

Library Services to the Visually Handicapped in Korea: Changes in the Information Environment and Role of Braille Library

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Information (retrieval) environment for the blind has been extended from Braille library to web pages for the blind. And Braille libraries have also responded to the change. First, the main role of Braille libraries is to process printed materials into accessible units, and make them available to the blind. In addition, Braille libraries provide new types of services through the internet. Braille libraries now produce information specific to the blind and assist them in navigating the internet to retrieve precisely the desired information out of the mass of general information. Thus they remain important even while changing the form of their services in response to the new information environment.

Keywords: Blind, Braille library, Information environment, Internet

1 Introduction

Information environment of the blind has largely changed. That change means their opportunity to get information has expanded from access through only Braille libraries' printed materials for the blind to general internet web site information retrievable from anywhere. That is, the blind's access to information is now equal to that of the general public. At present, many institutions as well as libraries provide information—not only information retrieval or bibliography but also text of information—through the internet by various means. For example, the National Library of Korea and some other institutions provide two kinds of web pages, a graphic mode page for the general public and a text mode page for the blind¹⁾. For the blind it is easy to access information using the text mode page. Another kind of web page provides a voice guide or even background music immediately upon entry so that blind can access the site with any computer²⁾.

Given that situation, the role of the Braille library has also changed. While early Braille libraries mainly processed and supplied Braille and talking books, today they also provide a lot of services through internet. There is no doubt that this shift is influenced by the change in the information environment that includes the blind. But Braille libraries continue to provide their original service which is different from other institutions³⁾ and by doing so, retain their *raison d'être*.

The purpose of this paper is first to look at the change in the role of the Braille library

in Korea along with the change in the information access environment which includes the blind. Next is to comprehend the information environment of the blind by examining the roles of each example web page from which the blind can acquire information. And finally, this paper seeks to clarify the relationship between the changes in the information environment of the blind and the transformation of the role of the Braille library.

2 Changing Role of Braille Library by Changing Information Environment

There are mainly three aspects to the understanding the change of information environment for the blind—before the emergence of internet, expansion⁴⁾ of internet, and the emergence of web pages for the blind following the internet's development. Obviously, the information environment of the blind changed greatly after the internet expanded, for the blind could access information without the limitations of time, place, and physical abilities. However, there were many obstacles for the blind in acquiring information as opposed to the general public. One of the reasons is that the blind were not assumed to be internet users. After web pages for the blind emerged, they finally had access and could gather information on a level equal to the general populace.

Therefore, we look at the changing role of the Braille library from the three aspects of information environment as previously mentioned.

2.1 Before the Emergence of Internet

The primary role of Braille libraries⁵⁾ was to provide and process information. First, their function was to provide information on what materials library holds which is no different than a general library. But the Braille libraries services were unique in sending those materials by mail to the blind who had difficulty in coming to the library. Next, the libraries' function was to process the information so that printing materials were translated into Braille books or talking books accessible for the blind, something no other institution could provide. This processing function resembled Braille publishers' provision of Braille-lettered books and the public library's reading service for the blind. However, Braille publishers did not information centers for the blind because they would not provide information to individual blind users. Reading service for the blind in public libraries were not so helpful for the blind because they did not have any information about library holdings, and they could not acquire the information unless they visited the public library. In other words, only Braille libraries processed and supplied information for individual blind users. For that reason, much of the literature⁶⁾ in this area strongly emphasizes the two processing and provision functions of Braille libraries, highlight several problems, and suggest solutions or ways to improvement. That is, the role of Braille libraries was concentrated on heavily those two functions.

2.2 Expansion of Internet

The expansion of the internet greatly changed the blind's information environment. Before internet emerged, of course, there were some IT devices for the blind such as reading machines, Braille printers, computers for the blind, and others. But those tools did not greatly expand the information environment of the blind but just improved the role of information

processing. The blind came to access information they could not get from Braille libraries, such as full information retrieval or information about other libraries through internet. Therefore the information environment of the blind extremely expanded with the internet, from a situation of having little information to becoming nearly equal with the general public.

Braille libraries play two important roles generally even though they no longer serve as information centers for the blind. One is provision of new services through the internet. Braille libraries, for example, offer catalogs of materials or through their library homepage various kinds of information about their library, services, new resources, other related institutions, and so on⁷⁾. The other is to provide a public place where information is supplied, mainly by offering internet access. If the blind do not have special computers and internet access settings for them even with the spread of internet usage, they will not be able to use the information on the internet. But it is not easy for the blind since gathering together computer parts necessary for their internet access and general systems of public library or internet café do not provide the particular internet access settings needed for the blind. Therefore only Braille libraries as public sites provide those special settings for the blind so that they who have no such settings can share the equipment and internet access. Thus the role of Braille libraries has expanded from the solitary role of processing and providing materials to the role of responding to the information needs of the blind.

2.3 The Emergence of Web Pages for the Blind

It is web pages for the blind that improved their access to information. Even though digital information developed and lots of information circulate on internet, the numerous visual information like graphic on general web pages make it difficult for the blind to obtain information. But now with text mode web pages, it is easier for the blind to use the internet and read the screen. Therefore the blind can now acquire information that they could not previously even though they could access the internet.

The role of Braille libraries also changes with the emergence of web pages for the blind. This is because of the increased opportunities for the blind to acquire information through usage of digital libraries or web pages for the blind at various information institutions⁸⁾ other than Braille libraries. Of course, the blind can acquire Braille books or talking books only through Braille libraries even today. Also, it is impossible to acquire all information through internet. It is nevertheless also true that the blind can acquire information through web pages for the blind as well as Braille libraries. Although Braille libraries became one way to acquire information, they still carry out their original roles. In the next chapter, I selected homepages of Braille libraries and some other web pages for the blind, and examine their particular characteristics, what kind of information that they have, and the different roles manifest in each web page.

3 Information Environment of the Blind: Web Pages for the Blind

In this chapter, I examine the information environment of the blind through four case studies; two homepages of Braille libraries, a web page of digital library, and a general web

page.

3.1 Braille Library built in Daegu University (<http://dulvi.daegu.ac.kr/>)⁹⁾

This web site provides a union catalog retrieval system for Braille books and talking books of the whole country. For this service, the work to computerize the union catalog started in March 2002. The Korean Library for the Blind Association published a union catalog of the national library for the blind in 1994 and 1996, but they discontinued due to a lack of a budget. For this reason, several Braille libraries processed the same materials without a union catalog. To solve this problem, the Korean Library for the Blind Association resolved to publish the union catalog (Dec. 2001) and excepting repetitious materials, computerize materials for the blind found in eighty-six libraries across the country (Jan. 2003). In the "National Libraries for Blind Union Catalog," the blind can use various modes of this catalog such as Braille type, general book type, CD-ROM, ARS (Auto Response Service) by phone, and internet homepage (this web site). This catalog contains subject, writer, and publisher listings together with library names and addresses of eighty-six facilities holding eighty thousand Braille books and talking books¹⁰⁾.

The blind can acquire information about Braille books and talking books throughout the country through this web site. So even though they cannot acquire materials such as literature works, texts, or foreign books on the internet, they can acquire information through this website regarding the materials they seek and can get them through Braille libraries holding those materials. When they access the catalog, they can move beyond basic bibliographic information by learning the format their desired materials are in or they can search by the needed materials' particular format¹¹⁾. Now forty-four libraries have joined the union catalog, and it is possible to retrieve information about new arrivals at each of the libraries. This program is designed for a library that has not joined in the union catalog but might be able to join in the future¹²⁾.

3.2 Korea Braille Library (<http://kbll.or.kr/>)¹³⁾

There are some special features in this web site. First, there are options for the type of web pages, graphic or text mode, and choices for languages, English or Japanese, on the first page. There are also text mode pages for the blind in other sites, but the blind can use even the graphic mode pages in this site with a voice guide. There are buttons marked "play" and "stop", and if you click the "play" button, then a voice guide reads the contents aloud but if you click the "stop" button, then it terminates. Thus even if there is not any special devices for the blind, they can still access information through an ordinary computer.

This web page plays the role of a window that guides the blind to useful information. It provides various kinds of information such as news, events, or web sites related to the handicapped besides the search function in this site. Within the latter, they offer links to related institutions, Braille libraries throughout the country, welfare centers, and information regarding organizations for the blind. Through this page, blind people can access more web sites¹⁴⁾.

3.3 National Digital Library (<http://www.dlibrary.go.kr/>)¹⁵⁾

The plan for the establishment of the National Digital Library which was to connect

libraries across the country and create an information base was promoted from 1996. Seven institutions, that is, the National Library of Korea¹⁶⁾, the National Assembly Library¹⁷⁾, the Supreme Court Library of Korea¹⁸⁾, the Digital Science Library¹⁹⁾, KISTI (Korea Institute of Science and Technology Information) Document Delivery Service²⁰⁾, KERIS (Korea Education and Research Information Service) RISS²¹⁾, and the Korea Agriculture Science Digital Library²²⁾ all combined to make a database providing information for the whole consortium as well each institution's separate holdings. From August 2002 this web site for the blind was built on each of the four systems inside the Library—the site for the National Digital Library, the National Library of Korea, KOLIS-NET (Korean Library Information System Network), and the Internet Information Service—as a part of the solution to the blind's inequal access to information. These sites provide the blind with an opportunity to access information like ordinary people. From May 2003, they upgraded the retrieval function for its text type web site for the blind to include full text searches²³⁾.

Blind people can retrieve and acquire information much like the general public. Information they can acquire from this site include various academic resources, theses and dissertations, legal resources, precedent documents, foreign academic databases, and other similar materials²⁴⁾. This web site for the Blind is connected with the National Library of Korea and KOLIS-NET²⁵⁾. It is especially useful for obtaining academic resources for blind people to study.

3.4 Homepage for Seoul's General Handicapped Population

(<http://friend.metro.seoul.kr/main/index.php>)²⁶⁾

This web page provides useful general information about living for not only the blind but other handicapped people. What is provided at this site is information regarding the City of Seoul's general state, its systems, policies, taxes, welfare, employment opportunities, various handicapped organizations, and living conditions. As for information on living conditions, the web page presents information on handicap-friendly transportation services for subways, shuttle buses, and taxis, as well as handicap-facilitating equipment such as wheelchairs, sensory aids, and Braille writing stationery. There is also additional information about organizations for the handicapped and others assisting their lifestyle or offering rehabilitation services. The blind can acquire fully the needed information for life directly through this site.

The blind can access this site without any special devices for the blind because a voice guide operates automatically once accessed. It is also possible to turn off the voice guide.

4 The Meaning of Braille Libraries from the Blind Perspective

As stated above, Braille libraries were influenced by changes in the environment encompassing libraries in general. These institutions changed their roles in response to the blind's increased access to various kinds of information from web pages. For example, the blind could acquire academic information from the National Library or the National Digital Library, or web pages of any other information-disseminating institutions. They could also gather general information about life from web pages for the handicap at general institutions,

as well as data on Braille and talking resources and other related information specific to the blind from web pages of Braille libraries. The role of the Braille library therefore shifted accordingly. Braille libraries' expanded their roles to include internet usage beyond their basic role, that is, to process and to provide Braille and talking resources which is the only medium the blind can use in lieu of printed materials.

Although the role of Braille libraries changed, they still maintain a distinct role that separates them from other institutions or web pages for the blind. This is because they have reacted to the change in the information environment by providing services in response to what blind people claim as their original design for Braille libraries, that is to provide services specifically for the blind. For example, when internet usage expanded, they served the blind through the internet. Today, Braille libraries organize the digitized information and supply them for circulation on the internet.

In a word, Braille libraries play the role of not only merely providing information that libraries already have or requested by users, but also to make or process information, and to guide the blind to the desired information. Braille libraries make and supply journals on the internet, and also assist in the blind's navigation of the internet by collecting, processing, and distributing of the previously scattered information regarding the visually impaired and their Braille libraries. The Korea Braille Library, for example, publishes and delivers weekly the Braille journal *Chung Song* ("blue pine"). This journal started on October 20, 1988 and now the 520th issue has just been released, and was sent country-wide to blind people and institutions associated with the blind. This journal provides information to the blind about governmental policy, general societal information, information that the blind require for living, and thereby contributing to a better informed active life²⁷⁾. The blind may also access various kinds of information relevant to them, such as welfare, lifestyle, other Braille libraries, and institutions for the blind by only accessing through the Korea Braille Library site²⁸⁾.

Thus the significance of the Braille libraries' existence may be its continuity despite the change in the information environment of the blind effecting a change in their role. Since Braille libraries carry out their role in response to changing needs of the blind stimulated by the change of the information environment. Furthermore, they do not merely respond the blind's requests but also take the initiative in offering other information services to the blind.

5 Afterword

The disparity in information gathering is not limited to the blind but is greatly affected by the usage or non-usage of the internet. It may be important to reduce the disparity in the future. Lastly, I want to introduce the "Five-Year Plan for the Welfare System," one of the policies for the handicapped in Korea, especially the plan to improve their information level whose internet usage rate is low²⁹⁾.

The purpose of this plan is to create a digital welfare society. That is to say, the aim is to increase the information level of the handicapped and their quality of by making access equal to the level of the general public. The plan has six main sections-expansion of IT

education, widening of opportunities to participate in society through IT, improving the environment of information access, promoting the use of information, guaranteeing access rights for the blind to broadcast, and improving laws or systems for the progress of IT. Each of the main sections of the plan is written below:

1. Expanding the IT education
 - Raise the rate of internet usage of handicapped people by expanding their educated population base: 22.4% (2002) → 60% (2007)
 - Expanding opportunities for distance learning (education through online) and home visitational education
2. Expanding the opportunities to participate in society through IT
 - Find work in IT area in which is relatively easy for the handicapped to work
 - Support to find employment in IT area which is appropriate to the handicapped: Innovate telecommuting system, priority employment of the handicapped
3. Improving the environment for information access
 - Prepare devices needed for use by the handicapped in information institutions
 - Develop and expand devices and programs needed when the handicapped access information
 - Establish “research IT centers for the handicapped”: support wide information access of the handicapped
4. Promoting the use of information
 - Expand devices of information and communication: Increased usage of computers by the handicapped 56.4% (2002) → 80% (2007)
 - Increase online web sites for the handicapped
5. Guarantee access rights for the blind and the hearing impaired to broadcast
 - Expand support of broadcast access of the handicapped: increase the broadcast added screen explanation, subtitle, and sign language
6. Improving laws or systems for the progress of IT
 - Approve “legislative bills to encourage the right of access to information and communication”
 - Create a certification system: certify high-quality production for the handicapped to use
 - Improve the discount system on charges for information and communication: Deep discounts for the handicapped with low incomes

Notes

- 1) See the examples of web page in chapter three.
- 2) See the web page of *Sori* (“sound”) *Library* that is in the Homepage for Seoul’s General Handicapped Population. The web site of *Sori Library*: <http://www.sorisem.net/mylib/voice/default.asp>
- 3) See the chapter three.
- 4) The meaning of “expansion” here includes using of the internet at the blind.

- 5) All Braille libraries in public library and welfare center as well as independent Braille libraries are included in the term of "Braille libraries" here. Now there are sixty-three (63) Braille libraries in Korea. Information about this is in the homepage of the Korea Braille Library. Yet on this web page, it is written that the number of Braille libraries is sixty-four (64), but one library was listed twice. So the number of Braille libraries is actually sixty-three. See the web page: <http://infor.kbll.or.kr/lib01001/index2.asp?text=no>
- 6) Research papers about Braille libraries that are studied from 1980s to 1990s in Korea mainly understand the situation, notice problems, and propose solutions. For example there are research papers like this: Jin-Hwa Sul 1987, "Study about library services for the blind," Graduate School of Yonsei University Master Thesis; Hye-Son Yun 1992, "Views about library services for the blind," *Librarianship*, vol. 6.
- 7) About this, see the web pages of Braille Library in the chapter three.
- 8) For example, there are KISTI (Korea Institute of Science and Technology Information) or KERIS (Korea Education and Research Information Service).
- 9) The homepage of the Braille Library built in Daegu University: <http://dulvi.daegu.ac.kr/>
- 10) Cited from two web pages follow for the content:
 - ① <http://friend.metro.seoul.kr/eyefocus/contents/7/1/1/20020325/3.html>
 - ② http://www.pronovel.or.kr/news/index_view.html?no=3481
- 11) The web page for union retrieval in the Braille library built in Daegu University: <http://dulv.daegu.ac.kr/book/>
- 12) See "How to use the Union Retrieval" in the Braille library built in Daegu University: <http://dulv.daegu.ac.kr/book/>
- 13) The homepage of the Korea Braille Library: <http://kbll.or.kr/>
- 14) Information about related institutions which the Korea Braille Library is offering is in this web page: <http://infor.kbll.or.kr/lib01001/index2.asp?text=no>
- 15) The homepage of the National Digital Library: <http://www.dlibrary.go.kr/>
- 16) The homepage of the National Library of Korea: <http://www.nl.go.kr/>
- 17) The homepage of the National Assembly Library: <http://www.nanet.go.kr/index.html>
- 18) The homepage of the Supreme Court Library of Korea: <http://library.scourt.go.kr/>
- 19) The homepage of the KAIST [Korea Advanced Institute of Science and Technology] Digital Science Library: <http://library.kaist.ac.kr/>
- 20) The homepage of the KISTI [Korea Institute of Science and Technology Information]: <http://www.kisti.re.kr/kisti/index.jsp>
- 21) The homepage of the KERIS [Korea Education and Research Information Service] RISS: <http://www.riss4u.net/>
- 22) The homepage of the Korea Agricultural Science Digital Library: http://lib.rda.go.kr/main.asp?m_size=size_1024
- 23) See the web page of "Library Introduction" in the homepage of the National Digital Library for the content: <http://www.dlibrary.go.kr/NEL/Introduct/Business.jsp>
- 24) See the web pages follow about each seven institution and DB: from http://www.dlibrary.go.kr/NEL/Introduct/Organization_01.jsp to <http://www.dlibrary.go.kr/NEL/Introduct/>

Organization_07.jsp

- 25) National Digital Library (NDL): <http://sigak.nl.go.kr/dl/>
The National Library of Korea (NLK): <http://sigak.nl.go.kr/nl/>
Korean Library Information System Network (KOLIS-NET): <http://sigak.nl.go.kr/kn/>
- 26) The homepage for Seoul's General Handicapped Population: <http://friend.metro.seoul.kr/main/index.php>
- 27) Cited from <http://kbll.or.kr/> "Major Project" for the content.
- 28) See <http://infor.kbll.or.kr/lib01001/index2.asp?text=no> "Related web sites" for the content.
- 29) See the web page follow for the content: http://www.cowalk.or.kr/chnn/chx4/gdx1_idx29.htm