

## **ABLE: An instrument for assessing elementary students' perceptions of access to books, beliefs, and literacy environment**

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Stack, M., Moorefield-Lang, H.M., & Barksdale, M.A. (2015). ABLE: An instrument for assessing elementary students' perceptions of access to books, beliefs, and literacy environment. *Reading Psychology*, 36(6), 499-518. doi:10.1080/02702711.2014.893275

**This is an Accepted Manuscript of an article published by Taylor & Francis in *Reading Psychology* on April 1, 2015, available online:**

**<http://www.tandfonline.com/10.1080/02702711.2014.893275>.**

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### **Abstract:**

In order to promote voluntary reading in elementary school, students need to have access to books they want to read, to believe they can read, and to be in an environment conducive to reading. The purpose of this study was to develop and validate an instrument intended to measure students' perceptions in these areas. An exploratory factor analysis was conducted on data from 145 elementary school students in one urban elementary school. Results indicated three dimensions of elementary school reading: access to preferred books in school, beliefs as a reader, and literacy environment in school.

**Keywords:** literacy | elementary school students | reader beliefs | literacy environment | assessment

### **Article:**

The man who does not read good books is no better than the man who can't.

~ Mark Twain

This message from Mark Twain is a reminder that in teaching students to read, providing them with the tools to decode words and comprehend text is only half the battle. Reading will only enhance children's lives if they actually choose to read, enjoy reading, and do it frequently. Research indicates a strong association between voluntary reading and school achievement for elementary school students (Anderson, Wilson, & Fielding, 1988; Heyns, 1978; Krashen, 1993, 2008). Voluntary reading, or reading that students choose to do on their own, is also referred to as leisure reading, independent reading, reading outside of school, and self-selected reading.

Although many teachers and researchers support the idea that voluntary reading promotes reading skills, the results from the National Reading Panel (NRP; National Institute of Child

Health and Human Development, 2000) stated that there was not enough experimental evidence to support this claim, suggesting that more research needed to be done on voluntary reading. However, many studies have shown a positive association between success in school and the amount of voluntary reading. Anderson et al. (1988) found that for second through fifth graders, reading books outside of school was the best predictor of their reading proficiency. In a study of summer learning, Heyns (1978) found that the number of books read and time spent reading were both positively associated with vocabulary scores and family background even when controlling for prior achievement. Similarly, White and Kim (2008) found that voluntary reading in fourth and fifth graders over the summer significantly improved their reading achievement and reduced their skill loss. Amounts of voluntary reading by students have also been linked to vocabulary development, verbal fluency, comprehension, and content knowledge (Anderson et al., 1988; Guthrie & Wigfield, 2000; Krashen, 1993).

Voluntary reading is heavily influenced by students' own perceptions about reading and the ways that their schools encourage or discourage it. In order to encourage voluntary reading, educators must be able to explore students' perceptions and reading interests. There are three types of perceptions that influence students' voluntary reading: (a) perceptions about access to books, (b) perceptions about reading abilities, and (c) perceptions about library and classroom environments. The purpose of this study was to develop and validate an instrument, called ABLE, which serves as an acronym for the three areas of perceptions: Access to books, Beliefs about reading abilities, and Literacy Environment. There is a rich body of literature that both informs this study and provides a rationale for testing the particular instrument that was developed.

### Access to Books

Students who become strong, successful readers have access to an array of diverse, high-interest books in their communities, homes, and schools (Bleidt, 2011; Chin & Phillips, 2004; Duke, 2000b; Fryer & Levitt, 2004; Ingham, 1982; Ivey & Broaddus, 2001; Krashen, Lee, & McQuillan, 2008; McQuillan, 1998; Neuman, 1996, 1999; Neuman & Celano, 2001; Snowball, 2008; Worthy, Moorman, & Turner, 1999). In this piece, the term "access" refers to the ability of readers to locate books in a given setting that are both enjoyable and readable to them. Access also refers to students' abilities to obtain the books, check them out, read them, and handle them within a setting.

Few studies comprehensively investigate the books available to students in a variety of settings, but those that have done so have documented the impact of reading on achievement. In a study on the relationship between access to reading material and scores on the 1992 National Assessment of Education Progress (NAEP) fourth-grade reading test, McQuillan (1998) found that, after controlling for poverty, access to print was a significant predictor of performance on the exam. McQuillan's measure of access was based on reading material available at home, in school, and in the community. Krashen et al.'s (2008) study using the 2007 NAEP data found similar results, suggesting that students with greater access to reading material scored higher on the exam.

A number of educators have examined access to books in schools; the focus of this study (Duke, 2000a; Ingham, 1982; Neuman, 1999; Worthy, 1996; Worthy et al., 1999). Neuman (1999) conducted a large-scale study in which access to high quality books was significantly increased in preschools and childcare centers in what was called a book flood. By increasing access to books at a rate of five per child, the study significantly impacted early literacy skills. A study in English middle schools mirrored the book flood methodology and similarly demonstrated a positive impact on achievement (Ingham, 1982). Duke's (2000a) study analyzed accessibility to non-fiction texts and found elementary schools lacking, with most access to print being narrative fiction. The display of and accessibility to books was particularly important in impacting students, a finding that Worthy (1996) replicated. In their study of sixth-grade students, Worthy et al. (1999) found that the most popular reading materials for both boys and girls were scary books and stories, comics and cartoons, magazines about popular culture, and books and magazines about sports. In addition, they found that most of the students obtained their reading materials from stores or their homes rather than schools or libraries. Students ranked their classroom as the last source for books even among low-income students. Lastly, the results showed that availability of the most popular reading materials were limited across schools and classrooms (Worthy et al., 1999). Having access to books is especially important for boys, as their preferred genres of reading are typically not part of school reading curriculum or available at school (Clark & Foster, 2005; Coles & Hall, 2002; Sturm, 2003).

Similar studies have been conducted that addressed students' access to books in school library media centers (Bleidt, 2011; Humphrey, 2002; Lu, 2009). Bleidt's (2011) study focused on 10 high-need rural middle schools in Texas. The focus was to see how students viewed their school libraries. Young people felt that the library and librarians aided them in finding good books to read and a place to research and work quietly, as well as a location to work with technology. Humphrey (2002) recommended that in order to create a strong middle-school reading program, students needed to have access to books, and this could only occur in places such as school and public libraries, classrooms, and homes. Encouragement, support, and time to read were also crucial.

### **Beliefs of Self-Efficacy**

In order for students to want to read on their own, they need to believe that they can read and that they will be successful when they pick up a book. Self-efficacy theory has its foundations in Bandura's (1997) work, in which self-efficacy is defined as a person's confidence in his or her ability to carry out a plan of action to either solve a problem or complete a task. In studies on self-efficacy, Bandura (1997) showed how individuals' self-efficacy affected their performance, effort, and persistence on specified tasks. Based on this theory, a highly self-efficacious reader will work harder and more persistently than those readers with low self-efficacies. In addition, self-efficacious readers are likely to read frequently and may feel more comfortable answering questions in class about what they have read.

In prior studies on reader self-efficacy, researchers found that students with low reading self-efficacy tended to avoid challenging reading activities and withdrew from tasks that they perceived to be too difficult (Guthrie et al., 2007; Zimmerman, 2000). In a related topic area, Chapman and Tunmer (1995) divided reading self-concept into three subcomponents:

perceptions of competence in readers, perceptions of difficulty when reading, and attitudes towards reading. Their results suggested that for students in early elementary grades, perceptions of difficulty were related to reading ability. By fourth grade, however, their perceptions of difficulty and competence were significantly associated with reading comprehension (Chapman & Tunmer, 1995). In this study, reading self-efficacy was focused on perceptions of competence as a reader.

## **Literacy Environment**

In addition to having access to books and beliefs of self-efficacy as a reader, being in an environment that is conducive to reading encourages children to read. In the current context, environment refers to school and classroom environments. A number of researchers have examined the degree to which home environments, school environments, and community environments influence students. A child's environment is especially important to early literacy skills because, as research suggests, children are influenced by their interactions in school and at home (Baker & Scher, 2002; Burgess, 2002; Weigel, Martin, & Bennet, 2005). Research on the home environment indicates several associations with children's reading abilities and attitudes. For example, in several studies, researchers found that the more positive parents' attitudes towards reading were, the less likely their child was to have difficulties in reading (Baker, Scher, & Mackler, 1997; Chiu, McBride-Chang, & Lin, 2012). Similarly, parent's identification of pleasure as a reason for reading predicted their child's motivation for reading (Baker & Scher, 2002).

School environmental factors can also impact children's reading abilities and will be a focus of this study. Previous research has found a strong association between peer achievement and interest in reading with other student's achievement in literacy (Chiu et al., 2012; Ogle et al., 2003). Neuman (1999) found that in kindergarten classrooms in which teachers were trained to provide a literacy-rich environment, children had greater narrative competence, concepts of writing, and knowledge of letter names as compared to children in classrooms where teachers were not trained as such. Duke (2000b) studied the print exposure and print environment of low- and high-socioeconomic, first-grade classrooms. Results indicated that in low-socioeconomic classrooms, there was less print on the walls and other surfaces and there were fewer books and magazines available to students as compared to high-socioeconomic classrooms. Furthermore, Duke (2000b) observed that there were fewer opportunities for students in low-socioeconomic classes to use the classroom library.

Studies also indicate that the library media center can create a culture that encourages voluntary reading. Specifically, librarians are the faculty in the school available to aid students in asking, seeking, and finding the best reading material for each student. School librarians are in the library media center to know their material in both print and digital formats and to help students find a good work of fiction or aid students with their research (Bleidt, 2011). It is also important to have new and exciting materials for students to read. We may not want to have books judged by their cover, but students want to see fresh and stimulating material when they come into the library (Snowball, 2008). Having a wide range of materials for students to read or have read aloud is also important as a school librarian.

## How the Proposed Tool Enhances Current Tools

While the areas of access to preferred books, beliefs of self-efficacy as a reader, and literacy environment are independently related to children's voluntary reading, as shown in the literature, the current study aims to explore these facets of reading through the development of a single reading instrument. Several popular reading instruments are currently used to measure student's reading interest, motivation, and literacy environment—the Elementary Reading Attitude Survey, the Motivation to Read Profile, and the TEX-IN3 (Gambrell, Palmer, Codling, & Mazzoni, 1996; Hoffman, Sailors, Duffy, & Beretvas, 2004; McKenna & Kear, 1990).

The Elementary Reading Attitude Survey (McKenna & Kear, 1990) was developed to measure two constructs, attitude toward recreational reading and attitude toward academic reading. The final instrument contains 20 questions, 10 for each construct, and is designed for students in all elementary grades. The Motivation to Read Profile (Gambrell et al., 1996) is made up of two instruments, a reading survey and a conversational interview, providing both quantitative and qualitative data. The reading survey was designed to measure two dimensions of reading motivation, self-concept as a reader and value of reading. This portion of the instrument contains 20 questions. It was designed to be given to an entire classroom at the same time. The conversational interview includes open-ended questions regarding the individual natures of students' reading motivation, such as how they locate reading materials or their favorite authors. This portion of the instrument contains 14 questions and is intended to be administered individually. The TEX-IN3 (Hoffman et al., 2004) was developed to assess the quality of a classroom's literacy environment. The instrument is composed of three components: the text inventory, an inventory of all texts directly accessible to students in a classroom; the text in-use, observations of teachers and students as they use the various texts in the classroom; and the text interviews, interviews with teachers and students in the classroom.

While these measures are strong, well-constructed measures, none unify the areas of access to books, beliefs of self-efficacy as a reader, and literacy environment. In the development of this new instrument, called ABLE, we focused on examining how *students* viewed these three areas because their perceptions will influence their voluntary reading habits. No matter what teachers, library media specialists, and reading specialists think about these constructs, students' perceptions are paramount. In the following sections, we describe the development, validation, and intended uses of the ABLE.

## Method

### Participants

For this study, data was collected from a convenience sample of 145 students in grades two through five at one urban elementary school in a midsize city. The demographic information for the sample is given in Table 1. There are more males in the sample (57%) than females (43%). In addition, the majority of the students identified as Black (59%), followed by White (11%) and Hispanic (11%), American Indian (6%), and Asian (2%); students who identified as another race

made up 11% of the sample. Most of the students were in the second grade (42%), 28% of the students were in fifth grade, 25% were in the fourth grade, and only 6% were in the third grade.

**Table 1.** Demographic Information

	Frequency	Percent
<b>Gender</b>		
Female	63	43%
Male	82	57%
<b>Race/Ethnicity</b>		
Black	86	59%
White	16	11%
Hispanic	16	11%
Asian	3	2%
American Indian	8	6%
Other	24	17%
<b>Grade Level</b>		
2nd	61	42%
3rd	8	6%
4th	36	25%
5th	40	28%
Total	145	

### Measures

The survey measure was developed by first researching other reading surveys for elementary schools students. As described earlier, these surveys focused on the motivational factors for reading. Because the focus of our study was on students’ perceptions of access to reading material, beliefs as a reader, and literacy environment, we created questions directed towards these topics. To ensure content validity, teachers and experts in reading research reviewed the questions. The final survey was a 5<sup>1</sup>/<sub>2</sub> by 8<sup>1</sup>/<sub>2</sub>-inch booklet with the title “Book Survey” and pictures of popular children's books on the cover. The full survey contained 45 closed- and open-ended questions related to the reading topics mentioned earlier, as well as self-reported demographic information, such as gender, grade level, and race/ethnicity. Survey responses were on a 4-point Likert scale, from “strongly agree” to “strongly disagree.” Researchers administered the survey to the students during one 30-minute class period. The surveys were read aloud to the students as they individually filled them out. For the following analysis, open-ended and demographic questions were eliminated, resulting in 34 items.

### Analysis

To analyze this data, we employed an exploratory factor analysis (EFA). EFA is a data reduction and statistical analysis technique that is used to explore the dimensionality of an instrument by finding a smaller number of interpretable factors needed to explain the relationship among a set of variables (Brown, 2006; Rencher, 2002). An EFA is exploratory in that it is used when researchers have no a priori hypothesis about the factor structure. In this case, we had a general

idea of the areas related to reading perceptions that we wanted to measure, however, we did not set these as constraints in the model because no earlier models have validated the constructs in the ABLE model. The primary goals of EFA are to determine the number of underlying factors in an instrument and to determine its quality as a measurement instrument (Brown, 2006; Rencher, 2002).

## Results

Before conducting the EFA, the univariate and bivariate descriptive statistics for the data were examined. Five questions were negatively worded and thus were reverse-coded for all of the analyses. An example of a negatively worded item was, “I do my best to avoid reading in school.” Thus, an answer of “strongly agree” to this question suggests that the student does not read in school, which is the opposite of “strongly agree” responses for the rest of the instrument. From the univariate descriptive statistics, all of the items appeared to be normal in terms of mean, standard deviations, skewness, and kurtosis. In looking at the bivariate correlation matrix of the 34 items, many of the correlations between the items were above 0.3, suggesting that a factor analysis would be appropriate for this data.

**Table 2.** Fit Measures

<i>Results of EFA for Initial Instrument (34 Items)</i>						
Number of Factors	Chi-Square			RMSEA	RMR	Negative Residual Variance
	$\chi^2$	df	p-value			
1	1011.818	527	0.000	0.080	0.096	No
2	846.253	494	0.000	0.070	0.078	No
3	733.783	462	0.000	0.064	0.068	No
4	621.549	431	0.000	0.055	0.058	No
5	537.398	401	0.000	0.048	0.050	No
6	480.089	372	0.000	0.045	0.045	No
7	428.909	344	0.001	0.041	0.041	No
8	385.852	317	0.005	0.039	0.038	No
9	No convergence					
10	No convergence					
<i>Results of EFA for Preliminary Instrument (27 Items)</i>						
4	318.423	249	0.002	0.044	0.051	No
<i>Results of EFA for Final Instrument (18 Items)</i>						
<b>3</b>	<b>130.611</b>	<b>102</b>	<b>0.030</b>	<b>0.044</b>	<b>0.044</b>	<b>No</b>

Next, an EFA was conducted to determine the number of underlying factors in the instrument. There are several ways to determine the number of factors, including the Kaiser criterion, scree plot, fit statistics, and substantive interpretability of the factors. The results from an initial SPSS analysis indicated that, based on the eigenvalue greater than one criterion (Kaiser, 1961), there are at most 10 possible factors in this instrument. However, as Zwick and Velicer (1986) noted,

using only the eigenvalue criterion to decide the number of factors tends to overestimate the number of factors. The data were further explored by conducting an EFA in Mplus (Muthén & Muthén, 2010), using maximum likelihood estimation and promax rotation. In looking at these results, we first examined the scree plot, a graphical representation of the eigenvalues and components in which the number of factors is determined by examining the elbow—or the sharp turn—in the plot; the eigenvalues prior the elbow indicate the number of factors (Cattell, 1966). In this case, the scree plot suggested that either a three- or four-factor model was plausible.

To further establish the number of possible factors, we inspected the fit statistics (Table 2). The Chi-square criterion, which suggests a p-value greater than 0.05, was not met in any of the models; however, this test is highly dependent on sample size and therefore other fit statistics should be examined (Rencher, 2002). For the root mean square residual (RMR), a value less than 0.08 indicates a good fit. In this case, nearly all of the models except for a one-factor model met this criterion. The root mean square error approximation (RMSEA) criterion for a good fit is a value less than 0.05. As shown in Table 2, the four-factor model is close with 0.055 and the five-factor model has a value of 0.048, meeting this criterion.

Thus, in order to determine the number of factors, we also examined the factor loadings to see if the factors had salient loadings. Because the scree plot and fit indices for the three-, four-, and five-factor models looked reasonable, these factor loadings were investigated. The substantive interpretability of the loadings supported a four-factor model; thus, based on the scree plot, the RMSEA value close to the 0.05 criterion, and the substantive interpretability, a four-factor solution was determined to fit the data best. The items from the 4-factor solution that did not load onto a factor (7 items) were deleted and another EFA was conducted. The resulting four-factor model was chosen as the preliminary EFA solution because there were no cross-loaded or non-loaded items, the factors were interpretable, and the tests of model fit indicated that the model was a good fit (RMSEA = 0.044 and RMR = 0.051). There were 27 items remaining on the instrument. The interpretation of the preliminary four factors was as follows:

**Factor 1: Access to Preferred Books in School**

Six items loaded onto this factor. These items related to the child's perceived access to the books he or she wants to read in school. For example, one item in this factor was, "I can find books that I want to read in my classroom."

**Factor 2: Beliefs as a Reader**

Six items loaded onto this factor. For these items, students were asked about their ability and self-efficacy as readers. For example, one question asked, "When I have to answer questions about something I have read, I know the answers."

**Factor 3: Literacy Environment**

Eleven items loaded onto this factor. The items revolved around the school environment as it relates to reading. For example, students were asked, "My school librarian knows the types of books that I like to read."

**Factor 4: Negative Attitudes about Reading**

Four items loaded onto this factor. The items all related to having a negative attitude about reading. For example, “I do my best to avoid reading in school.”

In looking at the preliminary model, we were not satisfied with Factor 4: Negative Attitudes about Reading. All of these items were the questions that were originally negatively worded in the survey. Thus, we decided to investigate why these may have loaded together, rather than loading on another factor, like Factor 2: Beliefs as a Reader. An example of a negatively worded item from our survey was, “I worry about what others think of me when I read.” A student who perceived herself to be a good reader would likely respond to this question as “strongly disagree.” In this case, the item would most likely load on Factor 2 as it is related to beliefs of herself as a reader; however, all of the negatively worded items loaded together, indicating that students may have had some difficulty answering these questions.

In a prior study, Benson and Hocevar (1985) found that elementary-aged children had difficulty with negatively worded items in that they struggled to indicate agreement by disagreeing with such items. Similarly, Marsh (1986) also found that preadolescent students had difficulty with negatively worded item. Their results indicated that students with lower reading abilities were less able to respond appropriately to negatively worded item stems (Marsh, 1986). Because the survey we developed was intended to be used by students of all reading abilities, we decided it would be beneficial to exclude negatively worded items and rerun the EFA analysis. The results from this analysis suggested, based on the scree plot, fit statistics (RMSEA = 0.044 and RMR = 0.044), and the substantive interpretability, a three-factor model with 18 items fit best. The remaining items loaded onto the same factors as before, and thus, the names of the first three factors remained the same.

#### Factor 1: Access to Preferred Books in School

I can find books that I want to read in my classroom.

There are books in my classroom that I can read (not too hard).

There is a time in my classroom when I can read books that I want to read.

I see other kids in my classroom reading books that I want to read.

I can find books I like to read in the library.

#### Factor 2: Beliefs as a Reader

I am a good reader.

I would say that I read a lot.

I read at least 30 minutes a day.

When I have to answer questions about something I have read, I know the answers.

When I am reading something to myself, I understand what it is about.

I read in school to get my work done.

#### Factor 3: Literacy Environment

My school librarian knows the types of books that I like to read.

I tell my friends about good books I read.

When it's time to go to the school library, I feel excited.

We get points or other rewards at my school when we read books.

I hear books read in the library that I want to read.

There are new books coming into my classroom that I want to read.  
I like the stories that my teacher asks me to read for class work.

### Subscales

As a final part of the analysis, we created subscales for each factor by averaging the scores from the items within that factor. There were three subscales for the instrument, corresponding to the three factors: access to preferred books in school, beliefs as a reader, and literacy environment. In order to determine if the subscales were related, we conducted a simple bivariate correlation among the three factors. As shown in Table 3, there were significant (at the 0.01 level) positive correlations among the three factors. Thus, for example, when children perceived having more access to preferred books and having a better literacy environment, this was associated with higher perceived self-efficacies as readers.

**Table 3.** Correlations Among Subscales

Subscale	Access to Preferred Books in School	Beliefs as a Reader	Literacy Environment
Access to Preferred Books in School	1.00		
Beliefs/Self-Efficacy as a Reader	0.361**	1.00	
Literacy Environment	0.491**	0.456**	1.00

*Note.* \*\* Indicates significant at  $p < 0.01$ .

### Discussion

The purpose of this study was to develop and validate an instrument, called the ABLE, intended to measure students' perceptions of access to books in their schools, their beliefs as a reader, and their literacy environment. After conducting an EFA on the data, three interpretable factors with high-loading items were identified in the ABLE. These three factors were: access to preferred books in school, beliefs as a reader, and literacy environment. The first factor, access to preferred books in school, was related to the students' perceived access at school to the books they would most like to read. The factor of beliefs as a reader focused on the students' beliefs about their reading abilities. The third factor, literacy environment, was related to the students' perceptions of their schools as an environment that supports reading. The analyses demonstrated that the ABLE instrument measures three areas that have been repeatedly shown to relate to voluntary reading and reading achievement: children's perceptions about access to books, their personal self-belief/self-efficacy as a reader, and the literacy environment in which literacy teaching and learning occur (Anderson et al., 1988; Heyns, 1978; Krashen, 1993, 2008).

It is genuinely important that the ABLE measures significant factors related to voluntary reading and looks at them through the eyes of young readers; while teachers and librarians may feel that there are plenty of appropriate reading materials available in their school and that the learning environment is supportive, learners may have different perceptions. An understanding of how students experience text availability and the learning environment can be invaluable in assuring

that learner needs are being met. Likewise, the ABLE provides a measure of young children's self-beliefs/self-efficacy related to their own abilities as developing readers, a factor that is significantly related to literacy learning (Guthrie et al., 2007; Zimmerman, 2000). Teachers' abilities to meet the needs of developing readers can be solidly enhanced by understanding their self-beliefs and self-efficacy. That is, when we know that particular children do not have positive perceptions of their reading and their ability to improve as readers, actions can be taken to support them in developing more positive self-perceptions. While there are several other elementary reading instruments that measure the factors assessed by ABLE (Gambrell et al., 1996; Hoffman et al., 2004; McKenna & Kear, 1990), this instrument is unique in that it unites these three important areas of voluntary reading into one survey.

One limitation of the current study is the relatively small sample size of 145 students in one urban elementary school. Some researchers, however, argue that samples as small as 100 are acceptable for factor analysis (MacCallum, Widaman, Zhang, & Hong, 1999). In a review of the literature on EFA use, Costello and Osborne (2005) found that 62% of published EFA studies used a 10:1 or less ratio of sample to item. Given that there were 34 items being considered, the ratio of sample to item was around 4:1 in this study, indicating an acceptable number; however, a larger sample would have been more ideal. In addition, the instrument was only administered to students in one urban elementary school, thus the results may not generalize to other populations.

### **Uses of the Instrument**

The ABLE survey can be used by elementary classroom teachers and reading specialists for the purpose of looking at whole classroom and individual students' perceptions about text availability, literacy environment, and reader self-efficacy. The ABLE is brief—only 18 items—and thus teachers or researchers could easily and quickly administer it to a classroom in one sitting. There is a considerable advantage in being able to use the ABLE and gain information on these three factors in a single assessment session from a whole group of learners, as compared with using a variety of different instruments. Teachers can use the information gained from the ABLE assessment in grouping students and tailoring instruction to meet the needs of individual learners.

Further research is indicated using ABLE. One fruitful direction would involve examining this instrument with a variety of populations for further instrument validation. Another possible instrumentation research design could involve comparisons of the three identified factors with other literacy assessments to examine the relative power of ABLE in measuring student perceptions in these three areas. Within school contexts, research is needed that assesses relationships among student perceptions in the three ABLE factor areas. Clearly, it would be meaningful to examine how teachers can make use of ABLE data in assuring that students' literacy learning needs are met in classrooms and schools.

ABLE has been shown to have solid high-loading items in three essential areas relating to student perceptions of literacy. The high level of meaningful measurement in ABLE demonstrates that it has strong potential for classroom, school, and research use in the future.

### **Adaptation**

In school, teachers are in the position of preparing children to read the materials that are most available to them, and these are the books that children find in school and classroom libraries. In this particular school, the materials available to students were primarily print-based texts. However, it is becoming increasingly clear that access to online books, e-textbooks, hand-held devices, and other technology-based reading tools are being introduced in elementary schools. In more technology-rich schools, it may be necessary to adapt the ABE instrument to better reflect the types of materials available. For example, “I can find books I like to read in the library” might be changed to “I can find *digital* books I like to read in the library.” Because the purpose of this instrument was to measure student perceptions rather than the actual types of books available, this should not impact the established reliability and validity of the instrument.

Teachers need to be able to explore students’ perceptions and reading interests—regardless of the delivery system—in order to encourage voluntary reading.

### **Acknowledgements**

The authors thank Dr. Heidi Anne Mesmer, Associate Professor of Teaching and Learning at Virginia Tech, for her valuable guidance throughout this project. The authors also thank Dr. Yasuo Miyazaki, Associate Professor of Educational Leadership and Policy Studies at Virginia Tech, for his assistance with statistical analyses.

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