ICEB 2024 General Assembly Report - Research Committee

# Introduction

The ICEB Research Committee was established at the 6th General Assembly in 2016 in Baltimore, United States. It is charged with monitoring relevant braille research and providing a forum for knowledge exchange among ICEB member countries through a listserv. Its membership includes one representative from each ICEB member country as well as observers from these countries with an interest in braille research. Current representatives are: Natalie Martiniello (Chair, Canada), Emily White (Australia), Carol Byrne (Ireland), Maria Stevens (New Zealand), Deena Moodley (South Africa), Emma Edwards (U.K.) and Frances Mary D'Andrea (United States). In addition, there are currently 15 observers on the Research Committee listserv.

# Research Exchange and sharing

Braille research undertaken globally can carry important implications for those who read, transcribe and teach braille. Findings from these studies may be used to shape policies and practices that impact braille readers, including braille learners of all ages. Providing a forum for the exchange and sharing of this research strengthens the connection between research and practice across English-speaking countries. On-the-ground perspectives shared by practitioners and readers themselves also provide invaluable insights to ensure that research questions more accurately reflect needs and priorities. Encouraging knowledge exchange also provides ICEB with an opportunity to remain aware of braille research across ICEB member countries, including current and future priorities and trends.

As an example, in November 2022, country voting representatives of the Code Maintenance Committee (CMC) were invited to join the ICEB executive for a discussion led by Dr. Robert Englebretson, Dr. Cay Holbrook and Dr. Simon Fischer-Baum on the science of braille reading and the implications that this carries for the teaching, learning and development of braille. Please refer to the 2022 ICEB Midterm Research Committee report for more on this.

While not an exhaustive list, below is an overview of some of the research that has been shared by committee members since the Midterm meeting. Please note that this is shared for information purposes only and that individual readers are encouraged to engage in their own evaluation of any research that is published. We invite those who are interested to subscribe to the ICEB newsletter for these updates or to contact ICEB should you be interested to learn more about the Research committee listserv:

* Chen, D. et al. (2024). Development and Evaluation of Refreshable Braille Display and Active Touch-Reading System for Digital Reading of the Visually Impaired. *IEEE transactions on neural systems and rehabilitation engineering, 32*, 934–945. <https://doi.org/10.1109/TNSRE.2024.3363495>: An exploratory paper (using a single cell design) into potential new technological directions for developing braille display cells that can withstand higher finger pressures.
* Borton, L. D. et al. (2023). Using Constant Time Delay to Teach Final-Letter Groupsigns in Braille. *Journal of Visual Impairment & Blindness*, 117(6), 491-497. <https://doi.org/10.1177/0145482X231217291>. This article discusses the application of Constant Time Delay (CTD) as a teaching aid for learning final-letter groupsigns.
* Yalcin, G. et al. (2023). Determining the Reading Comprehension Levels of Students Who are Braille-Readers on Informative Texts. *International Journal on Social and Education Sciences, 5*(4). <https://doi.org/10.46328/ijonses.636>. An analysis of reading comprehension of 39 Turkish-speaking middle-school participants reading ‘informative’ texts and answering open-ended questions. Findings included that readers using contracted braille had statistically significant higher comprehension scores.
* Englebretson, R., et al. (2023). The primacy of morphology in English braille spelling: an analysis of bridging contractions. *Morphology*. <https://doi.org/10.1007/s11525-023-09413-8>. Morphology is posited to play a significant role in the understanding of written language. However, Unified English Braille rules can cause contractions to cross morphological boundaries. This study demonstrates that young braille spellers generally follow morphology rather than orthographic rules.
* Hoskin, E. R. et al. (2022). Effectiveness of technology for braille literacy education for children: a systematic review. *Disability and rehabilitation. Assistive technology, 19*(1), 120–130. <https://doi.org/10.1080/17483107.2022.2070676>. This systematic review considered 12 published articles that address the use of technology in the context of braille instruction for children and youth. Key findings are that there is a need for standardized evaluation metrics (so that reviews by clinicians and researchers can be meaningfully compared), and recommendations for key features that future technologies should include are made.

In addition to the sharing of articles, the listserv also provides an invaluable platform for sharing information about upcoming braille related scientific meetings and conferences. Looking ahead, two conferences that will be of interest to the braille research community include the International Tactile Reading Conference to be held in the Netherlands in June 2025 (<https://tactilereading.yellenge.nl/>) and the 2025 International Conference on Low Vision and Blindness Rehabilitation Research to be held in Florance, Italy in September 2025 (<https://vision2025florence.com/>).

# Wikipedia

ICEB recognizes that misconceptions about braille can often be perceived as factual by members of the general public. For example, research in recent years has shown that the often cited 10% braille literacy statistic is based upon convenience sampling that does not accurately reflect population-wide statistics, nor does it reflect the unquantifiable impact of braille for those who use it. These and other misconceptions can inadvertently influence the way in which people, including prospective braille learners, might perceive the continued importance of braille.

Members of the ICEB Research committee in collaboration with the ICEB executive, are committed to reviewing and updating Wikipedia articles about braille. Although not a peer-reviewed source of information, Wikipedia is an often-referenced website for gaining information about a wide range of topics, and it is easily accessible to the general public. Thus far, revisions have been made to the main “braille” Wikipedia page which can be found here: <https://en.wikipedia.org/wiki/Braille>

These revisions include updated content about countries that have adopted UEB, corrections to braille symbols that reflect UEB changes, information about new braille writing technologies (including braille screen input on smartphone devices) and the changing landscape of braille learners.

A recent search revealed that there are roughly 5,343 articles on Wikipedia that mention *braille*. It is proposed that this work continues by updating those pages that may be most frequently referenced.

# Resolution 3: Affirming the Importance of Braille for Adults and Older Adults with Acquired Visual Impairment

Resolution 3 was adopted at the 7th General Assembly in 2020 in recognition of the fact that there remain few resources for working-age and older adult touch learners of braille. This is particularly pertinent as the prevalence of those with acquired or age-related sight loss continues to increase across English-speaking countries. In response, members of the research committee in collaboration with the ICEB executive have been collecting adult English braille learning resources for posting on the ICEB website. We would like to thank all those from across the ICEB community who have shared information about textbooks, peer-support learning groups, organizations that provide adult braille instruction, helpful websites and other valuable resources for adult braille learners. These resources have been collated into a list and can now be found on the ICEB website here: <https://iceb.org/adult_braille_resources.html>

This is a living document. Should you have any additional resources relevant to blind and partially sighted adult braille learners, please contact ICEB at [info@iceb.org](mailto:info@iceb.org).

# Conclusion

In the years ahead, the ICEB research committee will continue to provide a forum for the sharing of research. In addition, we look forward to expanding the adult braille learning resource list and to continue updating information about braille on identified Wikipedia pages. We would like to thank all those who have contributed to these and other efforts, and look forward to providing future updates through the ICEB newsletter and social media channels.

Respectfully submitted,

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Chair of the ICEB Research Committee

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