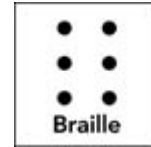




Information about Braille



- The **Braille** system is a method that is widely used by blind people to read and write. Braille was devised in 1821 by Louis Braille, a blind Frenchman.
- Each Braille character or *cell* is made up of six dot positions, arranged in a rectangle containing two columns of three dots each. A dot may be raised at any of the six positions to form sixty-four possible subsets, including the arrangement in which no dots are raised.
- Braille may be produced using a *slate and stylus* in which each dot is created from the back of the page, writing in mirror image, by hand, or it may be produced on a Braille typewriter or *Perkins Brailier*, or produced by a Braille embosser attached to a computer. It may also be rendered using a refreshable Braille display.
- Since Braille is one of the few writing systems where tactile perception is used, as opposed to visual perception, a Braille reader must develop new skills. One skill important for Braille readers is the ability to create smooth and even pressures when running one's fingers along the words. There are many different styles and techniques used for the understanding and development of Braille, even though a study by B. F. Holland suggests that there is no specific technique that is superior to any other.
- Another study by Lowenfield & Abel shows that Braille could be read "the fastest and best... by students who read using the index fingers of both hands." Another important reading skill emphasized in this study is to finish reading the end of a line with the right hand and to find the beginning of the next line with the left hand simultaneously. One final conclusion drawn by both Lowenfield and Abel is that children have difficulty using both hands independently where the right hand is the dominant hand. But this hand preference does not correlate to other activities.
- In 1960, 50% of legally blind, school-age children were able to read Braille in the U.S. According to the 2007 *Annual Report* from the American Printing House for the Blind, there are approximately 57,696 legally blind children in the U.S. Out of those school-age children, only 10% use Braille as their primary reading medium.
- There are numerous causes for the decline in Braille usage, including school budget constraints, technology advancement, and different philosophical views over how blind children should be educated.
- A key turning point for Braille literacy was the passage of the Rehabilitation Act of 1973, an act of Congress that moved thousands of children from specialized schools for the blind into mainstream public schools.^[3] Because only a small percentage of public schools could afford to train and hire Braille-qualified teachers, Braille literacy has declined since the law took effect.^[3] Braille literacy rates have improved slightly since the bill was passed, in part because of pressure from consumers and advocacy groups that has led 27 states to pass legislation mandating that children who are legally blind be given the opportunity to learn Braille.
- In 1998-99 there were approximately 55,200 legally blind children, but only 5,500 of them used Braille as their primary reading medium. Early Braille education is crucial to literacy for a visually impaired child. A study conducted in the state of Washington found that people who learned Braille at an early age did just as well, if not better than their sighted peers in several areas, including vocabulary and comprehension. In the preliminary adult study, while evaluating the correlation between adult literacy skills and employment, it was found that 44% of the participants who had learned to read in Braille were unemployed, compared to the 77% unemployment rate of those who had learned to read using print. Currently, among the estimated 85,000 blind adults in the United States, 90% of those who are Braille literate are employed. Among adults who do not know Braille, only 33% are employed.^[3] Statistically, history has proven that Braille reading proficiency provides an essential skill set that allows visually impaired children not only to compete with their sighted peers in a school environment, but also later in life as they enter the workforce.
- Though Braille is thought to be the main way blind people read and write, in Britain (for example) out of the reported 2 million visually impaired population, it is estimated that only around 15-20 thousand people use Braille. Younger people are turning to electronic text on computers with screen reader software instead, a more portable communication method that they can also use with their friends. A debate has started on how to make Braille more attractive and for more teachers to be available to teach it.