Current Practices in Instruction in the Literary Braille Code University Personnel Preparation Programs

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Abstract: University instructors were surveyed to determine the requirements for their literary braille courses. Twenty-one instructors provided information on the textbooks they used; how they determined errors; reading proficiency requirements; and other pertinent information, such as methods of assessing mastery of the production of braille using a Perkins brailler, slate and stylus, and Perky Duck.

In her examination of the standards and criteria for the braille literacy competence of 34 university training programs that prepare teachers of students with visual impairments in the United States and Canada, Amato (2002, p. 149) found widespread diversity and a lack of consistency in university-level braille courses with respect to the format of instruction, content and instructional materials, expected student outcomes, and standards and criteria for competence in braille literacy. There appears to be no consistent standard for training teachers of students who are visually impaired in braille.

Noting that competence in the literary braille code is defined by each university preparation program, Amato (2002) recommended that national standards for graduates’ knowledge of and criteria for competence in braille be established. In addition to calling for an accepted definition of what it means to be competent in braille, Amato suggested that objective outcomes for university students should be developed to ensure that students who are blind are taught by qualified professionals.

As the first step in the process of achieving this standardization, the Personnel Preparation Division of the Association for Education and Rehabilitation of the Blind and Visually Impaired (AER) commissioned a study in fall 2008 to identify potential voluntary standards for the minimum level of braille skills that are needed for beginning practitioners who teach braille to children or adults. We volunteered to conduct this study and, given the limited information about braille competency standards, determined to use a nominated sample of individuals who had extensive experience in teaching braille to university students as our informants.

Amato’s (2002) study used a survey that was designed to explore five research
questions about the format of courses for teaching braille, the topics and instructional materials that are used in the courses, the expected outcomes for students, the criteria for competence in braille, and the instructor’s opinions about some key issues related to braille literacy. We chose to use the Delphi method to obtain a consensus on the minimum level of skills in the literary braille code that are required for students who complete university programs. In this study, we did not inquire about the methods and strategies that are used at universities to prepare teachers to teach braille reading and writing.

Because Amato’s (2002) research was conducted in 1999, we believed it was important to gather current information about the practices related to university instruction in literary braille and the expectations for braille competence by personnel preparation programs today. Prior to soliciting the opinions of the participants who teach literary braille courses at universities in the United States and Canada on appropriate standards, we collected descriptive data on programs and instructional techniques. These descriptive data are reported here. An article with the full results of the Delphi study is being prepared.

Methods

Instrument

To determine the current practices of university programs with regard to instruction in braille, a series of 16 questions was included in a survey that was distributed to university instructors who had agreed to participate in a larger study on the topic. These 16 questions gathered information about each instructor and the logistics of the literary braille course. They included the number of years teaching literary braille, the instructor’s job title, which textbooks the instructor used to teach literary braille, the tools that were required (with questions specifically about the Perkins Brailler, the slate and stylus, and Perky Duck software), what constituted an error on an assignment, and whether assignments were timed or untimed. The survey was pilot-tested by university instructors who did not meet the criteria for participation to ensure that the survey was accessible and user-friendly and that the questions and choices were clearly written.

Criteria for participation and recruitment

To participate in the study, individuals had to have taught a literary braille course at a university in the United States or Canada a minimum of three times over a period of three or more years and to have taught the course at least once in the past three years. They had to have responsibility for providing instruction to graduate or undergraduate students in how to read and write the literary braille code.

We recruited participants through a posting on the electronic discussion group for the Personnel Preparation Division of AER. In addition, we directly contacted coordinators of university preparation programs who were listed on the AER web site and asked them to extend the invitation to participate to anyone who met the criteria. A total of 42 university programs were identified on the AER web site. All individuals whose names were provided to us, who met the stated criteria, and who agreed to participate were
included in the survey. In all, 21 individuals representing 25 universities provided information about their literary braille courses or the programs at which they teach. The study was approved by the Institutional Review Board at Florida State University, and the participants indicated their consent to participate electronically or signed a paper consent form.

DATA COLLECTION
Data were collected in May and June 2009 through a survey developed using an online data collection program. The participants were given the opportunity to complete the survey via alternative means (such as a word processing file or hard copy). Two participants completed the survey using a word processing program, and their data were entered into the online survey.

Results

DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS
Sixteen of the 21 participants had taught the literary braille course at only one university, 3 participants had taught the course at three universities, and 2 participants had taught the course at five universities. Ten participants (47.6%) were in tenured or tenure-earning positions; 2 (9.5%) were in nontenured positions; 7 (33.3%) were hired specifically to teach the course; and 2 reported other titles, such as “director of a certification program” and “professional salaried staff.”

The participants ranged in their years of experience in teaching the literary braille course. Seven (33.3%) had taught the course for 3–5 years, 3 (14.3%) had taught it for 6–10 years, 7 (33.3%) had taught it for 11–15 years, and 4 (19%) had taught the course for more than 15 years.

STUDENTS’ MAJORS
The 21 instructors reported having students who were planning to be teachers of students with visual impairments in their literary braille courses. Six (28.6%) had also taught students who were preparing to be vision rehabilitation therapists or rehabilitation teachers, and 6 (28.6%) had taught students who intended to be orientation and mobility specialists. Others reported that parents, transcribers, paraeducators, and special education majors who were planning to provide services to students with other exceptional needs took their literary braille courses as well.

INSTRUCTIONAL FORMATS AND TEXTBOOKS
The participants were asked to share the format in which they provided instruction in braille. More than one response was allowed. The face-to-face format was used by 11 (52.4%), online instruction was used by 9 (42.9%), and a hybrid method that combined both online and face-to-face meetings was used by 7 (33.3%). Two participants reported using other formats, including offering the lessons through an extension course.

From a list of the three textbooks that are most commonly required for teaching university students the literary braille code, the participants were asked to indicate which books they were currently using or had used in the past. Of the 19 instructors who responded to the question, 9 indicated that they were using New Programmed Instruction in Braille.
which had been used by 6 instructors in the past; 6 indicated that they were using the *Instruction Manual for Braille Transcribing* (Risjord, Wilkinson, & Stark, 2000), which had been used by 10 instructors in the past; and 5 reported using *Braille Codes and Calculations* (Pesavento, 1993), which had been used by 1 instructor in the past. Ten participants listed other texts, including *English Braille, American Edition* (Braille Authority of North America, 1994), which was used by 3; *NPIB Companion Reader* (Koenig, Sanford, Ashcroft, 2001), used by 2; and *Dot Writing* (Pesavento, 1993), also used by 2. One additional person listed “Braille Authority of North America (BANA)” which most likely refers to *English Braille, American Edition*, a publication of BANA.

**TOOLS TO PRODUCE BRAILLE**

All 21 participants required students to use the Perkins Brailler to produce braille, 20 (95.2%) required the use of a slate and stylus, and 16 (76.2%) required the use of computer programs that simulate braille (such as Perky Duck). In addition, 5 participants reported that students used other tools to produce braille, including the BrailleNote; Mountbatten Brailler; and braille-translation software, such as the Duxbury or Braille2000. One participant noted that students also used a drill-and-practice computer program developed by the university.

*Production of braille using a Perkins Brailler*

The participants were asked,

> Describe how your program ensures that students can produce braille on a Perkins Brailler by the end of their course of study. Please include details, such as the frequency of assignments (e.g., daily, weekly, monthly), number of assignments turned in to the instructor, approximate number of words of assignments, passing score(s), and other details that will give an accurate picture of how you assess minimum competence.

The 21 participants each reported in a narrative format how they evaluated their students’ ability to produce braille on a Perkins Brailler. There was great deal of variability within the data. Since the question was worded in an open-ended fashion, the responses were not uniform, and each contained slightly different details. In general, the students had to complete and submit weekly assignments, and for those whose classes met face to face, in-class assignments and tests were also graded. There was no program that did not require the use of the Perkins Brailler to complete some assignments. In some programs, the students completed multiple assignments of 10–15 sentences, and in others, they completed assignments that were four braille pages in length on 11-inch x 11.5-inch paper.

The instructors varied in their policies regarding students resubmitting homework that did not meet the instructors’ criteria and whether students were allowed to drop one or more assignments from the final grade. The range of errors that the students were allowed to make varied as well—from 4–5 errors per assignment to 2 errors per 100 words to 10 errors per 100 words. Other programs used complex point systems per assignment, and students needed to earn a set
number of points or a percentage of points to pass. Some programs required a mid-term or final examination or both, and others gave several examinations during the course that were equally weighted.

Production of braille using a slate and stylus

The participants were also asked to describe their requirements for producing braille using a slate and stylus. As with the Perkins Brailler, there was extreme variation in what was required. Two instructors included only one assignment using the slate and stylus, others required multiple assignments (typically two to four), and still others assigned weekly work with this tool. Two instructors required students to submit a certificate from the Hadley School for the Blind showing that they had completed the Introduction to Braille course using a slate and stylus (rather than a Perkins Brailler). Several instructors reported that the slate and stylus was taught in the advanced braille course (as opposed to the introductory course) or in another course, such as the Nemeth course or methods course, or that the emphasis was on how to teach a braille reader to use a slate and stylus, rather than to demonstrate personal mastery. Two instructors assigned students to use the slate and stylus for functional projects, such as grocery lists, greeting cards, and address cards. At the other end of the continuum was one instructor who reported giving timed practices in writing with a slate and stylus for which students had to demonstrate the ability to write 100 words in 15 minutes. In general, though, most instructors reported that assignments with the slate and stylus were shorter and less frequent than were those using the Perkins Brailler.

Production of braille using electronic methods

The participants were asked to describe how students produce braille using electronic methods. We were aware that some university programs use a free software program, Perky Duck, which simulates entry of the 6 keys of a braille writer on a computer keyboard. Perky Duck is not a braille-translation software program but, rather, a braille-simulation program that can create electronic braille files that can be printed or embossed. Students must know the braille code to create these files, since they use the computer keyboard to simulate a Perkins Brailler (that is, they press down combinations of keys to create braille symbols).

Again, there was a wide range of responses from the 21 instructors. Four instructors reported that they did not use Perky Duck or any other electronic methods. Other instructors shared information about how they used the Mountbatten Brailler, braille-translation software, or a drill-and-practice program developed by their universities. When Perky Duck was used in a course, the number of assignments requiring students to use the software ranged from 2 to 16. Some instructors did not grade assignments done with Perky Duck, but used it as a practice tool. Several instructors reported that Perky Duck was not compatible with newer computer keyboards and with certain Macintosh computers, which was a barrier to requiring its use in course work. One instructor expressed concern that the use of Perky Duck can make it easier for a student to cheat on assignments.
The participants were given an extensive list of possible errors and could check all items that they counted as errors in their literary braille courses (see Table 1). There was high agreement in what constitutes a literary braille error. Other errors included formatting errors and not following rules.

The participants were asked, “Do you count each error separately, or do you take off points for categories of errors? For example, if a student misses the ‘com’ contraction each time it should be used, do you count that as one error, or does each time missed count as one error?” Nine participants stated that every error counted. Others reported a wide array of ways in which the same error was counted. For example, one participant stated, “Recurring errors are deducted only the first time. However, if a student has an error, gets it correct later in the document, and then misses it again, each time points are deducted because it is not representative of a misunderstanding of code/contraction/rules.” Some instructors reported that on the proficiency or final examination, each error counts separately, which differs from their grading of homework. Three instructors took off points for categories of errors.

### Erasures

Fifteen of the 21 instructors indicated that if an erasure could be felt, it was considered an error. A few instructors allowed students to “block out” errors using a full cell. One instructor allowed students to put full cells over the error and then braille the material at the bottom of the page. A few instructors indicated that at the beginning of the course, erasures are allowed, but as the students progress in their skills, erasures are counted as errors if they can be felt. Several participants noted that braille erasures must not lead to a braille reader’s confusion and that if they do, an error has occurred.

### Timed Writing Assignments

The participants were asked if they timed writing assignments. Eleven individuals provided information for this question. Seven participants indicated that the final examination for the literary braille course is timed. Several indicated that some quizzes and a midterm test are also timed.
One instructor described an in-class timed writing activity:

I bring a stopwatch to class and give students three, four, or five minutes (depending on the time we have to spend on this activity), and they are to braille something that they have brailed previously (typically a previous homework or class work assignment) as quickly as possible, and then they count the number of correct words brailed, then divide by the number of minutes. We do this several times throughout the term and their words per minute are charted to demonstrate their progress related to writing speed.

**Passage of a Braille Competence Test**

Finally, the participants were asked if their program requires students to pass a state or provincial or nationally developed braille competence test. Nine participants indicated that their students have to pass a state-level test, several participants stated that students have to pass a university-designed test, and one instructor reported that a competence test is recommended but not required. No participant reported that students must pass a national examination.

**Limitations**

The findings reported here are limited in their usefulness because of the way in which the sample was selected. The small sample was recruited and the 21 participants were selected on the basis of rigorous criteria, which included a minimum number of years that they had taught literary braille to college students. Newer university instructors, who could have different views on what standards are appropriate, were not invited to participate because the criterion for “expert” was defined for the larger study partially by the number of years of experience teaching.

In addition, we made no attempt to verify the information that the participants provided. The data that were collected were reported by individuals who may have had a reason to alter their reports to meet a preconceived notion of what they believe is appropriate for university students who are learning braille but do not actually require. There were no opportunities for the participants or us to ask clarifying questions, and the written explanations of practices may have been incomplete or misunderstood.

Misunderstandings were particularly possible in the absence of concise definitions. We solicited information about grading practices, the amount of braille produced, the number of class sessions, and so forth using questions that permitted free responses. There is no way to determine if the one page of braille required by one instructor is equivalent to the one page of braille required by another, since specific descriptions of what either participant meant by the size of the page, spacing between lines, the number of braille cells filled, and the like were not provided.

**Discussion**

In preparation for a study that was designed to determine whether there is a consensus on the literary braille competencies that are expected of university students upon completion of their personnel
preparation programs, we gathered data on the general university practices that instructors use to teach students the literary braille code. Although Amato (2002) presented similar descriptive data, we did not know if instructors’ practices had changed or remained relatively constant 10 years after her study. It should be noted that it is possible that some of the individuals who participated in Amato’s study also provided data for this study. This duplication of informants was expected, given that Amato’s respondents represented 87% of the institutions that offered the course in 1999. Since the purpose of both studies was to describe current practices that are used to teach literary braille to university students, it seems unlikely that the involvement of some participants in both studies would alter the findings of the current practices at two points in time. Because Amato’s research was conducted in 1999, we believed it was important to gather updated information about the current practices related to university instruction in literary braille and expectations for competence in braille by personnel preparation programs today.

Table 2 presents similarities between the two data sets in several areas in which comparisons can be made. Even though the findings reported here reflect the activities at only a sample of institutions

<table>
<thead>
<tr>
<th>Item</th>
<th>Amato (data collected 1999)</th>
<th>Current study (data collected 2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>34 of 39 institutions</td>
<td>21 of 42 institutions</td>
</tr>
<tr>
<td>Instructors</td>
<td>47% Adjunct or contract 53% Tenure or tenure earning</td>
<td>33% Adjunct or contract 47% Tenure or tenure earning</td>
</tr>
<tr>
<td>Years taught at the university level(^a)</td>
<td>93% More than 11 years</td>
<td>33.3% 3–5 years 14.3% 6–10 years 33.3% 11–15 years 19.0% More than 15 years</td>
</tr>
<tr>
<td>Textbook used</td>
<td>49% Dorf</td>
<td>31% Risjord et al. (2000)(^b)</td>
</tr>
<tr>
<td></td>
<td>51% Ashcroft et al.</td>
<td>47% Ashcroft et al. (2001)(^b)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26% Pesavento (1993)</td>
</tr>
<tr>
<td>Instructional format</td>
<td>47% Distance learning 53% Face to face</td>
<td>48% Distance learning 52% Face to face</td>
</tr>
<tr>
<td>Demonstrate use of the Perkins Brailler</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Allowable errors in written braille</td>
<td>2–10 errors per page</td>
<td>2 errors per 100 words to 10 errors per 100 words</td>
</tr>
<tr>
<td>Demonstrate use of the slate and stylus</td>
<td>82%</td>
<td>100% (1 per course to 1 per week)</td>
</tr>
<tr>
<td>Required an exit examination</td>
<td>51% require students to pass a comprehensive exit examination that includes braille</td>
<td>43% reported that students have to pass a state-level test</td>
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</table>

\(^a\) Amato asked how many years the respondents had taught at the university level; the current study asked how many years the respondents had taught literary braille to college students.

\(^b\) Risjord et al. are authors of the new edition of the manual written by Dorf in Amato’s study.
(50%), while Amato’s (2002) data set included instructors from 87% of the institutions that prepared teachers of students with visual impairments in 1999, it appears as though the circumstances that Amato described have not changed in many areas. There continues to be wide variability in the expectations related to the demonstration of literary braille skills by students who are preparing to work with adults and children who are blind.

This variability appears to be most evident in relation to the amount of braille that students are required to produce, the number of errors that instructors allow in defining competence, and permitted methods for dealing with erasures. The braille work of some university students, for example, is accepted even if errors are blocked using a full cell. While some students are required to create nearly error-free braille (2 errors per page), others are permitted to make as many as 10 errors per 100 words and still pass an assignment or test. Extreme variations in the amount of braille produced using a slate and stylus were reported, with one instructor indicating that university students are exposed to instruction on this tool in one lesson and are required to use it only in that class. Another instructor required that students correctly braille 100 words in 15 minutes using the slate and stylus to earn 100%.

Yet, regardless of the requirements of their institutions with regard to the demonstration of competence in literary braille, graduates of university programs who enter the profession are deemed competent to teach braille to children and adults for whom it is appropriate. Given the great inconsistency in the requirements of university instructors of literary braille, only in those states where demonstration of braille competence is included on a state assessment can administrators, parents, and adults with visual impairments know the specific level of skill and knowledge of the literary braille code that the new professional has obtained.

Conclusion

The braille skills and knowledge of the braille code of new professionals should be consistent, no matter where the teachers received their university training or who provided braille instruction. In the absence of a requirement that professional educators of adults and children who are blind demonstrate competence in literary braille on a state or national assessment, it is incumbent on the profession to regulate itself. The adoption of minimum standards for graduates’ competence in braille literacy skills is one approach that would provide guidance to university preparation programs as they evaluate their program offerings and students’ outcomes. If such standards were embraced by university preparation programs, their impact would be to ensure a high level of braille literacy for graduates of all programs, thereby increasing the likelihood that school-aged students and adult clients who are blind receive literacy assessments, instruction, and services by educators with high-quality braille skills.

References


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