



**The voice of blind and partially sighted people in Europe**

## **EBU Statement on Access to Reading and Using Braille**

In the past few decades immense developments in information and communication technology have provided enormous progress for blind people. Assistive technologies have opened the world of information with considerable freedom and independence. And even if blind people are still struggling against accessibility barriers, the current situation is hardly comparable to the era without computers and various digital aids to help alleviate the restrictions of the disability.

How does braille influence the life of blind people today? Does it still represent an inevitable and crucial tool for blind peoples' lives? The majority of experts in the world would answer this question by saying "yes!" and call for even greater attention to the use of Braille. It is important to emphasize early Braille education for blind children as well as the development and training of Braille skills for adults with sight loss in order to develop adequate reading speeds.

Widespread use of Braille in public areas, its accessibility and availability in everyday life and the provision of the necessary tools for its creation are essential to further promote the importance of Braille.

In order to reach this objective a two-sided approach is needed, both internal as well as external. The internal approach is aimed at blind people and Braille users whereas the external approach targets legislation, the built environment, product designers, technology developers etc. The reason for the

promotion of Braille is clear - literally to keep blind people literate and to give them the chance to participate in the information age on an equal rights footing.

Since the invention of the Braille alphabet by Louis Braille, blind people have been able to read and write on their own. Today, the six or eight tactile dots are more available and easier to produce than ever before, not only as printed Braille material, but also in digital format thanks to developments in Information technology. More and more Braille is appearing in public spaces, such as on elevator buttons, handrails, medicine packaging or in restaurant menus.

Until now Braille is considered the optimal and most effective tactile signage for sensitive fingertips. The dot patterns are easily identifiable and can be read much more fluently than, for example, the complex structures of raised letters of the Latin alphabet. Even a few basic skills are enough to use Braille as a marking system for playing cards or spice jars in the kitchen. This way Braille can very quickly find its way into the life of a blind person, whether he or she is a child or an adult who lost sight due to an accident or a progressive illness. Developing good reading skills will allow a blind person to learn and acquire knowledge, to dive into areas such as the sciences, foreign languages, music notation, proper grammar and vocabulary skills. Braille can thus become the most important key in a blind person's education to be well prepared for a professional career.

Why Braille is still a very important tool for a blind person even after 200 years since its invention?

- Braille is easy to write with slate and stylus or the Braille typewriter;
- The system of arranged dots and dot patterns is easy to understand and learn;
- It is not necessarily expensive to start a training program of Braille to begin using it in the household and in daily life;
- The dot combinations along with their rules and standards are a universal tool – they can be used to represent Latin letters as well as Greek or Cyrillic notation, mathematical or chemical formulae and even musical notes;
- Braille is an essential tool when studying foreign languages to develop good grammar and spelling skills;

- Braille has found its way into the digital age thanks to Braille displays, electronic publications (books or magazines), and due to the agreed digital format of Braille;
- Mobile phones, computers and the internet can be efficiently used with a Braille display.

### **Recent Situation of Braille Usage**

The Report for the European Blind Union and European Commission of 2018, [Braille Teaching and Literacy](#), has conducted extensive research on the “situation of Braille” in 9 European countries. This research has shown that the activities in training, methodical preparation, promotion and usage of Braille differ significantly. None of these countries had a clear understanding of the number and the status of the Braille reading population. It is therefore difficult to evaluate any activities towards the development of Braille skills, and to determine the potential number of persons who could benefit from the delivery of Braille services. Even though Braille is part of the education process in mainstream schools in most of these countries, Braille instruction is done by special assistants (teachers, parents, special pedagogues). The research suggests that the quality of Braille instruction may be inadequate. In most of the countries an apparent lack of testing of Braille proficiency and reading speed was recorded. All in all the development of literacy skills was reported as not monitored.

In many countries children are introduced to electronic Braille at a very late age, often due to the unavailability of assistive technologies. This phenomenon badly impacts the development of reading skills, by skipping a most crucial period for learning. Additional shortages of materials on paper may furthermore reduce a child's motivation for the development of appropriate reading skills.

But the report also contained many good practice examples in the area of educational and play materials for Braille training. As the authors state: “although there were many encouraging examples given in relation to education and play, it is not clear from the data whether these are widespread practices or one-off instances”.

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## **Braille in the 21<sup>st</sup> century**

Assistive technologies often give blind people quick access to information through auditory perception. Screen reading software makes computers, mobile phones, tablets and some other devices such as tv sets accessible, information can be read from the screen making interaction with these devices possible. Production of audiobooks is a great expansion of access to literature, podcasts, which have become very popular, offer countless hours of listening to all kinds of topics.

All this auditory input, however, should not eliminate other channels of perception, but rather be a welcome addition.

The research by Natalie N. Stepien-Bernabe, Daisy Lei, Amanda McKerracher and Deborah Orel-Bixler (2019) - [The Impact of Presentation Mode and Technology on Reading Comprehension among Blind and Sighted](#) – studied a small sample of 65 individuals. In this study the authors hypothesized a correlation between physical engagement and text comprehension in scientific material and investigated the impact of assistive technologies on text comprehension. The results of this study suggest that actual reading of science text, whether by sight or fingers, is superior to the auditory perception of science text. Furthermore, for the sample of blind individuals the study showed a 10 per cent increase in text comprehension when the text was read by touch rather than listened to through the use of a screen reader.

Other studies also suggested that Braille materials and tactile tools were the tools which proved an effective way “to allow blind students to better engage with course material, increasing the likelihood that blind students will stay involved in the sciences” (Supalo et al. in Lillehaugen, 2014).

Braille texts, whether printed on paper or presented digitally, are important in studies and occupation, not only as tactile representations of words. They bring to a blind person structured information, mathematical or statistic formulae, the possibility to read and write organized information showing items related to each other. The Importance of Braille as a graphical representation of information was many times proved in different studies. According to Diana and Doug Brent (2000) "the sequenced, ordered characters of braille provide a medium laid out in space very much like print. Indexes, lists, outlines, indentation, are meaningful in braille. One can read them quickly or slowly, stop and back up, and follow a developed argument in ways that are difficult when listening to words flow by on a tape". And though braille is not so

transportable and not so easily accessible as spoken text from audio materials or computers with screen readers and it furthermore requires transcribing and thorough training, it offers crucial skills for a person to become literate. As Diana and Doug Brent (2000) put it: “braille, like print, is a code, a written representation of our spoken language. We would never consider substituting a purely oral medium for print reading and writing for our sighted children. These same priorities and expectations must be observed for those who are blind or severely visually impaired. When oral and written communication is balanced rather than having one substituted for another, technology can become a most empowering and exciting tool, but technology in and of itself cannot be a teacher of literacy.”

Blind people in the 21<sup>st</sup> century have to grasp all the means of perception possible as the tools for receiving information.

One may pass his/her education process and leisure time by listening to texts, books, newspapers and magazines, but it is only through one's own reading that the full meaning of the written text is revealed and good orthographic skills are developed and maintained. Those who want to read more complicated texts, write things down themselves, read to others, learn foreign languages or use computer programs must master Braille. It is also indispensable for successful professional employment. The personal ability to read and write must therefore always be a major goal in the education of blind people.

**The European Blind Union therefore claims:**

- Blind pre-school children must be prepared in early intervention to learning braille by tactile training and getting familiar with scripture and letters.
- In education - both at special needs schools and in inclusive school settings - blind children must learn the braille commonly used in the respective country and practise using it. The important use of audio media in the classroom must not lead to the displacement of teaching materials printed in Braille.
- Blind pupils are entitled to work on the computer not only with synthetic speech output, but also with a Braille display. Lower usage of Braille displays is not caused only by price of the devices, but also due to the lack of habit of reading Braille along with synthesized speech, correcting texts or simultaneous reading by

hands and ears. This simultaneous reading has to be trained and supported.

- Braille displays must be financed by society for education, profession and private life.
- Qualified teachers must always be available to teach Braille to blind children and adults. There must be training programs for teachers who have blind students in didactic processes concerning Braille.
- People who become blind in their senior years are entitled to intensive basic rehabilitation to train their sense of touch and learn Braille.
- Braille books must be published at the same time as the original. Publishers - especially those of textbooks - must share their typesetting data with Braille-producing institutions in order to speed up the preparation in alternative formats. Libraries and publishers of Braille must be financially equipped by society to produce and offer more Braille literature.
- General educational offers, for example in adult education, must also be usable for blind people by making learning materials also available in Braille.
- In elections there must be tactile tools with Braille to allow blind persons to vote independently.
- In public spaces signs and advice must be available in Braille, for example at elevators, toilets and handrails.
- Technical devices and packaging of products of all kinds must be signed with Braille in priority products of cleaning, hygiene and other essential or dangerous areas.

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## Resources

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