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USING OF THE BRAILLE ALPHABET IN THE REPUBLIC OF MACEDONIA

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Abstract

The author of the alphabet for the blind is Louis Braille, who invented six dot cells in 1825 and in 1850 it is officially recognized in Europe as a single letter for people with severe visual impairment. One of the most important goals in educating these people is to know and to actively use the Braille alphabet. But, according to the American Federation for the Blind (2009) there are only 10% of school-age children with severe visual impairment who use Braille alphabet as the primary letter. This is much lower than in 1960, when 50% of students were using Braille.

The goals of the paper are to determine the number of blind persons who know and use Braille and accessibility of Braille for the blind persons in the Republic of Macedonia. The research was conducted by using the questionnaire which included questions open, closed and mixed type. Using the answers we get pictures of the current situation, i.e. the representation and use of Braille writing by the blind in the country.

According to the complete analysis and processing of the obtained results we conclude that the number of blind persons who use Braille is very small. Namely, from 4171 blind persons, members of 18 Unions of blind, only 491 (11.8%) know Braille, or 222 (5.3%) from all of the members actively use this letter as a medium of written communication.

Key words: Braille, Blind persons, Union of blind

Introduction

The author of the alphabet for the blind is Louis Braille, who invented six dot cells in 1825. In 1854, only two years after his death, the Braille alphabet started to spread throughout the world. Braille is much more than a system of six dots, two horizontal, three vertical, a total of 63 combinations. A combination of these dots might be used to write letters of the alphabet, punctuation signs, contractions and work signs. Braille can be used by blind people from all language, of course with some modifications of letters that do not exist in the French alphabet. In 1955, UNESCO has accepted Braille as a universal letter for people with serious visual impairment in the entire world. Accepting Braille is a result of its graphical specifics which are corresponding to the nature of the tactile sense. According to Cvetkovic (1989) Braille alphabet has these specifics:

- Braille symbols have universal application in all forms of written communication of blind people;
- This letter corresponds to tactile perception, because the symbols are presented in relief;
- Symbols have specific relief and graphic structure;
- Symbols have specific dimension.

Beside numerous benefits to this letter, we must mention the few shortcomings, which are successfully eliminated with the use of the computer technology by the blind persons.

In brief, according to Radulov (2009) the following difficulties while using the Braille alphabet can be stated:

- *Large volume* – because the relief character and larger symbols, Braille is extensive than a printed alphabet. Printed Braille documents are very bulky. For example, Tolstoy's novel "War and Peace" written in Braille has 30 large volumes. Today, with the use of computers and Braille line (display), the problem of large volume is determined.
- *Small speed of reading* - this is logical, because reading with one or two fingers, a reading window is considerably smaller than the visual reading. Namely, with visual reading 10 or more letters are perceived simultaneously, while with the Braille reading only one character or letter is perceived (McConkie, 1983). Studies show that the speed of reading of the blind is two

to three times slower than the speed of people without visual impairments. The average speed of reading with one finger equals 104 words per minute. Readers with two fingers can increase the reading speed to 200 words per minute (Saradegna et al.,2002).

- *Slower writing* - the difference in writing speed of blind and people without visual impairment is very great. With the use of Braille typewriters and computers, this difference is exceeded.
- *Easy to learn but difficult to use* - learning Braille is not a problem for the blind, and even less for people without visual impairments. The problem is in its use as a tool for reading. In the process of literacy Olson (1982) proposed to use large three-dimensional objects (e.g. balls) first and slowly decrease the size of these items.

Many authors point out that the number of children who use this letter is reducing (Johnson, 1996). According to the American Federation of the Blind (2009) there are only 10% of school-age children with severe visual impairment who use Braille alphabet as the primary letter. This is much lower than in 1960, when 50% of students were using Braille. One of the reasons for less use of Braille alphabet is the development of techniques that create new additional features, i.e. translating the printed information in audio form (Aviv, 2010). Technology does not replace knowing how to read and write Braille.

Methodology

The goals of the paper are to determine the number of blind persons who know and use Braille and accessibility of Braille for the blind persons in the Republic of Macedonia. The research was conducted by using interview, with the following research questions: How many members of Unions of Blind know Braille, How many of them use Braille as a primary medium and How the Unions of Blind encourages the members to use Braille. The majority of the interviews were conducted by telephone with all representatives of the 18 Unions for the Blind in the country. From the total of 4171 members, the Union for Blind has 2500 or 59.3% members in the capital city Skopje. That means, the remaining 1671 (40.7%) members are from other 17 Unions (e.g. city Bitola 4.9%; city Tetovo 4.6%; lowest number of members (0.9%) are in the cities Makedonski Brod and Gevgelija).

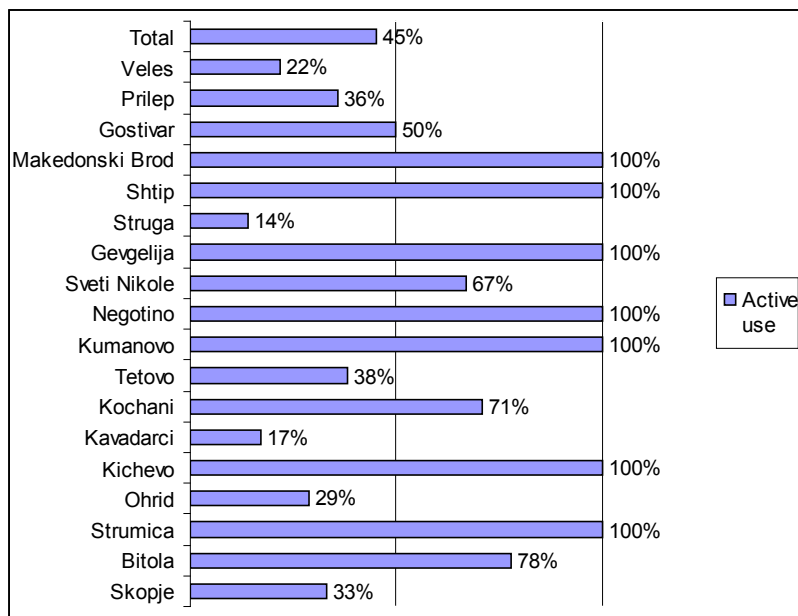
Results

We used SPSS 13.0 for quantitative data analysis, which included computation of percentages, mean scores, standard deviations and t test. The significance was determined at level $p < 0.05$.

Table 1. *Members who know and don't know Braille*

Unions for blind people (citys)	Know		Don't know		Total
	N	%	N	%	N
Skopje	300	12	2200	88	2500
Bitola	32	15.5	174	84.5	206
Strumica	20	22.2	70	77.8	90
Ohrid	14	20.6	54	79.4	68
Kichevo	5	5	95	95	100
Kavadarci	6	13.3	39	86.7	45
Kochani	7	6.9	95	93.1	102
Tetovo	16	8.4	174	91.6	190
Kumanovo	15	9.1	150	90.9	165
Negotino	1	2.4	40	97.6	41
Sveti Nikole	15	22.7	51	87.3	66
Gevgelija	2	5	38	95	40
Struga	7	15.9	37	84.1	44
Shtip	15	15.6	81	84.4	96
Makedonski Brod	1	2.5	39	97.5	40
Gostivar	6	10.7	50	89.3	56
Prilep	11	6.5	158	93.5	169
Veles	18	11.8	135	88.2	153
Total	491	11.8	3680	88.2	4171
M	27.28		204.44		231.73
SD	68.51		500.52		568.79

The obtained results show that only 491 (11.8%) of all members know Braille (Table 1). The biggest percent (97.5%) of members who don't know Braille are in the Union for blind in Makedonski Brod, and the smallest percent (77.8%) in Strumica.



Picture 1. Percent of members who actively use Braille

At seven Unions of Blind, all members who know Braille use it actively. In the Union for Blind in Struga only 17% of the members use Braille for writing and reading (Picture 1).

Table 2. Union encourages for using Braille

Union of Blind:	Yes		No		Total	
	N	%	N	%	N	%
Encourages using Braille literature	18	100	/	/	18	100
Organizes competitions in reading Braille	/	/	18	100	18	100
Receive Braille letters from members	2	11.1	16	88.9	18	100
Receive Braille magazines	3	16.7	15	83.3	18	100

Union activities about encouraging using Braille alphabet are displayed in Table 2. All Unions of Blinds state that they encourage their members to use Braille, but they don't take some particular activities. Only 3 or 16.7% of them (Strumica, Gevgelija and Sveti Nikole) receive Braille magazines.

Discussion

The decline of the number of Braille readers since 1963 (American Printing House for the Blind, 1991) has been widely discussed by professionals and censured by consumer groups (Rex, 1989; Schroeder, 1989; Stephens, 1989). Although there is no consensus on the causes for this decline, a number of factors have been cited. Among them are the rise in the number of visually impaired children with additional disabilities who are non-readers (Rex, 1989), disputes on the utility of the Braille code (Thurlow, 1988), the decline in teachers' knowledge of Braille and methods for teaching it (Schroeder, 1989; Stephens, 1989), negative attitudes toward Braille (Koenig & Holbrook, 1992; Rex, 1989), and the greater reliance on speech output and print magnification technology (Paul, 1993). Many commentators on the Braille literacy crisis agree that one of the most significant contributing factor is the negative societal attitude toward Braille (Riccobono, 2006; Hehir, 2002).

In our research, according to the complete analysis and processing of the obtained results we conclude that the number of blind persons who use Braille is extremely low. Namely, from 4171 blind persons, members of 18 Unions of Blind, only 491 (11.8%) know Braille, or 222 (5.3%) from all of the members actively use

this letter as a medium of written communication. From 18 Unions, there is a library only in Skopje. The library in Skopje has 100 books and 100 magazines printed in Braille, but it's not enough.

Conclusion

Learning to read and write in Braille allows a child to be fully literate and excel in learning from any books published in Braille form. Society would never accept a small percent literacy rate among sighted people; it should not accept such an outrageously low literacy rate among the blind. To avoid crisis Braille literacy should be recognized as a crucial part of rehabilitation of blind individuals. Blind people who know Braille and use it find success, independence, and productivity. Literacy should, therefore, be conceived by the Government as a basic right. In our country, it is very important to develop a specific instructional strategies and implementation of programs designed to increase Braille users for blind people.

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УПОТРЕБА НА БРАЈОВОТО ПИСМО ВО РЕПУБЛИКА МАКЕДОНИЈА

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Апстракт

Творец на писмото за слепи е Луј Брај, кој во 1825 година ја измислил шестоточката, а во 1850 година таа е официјално прифатена во цела Европа како единствено писмо за лицата со сериозно оштетување на видот. Една од најважните цели во едукацијата на овие лица е да го знаат и активно да го користат Брајовото писмо. Но, според Американската федерација за слепи (2009), само 10% од децата со визуелно оштетување на училишна возраст го користат Брајовото писмо како примарно писмо. Ова е многу помал процент од оној во 1960 година, кога 50% од учениците користеле Брајово писмо.

Целта на овој труд е да го утврди бројот на слепи лица кои го знаат и користат Брајовото писмо, како и достапност на ова писмо за слепите лица во Република Македонија. Истражувањето беше спроведено со помош на прашалник што содржеше прашања од отворен, затворен и комбиниран тип. Со помош на одговорите се доби претстава за недостатоците на досегашната состојба, односно застапеноста и употребата на Брајовото писмо од страна на слепите лица во Република Македонија.

Од комплетната анализа и обработка на добиените податоци, констатиравме дека бројот на слепи лица кои го користат Брајово писмо е многу мал. Имено, од 4171 слепи лица, членови на 18 сојузи за слепи, само 491 (11,8%) го знаат Брајовото писмо, односно 222 (5,3%) од вкупниот број членови активно го користат ова писмо како средство за писмена комуникација.

Клучни зборови: Брајово писмо, слепи лица, Сојуз на слепи