State of Maine
Unified English Braille (UEB)
Transition and Implementation Plan

OVERVIEW

The Braille Authority of North America (BANA) is the organization responsible for setting the rules and guidelines for braille codes for the United States and Canada. UEB has been developed with input from many people with the intention of achieving an optimal balance among many factors, including keeping the general-purpose literary code as its basis, enabling braille to convey the same information as print, allowing for the addition of new symbols not currently available in literary braille, providing flexibility to change as print changes, reducing the complexity of rules, and allowing greater accuracy in back translation.[1] In November 2012, the U.S. members of BANA voted to adopt UEB in the United States while maintaining support for the Nemeth Code for Mathematics and Science Notation for those who choose to use it. January 4, 2016, the birthday of Louis Braille, was chosen as the date of implementation. This decision was made after careful consideration and monitoring of the countries that have adopted UEB since 2004, including Australia, Canada, Ireland, New Zealand, Nigeria, South Africa and the United Kingdom.

Implementing UEB will take a concerted effort among those involved in the education of students who read braille and the production of braille materials. The Individuals with Disabilities Education Act of 1997 reinforces the fact that braille is an essential tool for literacy for students who are blind. It is important that all instructional and assessment materials be made available in braille as appropriate.[2] The Maine Unified English Braille Implementation Committee was formed and is made up of staff from the Maine Department of Education (DOE), Department of Labor's Division for the Blind and Visually Impaired (DBVI), Catholic Charities Maine/Education Services for Blind and Visually Impaired Children (CCM/ESBVIC) and other stakeholders representing various perspectives in serving blind and visually impaired students. The committee collaborated and prepared this response outlining the state's transition and implementation plan for UEB. This is an adaptable proposal which may require changes as more information and resources become available.

While acknowledging that the Nemeth code is recognized as a viable code for math and technical material in the United States by the BANA, the Maine Unified English Braille Implementation Committee determined that instruction and material production beyond 2020 be provided in UEB. Provisions will be made for instruction and materials in Nemeth code when Nemeth is recommended by the IEP/504 Team. The committee made this decision after considering factors such as:

- The ease of switching between technical and non-technical materials;
- The support of forward and backward translation with electronic devices;
- That UEB aligns with instruction supporting all learners, including those with multiple challenges.

The committee understands that there will be challenges around the fact that this decision is made on a state by state basis, and not all states will make the same choice. This will most likely cause issues with availability and cost of materials in the desired code, no matter which choice each state makes. We have determined that UEB is the best choice for Maine.

MAINE IMPLEMENTATION TIMELINE

November 2013 – August 2015
1. Technology upgrades were put in place for UEB implementation.
2. Teachers of the Visually Impaired (TVIs) statewide were provided with training in UEB.
3. Instruction with students began in UEB.
4. Instructional materials in UEB were introduced to early braille learners.

2015 – 2016 School Year
1. The Maine Unified English Braille Implementation Committee was formed.
2. UEB information for special education directors, Division for the Blind and Visually Impaired (DBVI), TVIs, and other recognized stakeholders will be disseminated throughout Maine.
3. UEB training was provided to TVIs statewide.
4. UEB instruction with students continued.
5. Technical Advisors provided ongoing support to TVIs in the transition to UEB.
6. Districts were notified of their responsibility for obtaining training in UEB for all school staff that produce braille materials. (See resources below.)
7. All text books will be transcribed by those demonstrating competency in braille, such as the National Library Service for the Blind and Physically Handicapped (NLS) certified transcribers.
8. Education Services for Blind and Visually Impaired Children (ESBVIC) assisted local schools in the acquisition of instructional materials including UEB through the Instructional Materials Center.
9. Statewide assessments in braille code (UEB, UEB with Nemeth and/or EBAE/Nemeth) in which the student is most proficient as documented in the IEP/504 plan was provided.
10. Students new to learning braille, including pre-kindergarten through second grade, received braille instruction in UEB for both non-technical (literary) and technical (science, technology, engineering and math) areas.

2016 – 2017 School Year
1. UEB information is continuously disseminated to special education directors, DBVI, TVIs, and other recognized stakeholders throughout Maine.
2. Districts are responsible for obtaining training in UEB for all school staff that produce braille materials. (See resources below.)
3. All text books must be transcribed by those demonstrating competency in braille, such as National Library Service for the Blind and Physically Handicapped (NLS) certified transcribers.
4. Technical Advisors provide ongoing support to TVIs in the transition to UEB.
5. TVIs provide instruction in UEB for braille learners:
    a. Students new to learning braille, including pre-kindergarten through second grade, receive braille instruction using UEB for both non-technical and technical areas of the curriculum.
    b. Students in grades three through eight transition to UEB for both non-technical and technical materials according to individual learning plans designed by the IEP/504 Team.

    c. Students with graduation/transition dates on or before 2020 are introduced to UEB for non-technical materials. Learners within this group who have well-established skills with Nemeth code may continue to use Nemeth for technical materials and state assessments while receiving instruction in UEB for technical materials as time permits. For those continuing to use Nemeth code, instruction is provided regarding code switching which will be essential in combining UEB with Nemeth Code. The decision to transition to UEB technical materials in upper secondary grades is placed with the IEP/504 Team.

6. Instructional materials are available in UEB, EBAE, UEB with Nemeth and/or EBAE/Nemeth. ESBVIC assists local schools in the acquisition of instructional materials through the Instructional Materials Center.
7. Statewide assessments are provided in the Braille code (UEB, UEB with Nemeth and/or EBAE/Nemeth) in which the student is most proficient as documented in the IEP/504 plan.
8. Data collection is taken for progress monitoring of the implementation plan. The Maine UEB Implementation Committee reviews progress data, reevaluates and revises the implementation plan as needed. Data collected may include, but not be limited to, a survey of students who are braille users, TVIs, and special education directors.

2017 – 2018 School Year

1. UEB information is continuously disseminated to special education directors, DBVI, TVIs, and other recognized stakeholders throughout Maine.
2. Districts are responsible for obtaining training in UEB for all school staff that produce braille materials. (See resources below.)
3. All text books must be transcribed by those demonstrating competency in braille, such as National Library Service for the Blind and Physically Handicapped (NLS) certified transcribers.
4. Technical Advisors provide ongoing support to TVIs in the transition to UEB.
5. TVIs provide instruction in UEB for braille learners:
    a. Students new to learning braille, including pre-kindergarten through second grade, receive braille instruction using UEB for both non-technical and technical areas of the curriculum.
    b. Students in grades three through nine transition to UEB for both non-technical and technical materials according to individual learning plans designed by the IEP/504 Team.
    c. Students with graduation/transition dates on or before 2020 continue to receive braille instruction in UEB for non-technical materials. As time permits, learners within this group who have well-established skills with Nemeth code may continue to use Nemeth for technical materials and state assessments while receiving instruction in UEB for technical materials as time permits. The decision to transition to UEB technical materials in upper secondary grades is placed with the IEP/504 Team.
6. Instructional materials are available in UEB, EBAE, UEB with Nemeth and/or EBAE/Nemeth. ESBVIC assists local schools in the acquisition of instructional materials through the Instructional Materials Center.

7. Statewide assessments are provided in the braille code (UEB, UEB with Nemeth and/or EBAE/Nemeth) in which the student is most proficient as documented in the IEP/504 plan.
8. Data collection continues annually for progress monitoring of the implementation plan. The Maine UEB Implementation Committee will review progress data, reevaluate, and revise the implementation plan as needed. Data collected may include, but not be limited to, a survey of students who are braille users, TVIs, and special education directors.
9. UEB transition for non-technical materials is complete.

2018 – 2019 School Year
1. UEB information is continuously disseminated to special education directors, DBVI, TVIs, and other recognized stakeholders throughout Maine.
2. Districts are responsible for obtaining training in UEB for all school staff that produce braille materials. (See resources below.)
3. All text books must be transcribed by those demonstrating competency in braille, such as National Library Service for the Blind and Physically Handicapped (NLS) certified transcribers.
4. Technical Advisors provide ongoing support to TVIs in the transition to UEB.
5. TVIs provide instruction in UEB for braille learners:
    a. Students in grades ten and below receive braille instruction using UEB for both non-technical and technical materials according to individual learning plans designed by the IEP/504 Team.
    b. Students with graduation/transition dates on or before 2020 continue to receive braille instruction in UEB for non-technical materials. As time permits, learners within this group who have well-established skills with Nemeth code may continue to use Nemeth for technical materials and state assessments while receiving instruction in UEB for technical materials. The decision to transition to UEB technical materials in upper secondary grades is placed with the IEP/504 Team.
6. Instructional materials are available in UEB, EBAE, UEB with Nemeth and/or EBAE/Nemeth. ESBVIC assists local schools in the acquisition of instructional materials through the Instructional Materials Center.
7. Statewide assessments are provided in the braille code (UEB, UEB with Nemeth and/or EBAE/Nemeth) in which the student is most proficient as documented in the IEP/504 plan.
8. Data collection continues annually for progress monitoring of the implementation plan. The Maine UEB Implementation Committee will review progress data, reevaluate, and revise the implementation plan as needed. Data collected may include, but not be limited to, a survey of students who are braille users, TVIs, and special education directors.

2019 – 2020 School Year
1. UEB information is continuously disseminated to special education directors, DBVI, TVIs, and other recognized stakeholders throughout Maine.
2. Districts are responsible for obtaining training in UEB for all school staff that produce braille materials. (See resources below.)
3. All text books must be transcribed by those demonstrating competency in braille, such as National Library Service for the Blind and Physically Handicapped (NLS) certified transcribers.

4. Technical Advisors provide ongoing support to TVIs in the transition to UEB.
5. TVIs provide instruction in UEB for braille learners:
    a. Students in grades eleven and below transition to UEB for both non-technical and technical materials according to individual learning plans designed by the IEP/504 Team.
    b. Students with graduation/transition dates on or before 2020 continue to receive braille instruction in UEB for non-technical materials. As time permits, learners within this group who have well-established skills with Nemeth code may continue to use Nemeth for technical materials and state assessments while receiving instruction in UEB for technical materials. The decision to transition to UEB technical materials in upper secondary grades is placed with the IEP/504 Team.
6. Instructional materials are available in UEB and UEB with Nemeth. ESBVIC assists local schools in the acquisition of instructional materials through the Instructional Materials Center.
7. Statewide assessments are provided in the braille code (UEB, UEB with Nemeth and/or EBAE/Nemeth) in which the student is most proficient as documented in the IEP/504 plan.
8. UEB transition for technical materials is complete.
9. Data collection continues annually for progress monitoring of the implementation plan. The Maine UEB Implementation Committee reviews progress data, reevaluates and revises the implementation plan as needed. Data collected may include, but not be limited to, a survey of students who are braille users, TVIs, and special education directors.

RESOURCES FOR LEARNING THE UEB CODE

PATHS TO LITERACY

http://www.pathstoliteracy.org/

Specific Topics @ **http://www.pathstoliteracy.org/blog/welcome-ueb-resources-learning-new-braille-code**

- What is UEB?
- How will the transition occur?
- Rules and Guidelines for UEB
- Overview of the rules and changes in UEB
- Charts, Cheat Sheets and Tools for Remembering Changes in UEB
- Resources for Learning UEB
- Online Classes for Adults
- Online Classes for Braille Transcribers
- Lessons for Braille Students Making the Transition from EBAE to UEB
- Webcasts and Videos about UEB
- Additional Online Resources on UEB

Online Courses

- Hadley's "Introduction to UEB" and "Transitioning to UEB" courses http://www.hadley.edu/

- UEB Online is a training program for sighted people to learn Unified English Braille (UEB). Unified English Braille has been adopted by many countries and replaces standard English braille. This program is the first online UEB training tool. The program is suitable for classroom and specialist teachers, parents, teacher aides and other professionals supporting children and adults with vision impairment. http://uebonline.org/

- Unified English Braille online training by UEBOT: The course is designed for people proficient in English Braille American Edition. Individuals will be required to take an eligibility test in order to enroll in the course. http://uebot.niu.edu/

- Australian Braille Authority Unified English Braille Australian Training Manual is a series of lessons and practice exercises by which teachers, transcribers and parents can learn UEB. The 2014 edition is an update of the 2013 edition with some minor corrections. http://brailleaustralia.org/unified-english-braille/unified-english-braille-australian-training-manual-2013/

Transcriber UEB Certification

- FREE Braille Certification Courses (National Federation of the Blind) https://nfb.org/braille-certification (under contract from the National Library Service for the Blind) https://nfb.org/braille-transcribing
    - o NOTE: for current transcribers and proofreaders holding Library of Congress Certification in Literary Braille, an examination leading to a Letter of Proficiency in Unified English Braille is available

- FREE online Transcriber's UEB Course http://www.cnib.ca/en/living/braille/Pages/Transcribers-UEB-Course.aspx

UEB Code Manuals

- UEB Rulebook, Second Edition, 2013 http://www.iceb.org/ueb

- UEB Braille Symbols And Indicators http://www.brailleauthority.org/ueb/symbols_list.pdf

- UEB Guidelines for Technical Material http://www.brailleauthority.org/ueb/Guidelines_for_Technical_Material_2008-10.pdf

Quick Reference Guides

- Check Lists and Cheat Sheets http://www.svrc.vic.edu.au/CS.shtml

- "The Hitchhiker's Guide to UEB" was written for children learning UEB by New Zealand Teachers of the Blind and Visually Impaired as a quick reference tool for all those supporting children learning UEB.
    - o ELA http://www.banzat.org.nz/documents/HHGLiterary.pdf
    - o Math http://www.banzat.org.nz/documents/hhgmaths.pdf

- UEB Chart from Duxbury Quick UEB reference sheet from the makers of Duxbury Braille Translation Software http://www.duxburysystems.com/images/ueb_black.pdf

- UEB Chart from Aroga Technologies Quick UEB reference sheet from Aroga Technologies http://www.teachingvisuallyimpaired.com/uploads/1/4/1/2/14122361/ueb_braille_chart.pdf

- UEB Cheat Sheet from APH Quick UEB reference sheet from APH Training http://www.aph.org/files/atic/UEB-Cheat-Sheet-5-2012.pdf

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