JVIB

April 2005 • Volume 99 • Number 4

Research Report

Selected Findings from the First International Evaluation of the Proposed Unified English Braille Code

Darleen Bogart and Alan J. Koenig

Braille literacy skills are essential for success in school and employment and for independence throughout life (Ryles, 1996, 2000; Schroeder, 1996). Because of the fundamental importance of well-developed literacy skills, the braille code by which persons who are blind or have low vision attain full literacy should be one that is easy and efficient to learn, use, and produce. A process has been under way for some time to study possible changes in the English braille code, which is the focus of this article.

There are two main jurisdictions for English braille codes. The codes authorized by the Braille Authority of North America (BANA) are followed in the United States, Canada, and New Zealand. Those authorized by the Braille Authority of the United Kingdom (BAUK) are followed in the United Kingdom, Australia, South Africa, Nigeria, and many other countries where

English is a major language. The codes for literary material that is used in countries that follow BANA and BAUK are similar enough to be read in all the countries.

Although the braille code for music notation is international and the literary braille codes are similar, both BANA and BAUK have developed their own stand-alone technical codes for mathematics and science, computer notation, and chemistry. Not only are these codes incompatible with other technical codes that are used elsewhere in the world, but each is incompatible with the other technical codes within its own jurisdiction. For example, students in North America must learn four major codes to progress through school: English Braille American Edition (literary), the Nemeth Code of Braille Mathematics and Scientific Notation, the Computer Braille Code, and the Braille Code for Chemical Notation. British students must learn four codes as well, but their technical codes are not like those that are used in North America. The braille code for music notation would be the fifth code for some to learn, but, since it is an international code, it was not considered in this project.

In 1992, BANA initiated the Unified Braille Code (UBC) Research Project, of which the lead author was project chair (Bogart, Cranmer, & Sullivan, 2000). The main goal of the project was to develop one code (a “base” code) that could be used for literary braille material with technical symbols embedded in it, which

would be followed throughout the English-speaking world. The base code was to be the current literary code and was to consider the features of both the BANA and BAUK literary codes, with as few changes as possible so that access to current literary materials would be guaranteed. In 1993, shortly after the International Council on English Braille (ICEB) was formed by the braille authorities of Australia, Canada, New Zealand, Nigeria, South Africa, the United Kingdom, and the United States, it voted unanimously to assume responsibility for the UBC Research Project (Bogart et al., 2000). The U.S. working committee was expanded to include braille experts who were named by the braille authorities of the participating countries.

In 1995, the international committee completed a draft of the major blueprint for the UBC and presented it to the ICEB General Assembly, which was held in England. Following the research plan, an evaluation of the draft by general and technical readers was undertaken in the seven participating countries, as well as in Japan. With leadership from Dr. Emerson Foulke and the International Braille Research Center (IBRC), an international evaluation of the proposed UBC was initiated in 1997 (Bogart et al., 2000). The results of this research—responses to surveys from individuals in eight countries—are available to the public on the ICEB web site <www.iceb.org>. Later, ICEB changed the name of the code to the Unified English Braille Code (UEBC) to reflect the sole focus on the English language. Box 1 presents an overview of the key

principles of the UEBC, along with literary examples in context in the present version of UEBC (as of the date that this article was written).

After considerable debate, in April 2004, the ICEB General Assembly declared that the UEBC was sufficiently complete and recognized as an international standard for English braille and could be considered for adoption by the braille authorities of the individual countries. The UEBC Research Project remains a rich source of information about the use of braille. In an effort to bring some of this rich evaluation data to the attention of braille readers and others who are concerned about the use of braille, the authors, on behalf of BANA, searched the ICEB archival records (ICEB, 1998a, 1998b, 1998c, 1999a, 1999b, 1999c, 1999d, 2000) for key elements that could be shared with the field. The following is a summary of the process by which the IBRC carried out this research, as well as selected findings.

IBRC Research Project

The goal of the research project was to gather evaluation data from respondents across English-speaking countries on the ways in which they use braille and on their opinions about various aspects of the proposed unified braille code (ICEB, 1999b). A written survey was used to collect these data.

Participants

The participants were 446 English-speaking braille readers, proofreaders, educators, and transcribers from Australia, Canada, Japan, New Zealand, Nigeria, South Africa, the United Kingdom, and the United States. Since participants in each country independently volunteered themselves or were selected by their braille authorities, the resulting sample was nonrandom. Information about the project was widely circulated in newsletters that targeted the groups that were wanted for the study and through workshops and other presentations at meetings and conferences.

Table 1 summarizes the characteristics of the sample. With only one exception, the respondents from the various countries represented both nontechnical users (those who primarily used the literary code) and technical users (those who used the mathematics, science, or computer codes) of braille. In Australia, all the respondents identified themselves as technical users of braille. In general, most respondents were braille readers, followed by teachers, transcribers, and proofreaders. As a group, they had numerous years of experience with braille, ranging from a mean of 20 years for those in New Zealand to a high of 45 years for those in the United Kingdom, and their use of braille ranged from almost half their reading tasks (the Canadian respondents) to 80% of their reading tasks (the Nigerian respondents).

Procedures

The IBRC developed an evaluation instrument that consisted of a variety of samples from publications chosen to display the new symbols in the UEBC and the changes from the current literary code. Each sample was transcribed into braille according to the draft version of the UEBC and was preceded by a list of the new and changed symbols with their meanings. A questionnaire followed the samples, that asked about the respondents' attitude toward the principles and general features of the UEBC as well as about the specific changes. The evaluation was prepared in two parts: literary and technical. The literary version was sent to all the participants. The technical version was sent to only those participants who indicated that they read technical materials.

The braille authority in each country distributed the evaluation instrument to braille readers, teachers, transcribers, and proofreaders in its country. All those who volunteered to be evaluators were sent the evaluation instrument, except in Nigeria, the United Kingdom, and Japan. In these countries, evaluators were selected by their braille authorities and thus constituted a much smaller sample than in the other participating countries. Responses were returned to the IBRC, which arranged for the data to be compiled and analyzed and for written reports to be prepared.

Selected findings

Selected key findings from the UEBC evaluation are

presented in Table 2. The first section presents the percentages of the 428 respondents who favored various principles of the UEBC. With the exception of respondents from the United Kingdom, 51%–90% of the respondents from all the other countries favored the basic principle of a unified code for all reading materials, except for music (which is already an international code). Only 37% of respondents from the United Kingdom agreed with the concept of a unified code. Similarly, the majority of respondents from all the countries (58%–94%) favored a six-dot cell; stated that no major changes should be made in the current contractions and in short-form words in the literary code (64%–82%); and stated that the braille text should reflect the print text (56%–89%)—with the exception of the United Kingdom (21%) and 42% of the nontechnical readers from the United States. There was more variation (5%–78% agreement) and, in general, less support from the respondents, on changes related to the spacing of contractions (that spaces should be placed between combinations of *and*, *for*, *of*, *the*, *with*, and *a* and that the contraction for *to* should be followed by a space).

The second section of Table 2 shows the percentage of respondents in the various countries who favored selected new or changed signs, as proposed in the UEBC. There was a generally high level of support for the beginning capitalized, italicized, and boldface passage indicators (as well as for closing indicators for each, although these data are not presented in the

table). Less than half the respondents from the United Kingdom favored the italicized and boldface passage indicators. Although favorable responses for the nondirectional double quote, acute over a following letter, and the dollar sign were more mixed across the respondents, there was still a general level of support for these new or changed signs.

The third section of Table 2 presents the percentage of respondents who favored selected omissions that were being recommended in the UEBC. Across the entire group of respondents, there was generally less support for the recommended omissions. Although the respondents from Japan and South Africa showed higher levels of support, the others thought that the recommended omissions were not advisable.

Discussion

The findings that were presented in this short report represent only a fraction of the data that were generated from the IBRC evaluation study of the UEBC. However, these selected findings provide a quick snapshot of the opinions of the largely self-selected group of respondents. Clearly, a variety of opinions exist about the proposed UEBC. Although the respondents supported the underlying principles of the UEBC (such as a unified code for all reading materials, no major changes in the literary code, and braille that reflects print text), there was less support for some of the proposed omissions. This nonrandom sample was

the study's major limitation, and therefore inherent biases may be present in the participants' responses.

The outcomes of the IBRC research project show the dynamic nature of the process that is being used to design a draft of the unified braille code. Several features of the UEBC that were not widely supported have been modified in the current version of the proposed code. Those who participated in the initial evaluation have helped to shape the process of developing the proposed UEBC. It would behoove teachers, rehabilitation specialists, parents, braille users, and others who are interested in braille to be active in the ongoing discussions and research projects on the UEBC. The web sites for BANA <www.brailleauthority.org> and ICEB <www.iceb.org> provide a wealth of information on the UEBC research project.

References

Bogart, D. E., Cranmer, T. V., & Sullivan, J. E. (2000). Unifying the braille codes. In National Library Service for the Blind and Physically Handicapped, *Braille into the next millennium* (pp. 160–181). Washington, DC: National Library Service for the Blind and Physically Handicapped, Library of Congress.

International Council on English Braille. (1998a). *UBC evaluation report—Australia* [Online].

Available: http://www.iceb.org/ubcevau.html

International Council on English Braille. (1998b). *UBC evaluation report—Japan* [Online]. Available: http://www.iceb.org/ubcevwr.html

International Council on English Braille. (1998c). *UBC evaluation report—Nigeria* [Online]. Available: http://www.iceb.org/ubcevni.html

International Council on English Braille. (1999a). *UBC evaluation report—Canada* [Online]. Available: http://www.iceb.org/ubcevca.html

International Council on English Braille. (1999b). *UBC evaluation report—Consolidate worldwide (expanded sample)* [Online]. Available: http://www.iceb.org/ubcevwr.html

International Council on English Braille. (1999c). *UBC evaluation report—New Zealand* [Online]. http://www.iceb.org/ubcevnz.html

International Council on English Braille. (1999d). *UBC evaluation report—USA* [Online]. Available: http://www.iceb.org/ubcevus.html

International Council on English Braille. (2000). *UBC evaluation report—UK* [Online]. Available: http://www.iceb.org/ubcevuk.html

Ryles, R. (1996). The impact of braille reading skills on employment, income, education, and reading habits. *Journal of Visual Impairment & Blindness, 90,* 219–226.

Ryles, R. (2000). Braille as a predictor of success. In National Library Service for the Blind and Physically Handicapped, *Braille into the next millennium* (pp. 160–181). Washington, DC: National Library Service for the Blind and Physically Handicapped, Library of Congress.

Schroeder, F. K. (1996). Perceptions of braille usage by legally blind adults. *Journal of Visual Impairment & Blindness, 90,* 210–218.

Darleen Bogart, B.A., *national braille convenor, Canadian National Institute for the Blind, 1929 Bayview Avenue, Toronto, Ontario Canada M4G 3E8; e-mail: <darleen.bogart@cnib.ca>. The late* ***Alan J. Koenig, Ed.D.,*** *was professor, College of Education, Texas Tech University, Lubbock, and editor-in-chief of this journal.*

Previous Article | Next Article | Table of Contents

Search JVIB | JVIB Policies | Contact JVIB | Subscriptions | JVIB Home

If you would like to give us feedback, please contact us at jvib@afb.net.

www.afb.org | Change Colors and Text Size | Contact Us | Site Map |

Site Search Go

About AFB | Press Room | Bookstore | Donate | Policy Statement

---

Please direct your comments and suggestions to afbinfo@afb.net