Alternate methods for transcribing words with emphasis By Cheryl Kamei-Hannan, Ph.D. Assistant Professor, California State University, Los Angeles

Locating words written in bold, italics, underlined, or in colors is a more difficult task for a student who reads in braille, as compared with a student who is sighted. The process requires a braille reader to scan word by word to find the composition symbol, which transcribed in its simplest form is represented by dots 4,6 preceding a word, or dots 4,5,6 and a letter, such as r for red and b for blue. The addition of the composition symbol is often confused with letters or other braille contractions, especially for beginning readers and those who are learning the braille code.

In an effort to make finding words with emphasis an easy task for young, beginning readers, the Braille Authority of North America (BANA) initiated and funded a researcher to design alternative formats for transcribing words with emphasis and to investigate the efficiency at which students use the new format.

Hannan (2008) designed two alternate formats (Ua and Ub) for presenting words written in italics, bold, underline, and in color. Both of the alternate formats used a two line braille symbol. In Ua, as shown below, a word with emphasis was underlined in a blank line below the word. A letter, written at the end of the line, was used to indicate what type of typeset change was made, i.e. an "i" was used for italic, "r" for red and "b" for blue. Ub used a similar format, except that the letter indicator was written before the line, as shown in the example below.

Table 1 - Examples of Font Indicators

	Single Word	Multiple Words (< 4 words indicated)
CBC		
Italics	The fox jumped.	See the <i>brown dog</i> .
Bold	John is happy .	He is a very nice cat.
Underline	I like soda for lunch.	I can learn braille.
Red Font	The mouse is quick!	May I have more peas?
Blue Font	I will not go home.	People do not want it.

The fox jumped.	See the brown dog.
John is happy .	He is a very nice cat.
I like soda for lunch.	I <u>can learn braille</u> .
The mouse is quick!	May I have more peas?
48 7888 88 888 888	
I will not go home.	People do not want it.
The fox jumped.	See the brown dog.
John is happy .	He is a very nice cat.
I like soda for lunch.	I <u>can learn braille</u> .
The mouse is quick!	May I have more peas?
ad there he has	
I will not go home.	People do not want it.
46 4 8 8 8 85554 *******	
	John is happy. I like soda for lunch. I will not go home. I like soda for lunch. I will not go home. I like soda for lunch. I will not go home.

In Hannan's (2008) research thirty participants, proficient braille readers ages 7-9, were asked to scan, locate, identify, and name words with emphasis when presented in one of the three formats: current braille code (CBC), Ua, and Ub. Pre/Post intervention interviews with students also were conducted to identify conceptual background knowledge, previous knowledge, and preferences. Students were taught to scan, locate, identify the format indicator and name the

word/s that were written in italics, red, or blue. Measurements of speed and accuracy (typeset identification accuracy, word identification accuracy, and overall accuracy) were taken.

Results showed a statistically significant difference in the speed at which students were able to complete the task. However, no differences occurred in the accuracy at which students were able to identify and name the typeset and/or indicator. Interview results showed that many students had prior exposure to typeset indicators, but were unable to state the composition symbol used for bold, italic, or underline. Students were not able to describe these features in print, and they were unable to explain the purpose of words with emphasis. More than half of the participants preferred one of the two alternate formats. The students who preferred CBC were faster overall at all three tasks, with the fastest score being one of the two alternate formats. Teachers reported that students were not familiar with "scanning" and that they had to explain that scanning and reading text were different tasks. One student dropped out of the study because the task of scanning was too difficult.

Recommendations based on the results of this study were to use Ub as an alternate format for transcribing words with emphasis in early elementary textbooks, and to teach children concepts of print, how to scan for words with emphasis, and purposes of scanning. Teachers may also choose to transcribe materials using Ub. When students use Ub, they can be taught to scan a page using two hands in a vertical top to bottom hand motion. If the student uses two hands, then the extra line break would be spotted immediately, eliminating the need to scan each line of text using a horizontal hand movement pattern. This is especially true if the words with emphasis are located within a passage.

For additional information and a detailed report, please refer to: The October issue of the *Journal of Visual Impairment and Blindness*.

Citation:

Kamei-Hannan, C. (in press). Innovative Solutions for Words with Emphasis: Alternative Methods of Braille Transcription. *Journal of Visual Impairment and Blindness* (), pg. .