefectural Library. On the other hand, the lowest ratio is 65.7%, recorded by Okinawa Prefectural Library. What caused these differences (budgets,

service policies, sample reference books, etc.) will be researched in the future.

VI. DISCUSSIONS

From Table 1, we can say that some reference books are not being held in many libraries although their frequencies of appearances in reference records are high. If the frequencies of appearances in records represents the book's importance, libraries should consider holding these reference books.

However, one problem remains. Although we investigated the holding status in prefectural libraries, the above mentioned frequencies are not limited to those in the reference records registered (to Collaborative Reference Databases) by prefectural libraries. The reference books whose frequencies were high might have appeared in the records that were registered by the other kinds of libraries such as municipal libraries. We have to investigate the reference records and classify the reference books based on the types of libraries that used them.

In this study, we showed that the prefectural libraries did not hold some reference books. We suspect the other kinds of libraries such as municipal ones hold less reference books due to their limited budgets compared to the prefectural libraries. We have to investigate the other kinds of libraries and clarify the tendencies.

VII. CONCLUSIONS

In this study, we investigated (1) which reference books are held in Japanese public libraries, (2) how many times they are used (appear as references) in reference records in Collaborative Reference Databases, and (3) which reference books are difficult to find in libraries, despite their usefulness.

Future tasks include (1) increasing sample libraries and sample reference books and making the results more reliable, and (2) determining the causes of observed tendencies. Another interesting direction involves identifying reference books that are most frequently used in reference records and investigating whether they are being held in libraries.

REFERENCES

- [1] Ministry of Education, Culture, Sports, Science and Technology. "Future libraries —Toward information base which supports local community?— (report)." Ministry of Education, Culture, Sports, Science and Technology. http://warp.da.ndl.go.jp/info:ndljp/pid/286184/www.mext.go.jp/b_menu/houdou/18/04/06032701.htm, (accessed 2014-04-27). (text in Japanese).
- [2] Sugie, Noriko. Survey of holdings of reference books on health in public libraries. *Libraries Today*. 2007, vol. 45, no. 3, p. 165-175. (text in Japanese)
- [3] Oba, Hiroyuki; Agata, Teru; Ikeuchi, Atsushi; Otani, Yasuharu. What books libraries contain?: The survey on library holdings in Japan of for all books published during the first half of 2006. *Journal of Japan Society of Library and Information Science*. 2012, vol. 58, no. 3, p. 139-154. (text in Japanese)
- [4] Calil. "Calil | cross-library search site in Japan." Calil. <https://calil.jp/>, (accessed 2014-04-28). (text in Japanese).

- [5] National Diet Library. "Collaborative Reference Database." Collaborative Reference Database. <https://crd.ndl.go.jp/reference/> (accessed 2014-05-02). (text in Japanese)
- [6] Nagasawa, Masao; Ishiguro, Yuko. Reference books as information sources. New edition, Japan Library Association, 2004, p. 245. (text in Japanese)
- [7] For instance, following guidebooks about reference books have been published: Yoshida, Yuko. Practice of reference service, revised edition, Benseisyuppan, 2006, p. 146. (text in Japanese)
- [8] We also could examine reference cases that are registered on Collaborative Reference Database, and we examined sample reference books that are often used in the reference records in the database.
- [9] Calil. "Library's Map." Calil. <https://calil.jp/library/> (accessed 2014-04-27). (text in Japanese)
- [10] Yoshimoto, Ryuji. Calili.jp, a new Web service that provides one-stop search of Japanese libraries' collections. *Journal of Information Processing and Management*. 2012, vol. 55, no. 2, p. 97-105. (text in Japanese)
- [11] University of Tsukuba Library. "University of Tsukuba Library." University of Tsukuba Library. <https://www.tulips.tsukuba.ac.jp/lib/ja> (accessed 2014-04-28). (text in Japanese)
- [12] National Institute of Informatics. "CiNii Books-Search for collection in university libraries." CiNii Books. <http://ci.nii.ac.jp/books/> (accessed 2014-04-28). (text in Japanese)
- [13] National Diet Library. "NDL-OPAC." National Diet Library. <https://ndlopac.ndl.go.jp> (accessed 2014-04-28). (text in Japanese)
- [14] We collected ISBNs from March 19, 2014, to March 25, 2014.
- [15] We collected 2,522 ISBNs.

TABLE I. THE NUMBER OF LIBRARIES WHICH HOLD EACH REFERENCE BOOK AND THE NUMBER OF TIMES OUR SAMPLE REFERENCE BOOKS ARE USED IN THE REFERENCE RECORDS

Chapter	Reference Books' Titles	Year of Publication	The Number of Libraries that Hold Sample Reference Books	Ratio	The Number of Our Sample Reference Books that are Used in The Reference Records
Chapter 2	Dictionary of Difficult Reading of a Kanji	1956	20	100.0%	1
	Rovere French-Japanese Dictionary Published by Shogakkan	1988	17	85.0%	3
	Dictionary of Direct Words in Japan	1951	19	95.0%	4
	Dictionary of Synonym	1991	19	95.0%	0
	The Bible, The New Interconfessional Translation Concordance	1998	4	20.0%	1
Chapter 3	Encyclopedia of Current Law	2000	15	75.0%	4
	Encyclopedia of Cultural Anthropology	1987	20	100.0%	5
	Encyclopedia of Agriculture	1987	20	100.0%	1
	The World Atlas of Archaeology	1987	17	85.0%	0
	Geschichte des Kostüms	2001	15	75.0%	1
Chapter 4	Chronological Table of World History	1992	16	80.0%	2
	Chronological Table of Japan in the Modern Period	2001	20	100.0%	3
	Chronological Table of Natural History in Japan	2002	18	90.0%	1
	Chronological Table of Western Music	1983	16	80.0%	0
	The Complication Pandect of The State of a Country in Showa Era	1991	15	75.0%	17
Chapter 5	Encyclopedia of Southeast Asia	1997	18	90.0%	1
	Encyclopedia of Akita	1981	13	65.0%	11
	Encyclopedia of Hyogo	1983	15	75.0%	7
	Times Wrold Map : Live Atlas	1992	20	100.0%	2
	World History Atlas	2001	16	80.0%	2
Chapter 6	Encyclopedia of Westerner	1995	20	100.0%	12
	Encyclopedia of Japanese People	1979	12	60.0%	66
	Dictionary of Buddhist Japanese People	1992	15	75.0%	14
	Encyclopedia of Musician	2001	20	100.0%	2
	Bibliography of Japaense People Who are Relevant to Politics in The Modern Period	1985	19	95.0%	0
Chapter 7	Encyclopedia of The World's Masterpiece	1987-89	20	100.0%	6
	Encyclopedia of Japanese Scientist in The Modern Period	1986-87	17	85.0%	1
	Catalog of Translated Literary Work in Meiji, Taishyo, and Syowa Era	1959	19	95.0%	2
	Series of Pandect of Modern Japanese Literary	1982-	20	100.0%	20
	Catalog of National Diet Library from 1926 to March, 1949	1960/66-	20	100.0%	0
Chapter 8	Handbook of Japanese Newspaper and Journal	1965-2003	19	95.0%	1
	Catalog of Scientific Journal	2001	20	100.0%	2
	Pandect of Journal in Meiji Era	1985	12	60.0%	0
	Catalog of Oya Soichi Library	1985	20	100.0%	14
	Bibliography of The Greater East Asian War	1981	13	65.0%	0

TABLE II. THE NUMBER OF REFERENCE BOOKS THAT ARE HELD IN EACH LIBRARY

Names of Libraries	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6	Chapter 7	Chapter 8	Total
Hokkaido Prefectural Library	4	5	4	4	3	5	3	28(80.0%)
Iwate Prefectural Library	4	4	2	4	3	5	3	25(71.4%)
Miyagi Prefectural Library	4	4	4	5	5	5	5	32(91.4%)
Fukushima Prefectural Library	5	5	4	4	4	5	5	32(91.4%)
Tochigi Prefectural Library	4	5	5	5	5	5	4	33(94.3%)
Niigata Prefectural Library	3	4	5	4	5	5	4	30(85.7%)
Toyama Prefectural Library	4	4	4	5	4	5	5	31(88.6%)
Yamanashi Prefectural Library	4	5	4	4	5	5	4	31(88.6%)
Aichi Prefectural Library	4	5	5	4	5	5	5	33(94.3%)
Mie Prefectural Library	4	5	5	3	4	5	4	30(85.7%)
Nara Prefectural and Information Center	4	5	4	4	5	4	5	31(88.6%)
Hyogo Prefectural Library	4	3	5	5	4	5	5	31(88.6%)
Hiroshima Prefectural Library	4	5	5	5	5	5	5	34(97.1%)
Shimane Prefectural Library	4	3	4	5	4	5	3	28(80.0%)
Kagawa Prefectural Library	4	3	5	2	4	5	5	28(80.0%)
Ehime Prefectural Library	4	4	4	4	5	3	4	28(80.0%)
Fukuoka Prefectural Library	5	5	5	5	5	5	4	34(97.1%)
Nagasaki Prefectural Nagasaki Library	3	4	4	3	5	4	3	26(74.3%)
Kumamoto Prefectural Library	4	5	4	4	4	5	5	31(88.6%)
Okinawa Prefectural Library	3	4	3	3	2	5	3	23(65.7%)
Total	79	87	85	82	86	96	84	599