

DESIGN SPECIAL SCHOOL MATERIAL FOR THE STUDENTS WITH VISUAL DISABILITY USING (THE KURDISH LANGUAGE FIRST TIME WITH BRAILLE IN THE WORLD) AND BARCODE TECHNOLOGY

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Abstract

Purpose of the study: It has been presented by the researcher in this paper to be relied upon in the design of curricula for visually impaired people using barcode technology in The Kurdish region and the Kurdish speakers, in this paper the researcher use the Kurdish language with the Braille first time in the world and he hopes to add this language to usage of Braille in the next modifying in UNESCO organization because of it is now the second official language in Iraqi law.

Methodology: In these study characters of the Kurdish language has been investigated. Students with visual disabilities in the form of various groups gathered to be taught using the signs of Kurdish language. Their progress during this effort has been reported through this article

Results: Braille is not exclusive to people without another. It is an easy-to-read and writes tool for people with visual impairments. Although the Kurdish population is more than 30 million, their language is not mentioned in the UNESCO Guide until 2018.

Keywords: Braille, Kurdish language, QR code, UNESCO, Kurdistan Iraq, Special education.

INTRODUCTION

The purpose of this article is to provide a way to support the education of people with the impaired vision of the Kurdish nation, the Kurds are the second nation in many countries of the Middle East. Kurdish areas are concentrated in Iraq, Iran, Syria, Turkey, Lebanon, Azerbaijan and Afghanistan ([The Kurdish Population, 2017](#)). The population is about 35 million people. Most of them are in Turkey, Iraq, Iran, and Syria. Kurds have been subject to significant discrimination and harassment. And the use of chemical weapons in the Halabja region of Iraqi Kurdistan by the political system in the 1980s. These confrontations led to a large number of victims and birth defects. This is a real problem nowadays, with the economic difficulties that most families face high costs of treatment and health care for this group of people with disabilities, we will try. Education-related people with visual impairments who are monitored in the field of labor, namely the difficulties of educating people with visual impairments.

UNESCO has worked to support the education process through country-specific programs or through international plans. UNESCO played an important role in supporting education and heritage preservation in developing countries, areas of armed conflict, crises, and natural disasters, and here we would like to highlight an important issue that needs more. In support of the education process of people with visual impairments of the Kurdish nation, the United Nations and UNESCO has adopted programs and agreements to support persons with disabilities in order to raise the standard of living for this group, as well as help them and their families integrate into communities and many articles and articles are devoted to them. Activities and agreements to achieve this goal ([Sadato, et al. 1996](#); [Pascual-Leone, et al. 1993](#); [Hermelin & O'connor, 1971](#)) and has signed many of the countries represented by their governments to this Convention, and, thus, has committed to working with the terms of these agreements.

In Iraq, the Kurds achieved autonomy in the Kurdistan region in Iraq, and the Kurdish language was officially recognized as the second language in Iraq in addition to Arabic. Unfortunately, none of the specialists added any Kurdish language to the Braille manual issued by UNESCO, which led to the learning process for the blind and disabled. Visualization is a very complex process, and here we highlight the problem of learning visual disability using Braille code developed by Arabic. This problem adversely affects the learning process that Kurds with visual impairments often do not speak Arabic. The complex is more than teaching people in Arabic Braille an Arabic code, so we suggest that Kurdish be included in the guide to use Braille code published by UNESCO ([The Kurdish Population, 2017](#); [Yasar, 2019](#); [Raghibdoust, et al. 2018](#); [Kelly, 2009](#)) using Braille code developed by Kurdish language characters, and using rapid response technology to access audio materials over the Internet. Kurdish language is not included in Braille. Language in the countries in which they live is used instead of their native language. In Iraq, for example, Kurds in Iraqi Kurdistan use Arabic, because they are officially recognized by UNESCO. But this increases the difficulty of use because many Kurds do not speak Arabic. This is what the researcher demanded to set the Braille code in Kurdish to be accepted in Iraqi Kurdistan instead of Arabic.

The use of non-Kurdish languages by visually impaired Kurds complicates the process of dealing with Braille symbols because many Kurds do not know the Arabic language as well as the Kurds in Syria, many of them are not good Arabic and in Iran, too many Kurds do not speak the Persian language and in Turkey also does not know much The Turkish language is an additional difficulty to learn Braille because it is not officially recognized in the Kurdish language, making it difficult to use it with visually impaired Kurds, so the researcher believes that recognition of the Braille code compatible

with the characters of the Kurdish language will contribute strongly to support the education process Visual disability of Kurds (McSweeney, et al. 2018 ; AY. & GA. 2018; Al-Jaleeli, 2017).

METHODOLOGY

The official Kurdish language in Iraqi Kurdistan consists of 34 characters. To create a special table, it must match the basic design of Braille, which includes six dots per character. These points are highlighted and hidden by a character that is easily readable by a blind and visually impaired finger. Kelly, S. M. (2009)

The table of Kurdish language with Braille

Table 1: Use QR code with Braille code to access audio material on the Internet

The letter	Voice	Braille
ا	(a:)	
ب	(b)	
ج	(dʒ)	
چ	(tʃ)	
د	(d)	
هـ - هـ	(ε)	
هـ	(e)	
ف	(f)	
گ	(g)	
هـ	(h)	
ح	(ħ)	
ع	(ʕ)	
ی	(i:)	
ژ	(ʒ)	

ک	(k)	
ل	(l)	
ل, ل	(l')	
م	(m)	
ن	(n)	
و	(o)	
پ	(p)	
ق	(q)	
ر	(r)	
ر, ز, ر	(r)	
س	(s)	
ش	(j)	
ت	(t)	
و	(u)	
و, و	(u:)	
و	(œ)	
ف, و	(v)	
و	(w)	

خ	(x)	
غ	(y)	
ى	(j)	
ز	(z)	

The researcher places the titles of audio materials written in Braille code and below the QR code for the user to find the material he wishes to listen to by reading the address by Braille and at the bottom of each address there is a quick response code that leads the user to the required material on the Internet [Kelly, S. M. \(2009\)](#).

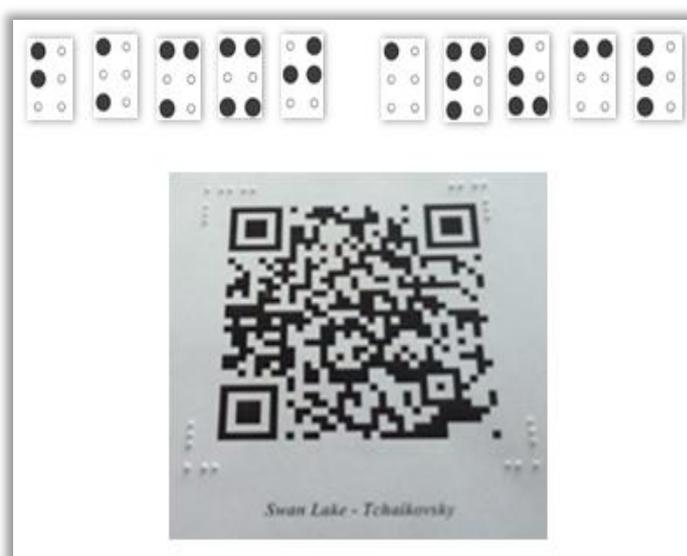


Figure 1: One of the pages of the music book, including the title of the track, written by the Kurdish Braille with the QR code

In this paper I find it logical and decisive in the process of education for people with visual disabilities to deal with Braille in parallel with their mother tongue, and because the Kurds are distributed among several countries as mentioned earlier they did not get recognition by UNESCO to add the Kurdish language to the Braille book issued by However, after the recognition of the Kurdish language as an official language in Iraq, it became necessary for both the Iraqi and the UN sides to be represented by UNESCO. It was necessary to add the Kurdish language to the Braille guide, core previously. [Badr, H. E., & Mourad, H. \(2009\)](#)

It is well known to those interested in special education issues that the mother tongue plays a role in understanding and facilitating the educational process of the visually impaired. Learning is a legitimate right guaranteed by international laws and regulations. In general, the slowdown in the deployment of Braille symbols corresponding to the Kurdish language will be reflected negatively on the process of teaching the blind and the visually impaired in the Kurdistan region of Iraq and areas of Kurdistan outside Iraq

Generate QR code

A QR code can be generated in several ways, including a program that can be designed using programming languages and electronic libraries (9) and which can be used by sites that design QR codes such as Google and others

It is also possible to design the catalog using Braille with a linear barcode that can be linked to a database containing audio material, you can go back to a previous article by the author detailed in this regard (10).

The diagrams below show you the most important steps used by people with visual disabilities to access audio materials

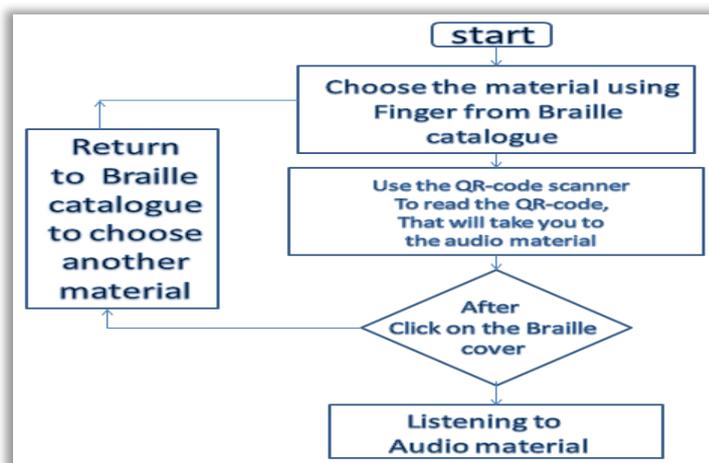


Figure 2: Flow chart of learning using Braille

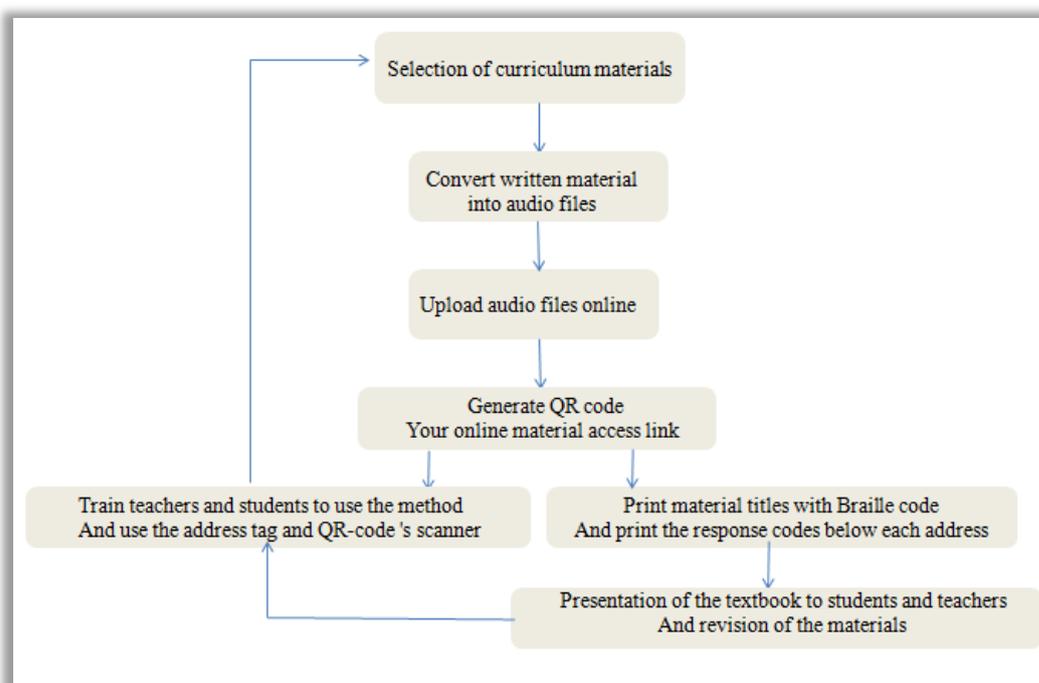


Figure 3: Flow chart of generating QR code

SUMMARY AND CONCLUSION

Creating Braille in Kurdish will bring excellent results for visually impaired Kurdish speakers in Iraq, Turkey, Iran, Syria, and Lebanon and will have a very positive impact on raising the level of this group of people with disabilities, which will help them integrate into communities. This cannot be achieved without the support of UNESCO and thanks to the recognition of this language and its addition to the UNESCO Braille Directory. The other side is to enhance the potential of the visually impaired to deal with the technology of information represented by barcode reader and using the database too and add and remove the audio material.

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