

Assistive Technology and Education Laboratory for Individuals with Visual Disabilities (GETEM)

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Abstract. This study, in general, deals with the information access for individuals with visual disabilities (IVDs) in Turkey, and the present situation of the information services provided for IVDs under the legal arrangements. In addition to these two issues, GETEM (Boğaziçi University Individuals with Visual Disabilities Technology Laboratory) project which was awarded in terms of accessibility, and the stages of the project are examined. The Internet Library Project designed by GETEM aims to provide access to information services for IVDs. This project also includes individuals with other disabilities (e.g. paralysis, dyslexia) who cannot benefit from printed resources along with approximately 400 thousand IVDs. The library will mainly consist of Turkish and English resources. These resources will be story, novel, and poem genres, the course materials (e.g. books, articles, course notes, lecture records) the Turkish universities provide as well as academic articles/books. The texts of online daily newspapers and weekly/monthly periodicals, and the international libraries which offer services for IVDs will be accessible for IVDs.

In this study, descriptive method is used. The research data is gathered by a review of literature, and by the interviews of GETEM executives.

Keywords: Blind and partially sighted, Disabled people, Digital Library Project, Talking Books, Visual disabilities.

1. Introduction

In every society, there are physically handicapped people beside healthy people. The individuals with visual disabilities (IVDs) are the biggest group among the handicapped people. Libraries are the most effective organizations to support the special education they require and meet their educational needs for life long. "Information services for IVDs is defined to render special materials for IVDs for the purpose of supplying their needs." (Kanık 1994). These services are maintained by national libraries, organizations, public or private research

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libraries, and by schools' or universities' research libraries. The information services for IVDs which is operated by the branch libraries via central libraries are generally based on the same philosophy as the ones provided for other people (Kanık 1994).

The increasing interest of IVDs' special education has led the information services to develop, and to prevail. These services have become a regular part of the public libraries with the support of voluntary organizations. The public libraries which provide services based on the equality principle function to meet IVDs' educational needs and self-improvement. They run services and collect compilations for this purpose. These services are promoted to prevail by the personnels who took essential instruction (Kanık 1994).

In many countries all over the world, libraries satisfy the needs of reading and information access for IVDs. There are legal arrangements on this issue, and national and international standards are defined (IFLA 2012, LA 2012, NLS 2012). In all countries, fundamental social groups are responsible for the provision of funds for libraries. However, in some countries there is no national systematic structure to meet these needs (Owen 2007).

2. Definition of Visual Disability

The occasion in which the strength of vision (sharpness of vision, visual field) cannot be improved to the normal level by the familiar procedures; such as, glasses, contact lenses, medication, operations and like is defined as either blindness or low vision disorder according to the level of reduced vision (İçli 2006).

“Blindness is the inability to see. The leading causes of chronic blindness include cataract, glaucoma, age-related macular degeneration, corneal opacities, diabetic retinopathy, trachoma, and eye conditions in children (e.g. caused by vitamin A deficiency). Age-related blindness is increasing throughout the world, as is blindness due to uncontrolled diabetes. On the other hand, blindness caused by infection is decreasing, as a result of public health action. Three-quarters of all blindness can be prevented or treated.” (WHO 2012).

There are several types of vision disorder: complete blindness, partial blindness, blindness of distance, tunnel and peripheral blindness, light blindness, color blindness etc. (Harris & Oppenheim 2003).

3. Information Access for IVDs

In each society, IVDs have the equal rights as other people do (United Nations 2012, Davies 2007). Besides, access to information is a significant democratical right among human rights (Tadora 2005).

“Equal opportunities to access information is the basis of democratic societies. All the IVDs have the right to access information, and to improve their own welfare based on the principle of equality of opportunity.” (Sağlamtuñç, 2010).

Although IVDs have the equal rights in terms of affairs of home, work, education, entertainment, and vacation just like other people, a considerable number of them have no access to printed information resources due to their disabilities (Creaser 2002).

Meanwhile, the level of vision disability affects the reading needs of IVDs, in that the specially printed or electronic materials designed for IVDs show variation in terms of access (Harris & Oppenheim 2003).

“The climate has rarely been more favorable for the achievement of serious improvement in the provision of information resources to visually impaired people.” (Creaser 2002).

With these reasons, printed tactile materials, audio cassettes, CDs, DVDs etc. made by special techniques are produced. That is, technological advances enable IVDs to gain access to information. Over recent years, special computers and audio recording devices have also been promoted to serve for IVDs.

In the last two decades, digitalization advances have not ensured only access to the printed works in electronic medias, but also adaptation of materials of screen readers and softwares (Peters 2004).

The burst of information technologies furthers alternative reading styles by means of assistive technologies which have removed personal and social barriers (Owen 2007, Davies 2007).

Assistive technology plays a significant role in the provision of equal opportunities for IVDs (Koulikourdi 2008). The obstacles to access to information of IVDs are eliminated by ways of certain hardware and software systems; such as, screen reading systems adaptable to numerous languages, monitors with six-point keyboard, reading machines which convert printed documents of periodicals, books, newspapers and cardvisits etc. into sound after scanning process, programs either audio or screen-expanding, close-circuit screen expanding systems, portable document reading machines etc (GETEM 2012).

4. Legal Arrangements

There have been many positive advances about the issue of information access for IVDs over recent years. Especially, several organizations primarily like United Nations emphasize the importance of the issue in line with legal arrangements. United Nations declared ‘Rights of Persons with Disabilities’ on 30 March 2007 (United Nations 2012, Ozida 2012).

Developed countries like the USA and UK which provide information access services for IVDs have made legal arrangements and have defined either national or international standards (LA 2012, NLS 2012, IFLA 2012).

5. Legal Arrangements in Turkey

The 12.59% of the Turkish population consists of people with disabilities (Ozida 2012). According to the 2002 research on measurement of disability in Turkey conducted by Turkish Prime-ministry Statistical Institute together with the Management of Disabled Persons, the proportion of IVDs is % 0,60 of total population. Apart from the official records (412.312 IVDs), it is estimated that there is a group of IVDs, the exact number of which is not measured yet.

In Turkey, the matter of the education for IVDs is addressed on the 1 July 2005-dated and 5378 issued by law decree of people with disabilities, and ‘In no way,

people with disabilities cannot be lacked of education.’ is declared in the section 15, which highlights the equal right to access to information. This section also confines library usage, which is an important component of education (Sağlamtunç 2010).

‘Rights of Persons with Disabilities’ declared by United Nations on 30 March 2007 is approved by the 2009/1537-issued, 27 May 2009-dated law released by the Council of Ministers of Turkish Republic (Ozida 2012).

Information services for IVDs was initiated, for the first time, by National Library to prepare braille books in 1955 (Kaynar 1992).

In Turkey, the information access services for IVDs are provided by National Library, public libraries, and universities’ libraries, yet they are not at adequate level to satisfy the needs (Kanık 2004, Subaşıoğlu 1999, Sağlamtunç 2010).

In the last two decades, numerous articles have been written about the information access problems IVDs face, and about the possible solutions. The departments of Turkish universities which provide education of information management rank the matter of information access among academic works (Kanık 1994, Aydın 2011).

The ongoing information access services which voluntary organizations supply are presently far to be centralized in Turkey (Subaşıoğlu 1999). There is no present work carried out by National Library about the issue; nonetheless, there are numerous works carried out by universities. The libraries of certain universities like Akdeniz University, Anadolu University, Bilkent University, and Gazi University provide services for IVDs. Also, Hacettepe University has intensively worked on constructing a special department for IVDs in Beytepe Central Library since 2009 (Sağlamtunç 2010). Not every public library has a talking books system, but just 14 of them do. However, a project called Talking Book Project is initiated by the Ministry of Culture (Sağlamtunç 2010).

6. GETEM (Assistive Technology and Education Laboratory for Individuals with Visual Disabilities)

Despite the access information services for IVDs are not centralized yet, sample and pilot works have been conducted within world standards by some universities in Turkey. A project which aims to provide information access services for IVDs is launched by GETEM. Boğaziçi University cooperates with Türk Telekom (Turkish Telecommunication) to support the project technically. This project also aims to provide services for people with other disabilities (e.g. paralysis, dyslexia) (GETEM).

GETEM libraries include Turkish and English publications (story, novel, poem etc.), Turkish universities’ course materials (books, articles, course notes, lecture records etc.), and academic articles/books. Apart from these materials, the texts of daily newspapers and weekly/monthly periodicals will be available for online use. International libraries which provide online services for IVDs will also be available for connection (GETEM 2012).

The materials (books, periodicals, texts etc.) of GETEM internet library will be converted into audio format. A special program which vocalizes the texts on computer screen, and the devices (e.g. refreshable braille) which convert the texts

on computer screens into tactile format will be utilized. In addition, audio data will be recordable for CDs and MP3 media (GETEM 2012).

With the inclusion of the project, universities and local administrations will provide services for other individuals, organizations, associations, and establishments (GETEM 2012).

6.1. Stages of GETEM Project

The test activities of the GETEM project will be initiated by the end of April 2012. Implementation of the project is targeted to achieve after the period of 2 months-test at the end of June 2012. The project received the interest of media, and it is nationally announced (GETEM 2012).

6.2. Persons Supporting GETEM Project

Boğaziçi University co-operates with donators on GETEM Project. Persons supporting GETEM Project: Ayşen Özyeğin, İbrahim Necat Uyum, Kerim Altınok, Özgür Altınok, Selim Altınok.

6.3. Organizations/Associations Supporting GETEM Project

Açık Toplum Enstitüsü/ Open Society Foundation; Altı Nokta Körler Derneği/Six Dots Association for the Blinds; Aşık Veysel Görme Engelliler İlköğretim Okulu/Aşık Veysel Elementary School for the Visually Impaired; Atatürk Kitaplığı Körler Bölümü/ Blind Section of Atatürk Library; Atı Nokta Körler Vakfı/Six Dots Foundation for the Blinds; Bakırköy Belediyesi/ Bakırköy Municipality; Beyazıt Devlet Kütüphanesi Görme Engelliler Bölümü/ Department of Beyazıt State Library for the Visually Impaired; Boğaziçi Üniversitesi Vakfı/ Boğaziçi University Foundation; Boğaziçi Üniversitesi Yayınevi/Boğaziçi University Press; İstanbul Rotary Kulübü/Rotary Club of İstanbul; Patates Baskı/Potato Printing; Sabancı Üniversitesi/Sabancı University; Türkiye Görme Özürlüler Kitaplığı/ Turkey Blind Library.

6.4. Essential Equipment for GETEM Internet Library Access

For access to GETEM internet library, reader services department should contain computers with speaking programs and special devices which convert texts to tactile materials. GETEM will provide essential education, and will play a mediator role to supply equipment (GETEM 2012).

7. Tele-Information Service

Tele-service has been conducted to provide opportunities by Boğaziçi University GETEM, which enable IVDs to listen to the texts of newspapers, periodicals, and books (GETEM 2012).

7.1. How to Use Tele-Information Service

The name, surname and telephone number of IVDs should be included in the system. The system is mainly based on speaking. It automatically identifies the voice of IVDs, and responds accordingly by providing the contents IVDs want (GETEM 2012).

7.2. Responding

Receiving a respond, user hears a short greeting and informative message. Afterwards, the user hears the question 'What would you like to listen?'. S/he is to say the name of newspaper, book or author. Issue categories are included in the system, as well (GETEM 2012).

7.3. An Awarded Project

The tele-information service was awarded '2009 Champions of Accessibility' by Türkiye Bilişim Derneği (Informatics Association of Turkey) for its considerable services (Informatics Association of Turkey /Türkiye Bilişim Derneği 2012).

8. Results

Services for IVDs are not prevalent in Turkey yet. Among the reasons are information services which are not run by central system, inadequate co-ordination between organizations and associations, insufficient follow-up to advances.

Despite the access information services for IVDs are not centralized yet, sample and pilot works have been conducted within world standards by some universities in Turkey. A project which aims to provide information access services for IVDs is launched by GETEM. Boğaziçi University cooperates with Türk Telekom (Turkish Telecommunication) to support the project technically. This project also aims to provide services for people with other disabilities (e.g. paralysis, dyslexia).

All libraries and information centers which provide the services of information are to be obliged to enable IVDs to benefit from the services within any formats. As a result, the advances in the present services which many library types provide for different user groups in Turkey are hopeful. However, these services require more improvements, and widespread services are needed.

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