The Relationship Between Reader Response and Prior Knowledge on African American Students’ Reading Comprehension Performance Using Multicultural Literature

Ruanda Garth McCullough

School of Education, Loyola University Chicago, Chicago, Illinois

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THE RELATIONSHIP BETWEEN READER RESPONSE AND PRIOR KNOWLEDGE ON AFRICAN AMERICAN STUDENTS’ READING COMPREHENSION PERFORMANCE USING MULTICULTURAL LITERATURE

RUANDA GARTH McCULLOUGH
School of Education, Loyola University Chicago, Chicago, Illinois

Educators receive numerous strategies to engage reluctant readers (L’Allier & Elish-Piper, 2007). Most methods involve motivating through student interest. It is important to consider cultural context when engaging reluctant readers. This study asks which is the stronger indicator of comprehension performance for 117 eighth grade African American students: interest or prior knowledge. A repeated measure design was used to investigate within-group variability of students at different achievement levels. The quantitative analysis explored the effects of cultural orientation of texts, prior achievement, and prior knowledge on students’ comprehension performance. The results reveal prior knowledge as a consistently stronger indicator of comprehension.

Introduction

Teacher educators often provide teacher candidates with a litany of strategies and methods to engage reluctant readers (Dugan, Foote, Sampson, Linek, & Fleener, 1997; L’Allier & Elish-Piper, 2007, Moore, Alvermann, & Hinchman, 2000; Thomas & Wexler, 2007). Most of these involve motivating students through their own interests. Interest inventories, book stacking, and book talks are just a few strategies used to draw out the students’ interests in order to connect them with literature and reading (Parr & Maguiness, 2005). We may need to reflect on this practice and ask ourselves: are we asking the right question? What a student has an interest in may differ from what they have themselves experienced. This distinction is critical for the examination of African American students’ reading comprehension performance and

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Address correspondence to Ruanda Garth McCullough, PhD, Loyola University Chicago, School of Education, 820 N. Michigan, Lewis Towers, Chicago, IL 60611. E-mail: rmccull1@luc.edu
their interaction with culturally relevant texts: stories for which the knowledge, beliefs, values, and practices of an ethnic group are central to their character development, plot, and language. We have to consider, do students perform better if they read what they are interested in or if the material connects with their own experiences? This study asks which the stronger indicator of reading performance is for African American students: student interest or prior knowledge.

Research findings regarding the relationship between interest and prior knowledge have been inconsistent (Alexander, Kulikowich, & Jetton, 1994). Some studies have shown that “prior knowledge was responsible for the interest-comprehension relationship” (Bray and Barron, 2004, p. 110). Other studies present findings that range from modest evidence of a relationship between prior knowledge and interest (Tobias, 1994) to conclusions that the two make independent contributions to comprehension and recall (Schiefele, 1999). The inconsistency may be due to the ever-present gap between theory and practice. Conceptually, we understand and most research shows a clear distinction between prior knowledge and reading interest. But often in teaching practices prior knowledge and interest are regarded as synonymous, when they are in fact two individual concepts that may affect comprehension differently. The instructional implications of prior knowledge and interest also may vary, but they are often applied as if they are synonymous.

In this age of accountability and high-stakes testing, it is especially important to understand the nature of prior knowledge and interest/enjoyment influence on reading achievement for disenfranchised, struggling readers. While the issues raised in this study are relevant for all students, they are especially pertinent for African American students and other disenfranchised groups, since their previous experiences are less likely to be present or privileged in the instructional materials used in their classrooms. In order to make effective decisions regarding text selection, pre-reading exercises, and testing materials that connect students with the written text, we must understand the weight of prior knowledge and interest and how they each impact reading achievement. More importantly, given that both prior knowledge and interest have an influence on reading comprehension, an investigation of
the differences is warranted. When these two distinct concepts are not clearly understood when planning literacy instruction for disenfranchised students especially, this may negatively influence the students’ comprehension performance.

Three types of interest will be considered in the interest ratings: “1) situational—a short-term interest that is triggered by a stimulus such as a text that tends to be shared among many people, 2) individual—a personal predisposition that develops slowly and tends to be relatively stable, and 3) topic—the likelihood of attending to a particular subject content or positive feelings for that content” (Bray & Barron, 2004, p. 108). Prior knowledge is defined here as “the knowledge, skills or ability that students bring to the learning environment prior to instruction” (Jonassen & Grabowski, 1993, p. 417). When it comes to reading comprehension performance, whether a student has experienced something or has knowledge of the content may have more of an impact on their comprehension and achievement than whether they are interested in the topic.

Students’ interest in a topic may increase the likelihood that they will initially engage a text, but students’ prior knowledge operates during the reading-to-learn process by activating their schema of the topic, context, characters, and meaning. In their study of the relationship between prior knowledge, interest, strategy, and use for fifth graders studying science, Alao and Guthrie (1999) found that prior knowledge accounted for 29% of the total variance in conceptual understanding, while interest explained 7%. Furthermore, Dochy, Segers, & Buehl (1999) found this to be the case in their analysis of prior knowledge and student performance when prior knowledge explained up to 81% of the variance in posttest scores. Armed with the understanding that prior knowledge has a greater influence on text comprehension, propositional knowledge, and procedural knowledge than interests, teachers might prioritize their prereading exercises, analyze preassessment data before instruction, spend more time on prior knowledge activation activities, and/or expose students to actual or virtual experiences related to the curricular content (Alao & Guthrie, 1999). Just having students complete a K-W-L worksheet will not suffice when many of the contemporary literacy strategies require students to make predictions, develop mental imagery,
and elaborate, all of which require a heavier reliance on prior knowledge than on interest (Wood & Endres, 2004). It is important to tease out the difference between what a student knows about through personal experience and what they are interested in learning more about from a topic or context that motivates them to learn.

Research Questions

This study explores the relationship between students’ interest and prior knowledge and their influence on reading performance with culturally relevant material. The investigation distinguishes between general and culturally bound prior knowledge: prior knowledge that is derived from social practices of a particular community group. The two research questions that will guide this analysis include:

1. How do prior knowledge and interest ratings interact with multicultural texts in ways that influence performance?
2. Which is a stronger predictor of reading comprehension performance for culturally relevant texts: prior knowledge or interest ratings?

Review of Literature

Adolescent Readers and Reading Comprehension

Both prior knowledge and interest are effective teaching tools for improving adolescents’ reading comprehension performance. This study specifically focuses on adolescent readers because they are at a crucial stage in their education and development (Franzak, 2006). Some alarming statistics point to a need to reevaluate literacy practices for this age group. For instance, 26% of eighth graders who took a 2007 NAEP (National Assessment of Educational Progress) did not achieve simple levels of literacy, while 31% reached proficiency—meaning approximately 1 million eighth graders were stalled during simple education levels and an additional 1.7 million were not proficient (NAEP, 2007; U.S. Census, 2007).
American schools, and their academic activities, structures, and materials, primarily reflect social, historical, and cultural traditions of a white, middle-class mainstream. The students whose experiences do not relate to the cultural norms reinforced in most American classrooms are at an academic disadvantage. The practices that require students to “check their bodies at the schoolroom door” (Gee, 2004, 39) have proven ineffective for members of nonmainstream cultures.

Culturally relevant educational research has demonstrated that African American adolescents need to read, write about, and discuss literature that would help them develop cultural competence (Feger, 2006; Gay, 2000; Ladson-Billings, 1995; Rickford, 2001a; Thein, 2009). The use of students’ cultural practices, language, dialect, and experiences in culturally relevant reading materials increases students’ engagement, enjoyment, interest, and performances (Cai, 2008; Feger, 2006; Plata, 2008). An early empirical study with a sample of 998 third and sixth grade African American students reported significant differences in reading achievement and school attendance for the experimental group that was exposed to culturally relevant materials (Grant, 1973). More recently, Rickford’s (2001b) 2-year study in an urban middle school demonstrated that culturally relevant texts increased students’ enjoyment, interest, motivation, and reading comprehension performance. Her study also exhibited students’ increased ability to respond to higher-order questioning in response to culturally relevant texts (Rickford, 2001b). When interacting with culturally relevant literature, African American adolescents with average comprehension performance benefit more than high and low performers from their experiential knowledge of the language, values, beliefs, and practices being represented in the text (Garth McCullough, 2008).

Schema Theory and Prior Knowledge

In the past, comprehension has been thought to consist of “aggregating the meanings of words to form the meanings of clauses, aggregating the meaning of clauses to form the meaning of
sentences, aggregating the meanings of sentences to form the meanings of paragraphs, and so on” (Anderson, 1994, p. 473). Proponents of schema theory, however, declare that during reading words cannot simply be “added up” to explain the whole message. Instead they view “comprehension as a matter of activating or constructing a schema that provides a coherent explanation of objects and events mentioned in a discourse” (Anderson, 1994, p. 473). The basic premise of the schema theory of reading is that the reader’s organized knowledge of the world provides much of the basis for comprehending, learning, and remembering the ideas in texts (Alvarez, 1990; Anderson, 1994; Bransford, 1994; McVee, 2006; Norris & Phillips, 1987; Reynolds, Taylor, Steffensen, Shirey, & Anderson, 1981; Rumelhart, 1975).

“The schema that will be brought to bear on a text depends upon the reader’s age, sex, race, religion, nationality, occupation—in short, it depends upon the reader’s culture” (Anderson, 1994, pp. 374–375). An implication of this position is that when some children appear to have poor comprehension skills, the problem may in fact be a lack of or failure to activate prior knowledge that the text presumes. The relevance of this discussion of schema theory to this study is the necessity to explore comprehension using a sociocultural lens.

Script theory offers one way to conceptualize the relationship between prior knowledge and cultural experiences (Schank & Abelson, 1977). It presents a schema theory that investigates the cognitive processes involved in how people understand and remember narratives. The theory proposes “that part of our knowledge is organized around hundreds of stereotypic situations with routine activities ... through direct or vicarious experiences each person acquires hundreds of such cultural stereotypes along with his idiosyncratic variation” (Bower, Black, & Turner, 1994, p. 538). Scripts help readers fill in the missing gaps or expand upon what they are reading to fully understand a text (Bower et al., 1994).

Many of the scripts that individuals have come to know are culture-specific and based on sociocultural beliefs and the practices of cultural groups. Gutierrez, Rymes, and Larson (1995) state that
becoming a member of a community of practice is a process of developing a particular identity and mode of behavior; through participation in a community’s sociocultural practices, members learn which discourses and forms of participation are valued and not valued by the community. . . . As members of a community interact within and across events, they construct normative patterns of life within a classroom. These scripts, characterized by particular social, spatial, and language patterns, are resources that members use to interpret the activity of others and to guide their own participation. A script, then, represents an orientation that members come to expect after repeated interaction in contexts constructed both locally and over time. (Gutierrez et al., 1995, p. 447)

An example of a script associated with African Americans would be a description of a Baptist church service, or a family reunion represented in a text.

In their study Gutierrez et al. found that the students’ scripts were often based on their particular sociocultural practices (Gutierrez et al., 1995; Gutierrez & Stone, 2000). If sociocultural practices do in fact shape students’ scripts, then students who are members of specific cultural groups may invoke different frames of reference in their interpretation of and reactions to a text. In this study it is expected that when the students read they will bring their knowledge from these cultural scripts into play as tools in their efforts to comprehend the text. If these scripts are in fact based on their social experiences as a member of a cultural group, students may comprehend or respond to the text accordingly.

**Reader Response**

**Interest/Enjoyment**

Like prior knowledge, interest in a text is also a mediating variable in the complex relationship between interest and comprehension (Bray & Barron 2004; Wade & Adams, 1990; Wade, Buxton, & Kelly, 1999). Even though research has found that interest in the topic of the text is related to better comprehension and recall, the how and why of this relationship remains unclear (Wade & Adams, 1990; Wade, Buxton, & Kelly, 1999). Schiefele (1999) conducted a study of interest during the reading phase and concluded that “subjective experience (activation, affect, and concentration) was significantly related to topic interest but unrelated to
any of the measures of cognitive processing of the texts” (Ainley, Hidi, & Berndorff, 2002, p. 13). This is a critical mediating variable in comprehension, since high interest requires the reader to expend fewer attentional resources (McDaniel, Waddill, Finstad, & Bourg, 2000).

A reader’s attention can be affected by different stages or types of interest. Frick (1992) drew a distinction between “interestedness,” which is assessed prior to reading, and “interestingness,” which is determined after readers have experienced the text. A rating of interest before participants encounter a text is an expectancy measure (Ainley et al., 2002). Postreading ratings reflect text-specific situational interest factors and also the interaction of each reader’s individual “interestedness” with a particular text. For this study, to reflect the greatest possible extent the contributions of the test passage to “interest,” test takers rated their interest in the culturally bound passages after reading (Ainley et al., 2002).

**Textual Factors**

Reading ease is another contributor to a reader’s response to text. Readability, or reading ease, continues to be an area of concern for people who need to determine the appropriateness of a given text for a pedagogic function. Educators often use readability scales such as the Dale-Chall Readability Formula, Gunning-Fox Index, Flesch “Reading Ease” Formula, and the SMOG Grading Plan to determine the match between student ability and the level of the text in the middle grades (Olson, 1984). These standard statistical formulas are basically of two types: ones that use word and sentence length (e.g., Fry, and Dale and Chall scales) and others that include syntactic complexities (Davis, 1988). The current study utilized the more contemporary Lexile readability measure, which indicates the reading demand of the text in terms of the semantic difficulty (word familiarity) and syntactic complexity (sentence length) (Smith, Stenner, Horabin, & Malbert, 1989).

The level of the vocabulary words in a text has also been identified as a major factor in determinations of readability (Anderson & Freebody, 1981; Bos, Allen, & Scanlon, 1989; Fisher, Blachowicz, & Smith, 1991; Freebody & Anderson, 1981; Haggard, 1980; Mezynski, 1983; Nagy & Herman, 1987; Ruddell, 1994; Stahl &
The Relationship Between Reader Response and Prior Knowledge

Jacobsen, 1986). Literacy research that has explored various relationships between vocabulary knowledge and comprehension has concluded that while the statistical relationship between vocabulary knowledge and comprehension is strong (Anderson & Freebody, 1981), the efforts to verify a direct causal relationship that supports this statistical relationship have been inconclusive (Beck, McKeown, & Omanson, 1987; Ruddell, 1994; Stahl & Jacobsen, 1986). A number of factors obscure the understanding of the link between vocabulary knowledge and comprehension (Ruddell, 1994). Factors that influence the definite relationship between vocabulary and comprehension include learning characteristics, type of instruction, assessment of vocabulary and comprehension, text features, estimates of vocabulary size, and the vocabulary acquisition process (Anderson & Freebody, 1981; Beck & McKeown, 1999; Beck et al., 1987; Ruddell, 1994; Stahl, 1989; Stahl & Jacobsen, 1986). This study is unique in its inclusion and exploration of culture-specific vocabulary (e.g., shape-ups, hooked-up, tagged, whacked-out, joint, chill, rip on, dig, diss, and hoochie mamas).

Text structure is another influential factor in the reading process. Research on text structure, the surface structure in which ideas in a text are communicated, has found that it has an influence on comprehension (Irwin, 1979; Pearson & Camperell, 1981). Text structure is of particular importance in this study, since texts from various cultural orientations are used. Although most studies presume that story schema has universal properties (use of affect to produce enjoyment, use of repetition, and parallel structure), culture-specific properties have been identified (Brewer, 1985; Lee, 1993). Often analysis of written stories does not include stories from non-Western cultures, which makes it difficult to isolate culture-specific properties (Brewer, 1985; Lee, 1993). Lee stated:

The question itself is further complicated by the fact that much written literature that emerges out of a particular cultural or national context is influenced by the native oral tradition. The question is also complicated because the level of cross-cultural communication and interaction (both voluntary and interaction as a result of colonial conquest) has resulted in cultures borrowing and sharing ideas and literary conventions. In some sense one might argue that African-American literature fits such an
amalgam. African-American literature is part of the American/Western tradition and yet still culturally distinct. (Lee, 1993, p. 40)

If oral traditions provide a base for the structure of written narratives, we may conclude that the differences found in story schemata of Asians’ and African Americans’ oral narratives in this study could result in differences in structure of and response to written text.

**Method**

A focus of this investigation is whether prior knowledge is a stronger and more reliable predictor of reading comprehension than enjoyment and interest indicators. In order to explore this question, students read stories from different cultural orientations. This study uses a repeated measures design to investigate within-group variability of African American students of differing achievement levels. In fall 2001, 117 eighth-grade African American students from four Chicago public schools participated in this study. Students’ reading comprehension scores from the 2000–2001 Iowa Test of Basic Skills (ITBS) test were used to identify their achievement level. Two of the sites were charter schools within the public school system: Gwendolyn Brooks and Audre Lorde charter schools (these are pseudonyms used to protect the identity of the participating schools). Both charter schools classify more than 58% of their students as low income. More than 84% of the students at the noncharter schools, Pearl Cleage and Toni Morrison (also pseudonyms), were considered low income. The schools were all located on the South Side of Chicago and serve predominantly African American populations. The students in the classrooms where the study was presented were all African American. In accordance with IRB (Institutional Review Board) and the school system’s site-based protocol, the principals and classroom teachers granted permission for their school to be included in the study before the study was presented to the students and their parents.

**Participants**

Approximately one-half of the 117 students involved in the study were male ($N = 62$). As noted, all study participants were African
The Relationship Between Reader Response and Prior Knowledge

American, and all but one was born in the United States. Approximately 22% of the students’ mothers and 30% of their fathers had a high school diploma as their highest degree, and 19% of the mothers and 13% of the fathers had college degrees. Average household size was five. More than 93% of the students at Cleage and Morrison qualified for free lunch. This was higher than the percentage at the two charter schools: 61% at Brooks, and 54% at Lorde qualified for free lunch.

Overall, the participants’ instructional reading level, based on their standardized ITBS test scores of reading comprehension from the previous school year, ranged from 3.3 (third grade) to 10.4 (tenth grade), with a mean reading level at approximately the seventh grade (7.59) and a standard deviation of slightly more than one year (1.2). The high, medium, and low student achievement levels were determined by dividing the grade-equivalent reading scores into thirds. This classification was made to determine whether students’ reading ability influenced their use of the cultural information in the text. When the students were tested in the spring of their seventh grade year, 31% tested at 8.0 and higher, 37% tested between 7.0 and 7.8, 21% tested between 6.0 and 6.9, and 11% tested below the sixth-grade reading level. The student with the lowest score in the sample had a reading level of 3.3. The next highest score was a student at the fifth grade reading level.

Procedures

In addition to completing a demographic profile, students read six short stories from young adult multicultural anthologies and completed demographic, prior knowledge, and reading comprehension instruments. The short stories were divided into two sets, each containing three stories, each of which represented a different cultural orientation: African American, Chinese American, and European American (see Appendix A for story excerpts). Three of the stories featured female protagonists. In session one, students completed a demographic/reading behavior survey. In the next session, students completed a prior-knowledge instrument that measured their understanding of the texts’ cultural and general content. The working definition for ethnic-specific cultural information was items that members of a cultural or ethnic
group would be more likely to know as a result of their interactions or experiences with other members of their group. General mainstream information was defined as core American information or knowledge of popular culture as expressed by nonethnic mass media, television, or newspapers. Individuals from any cultural or ethnic group have equal access to this type of knowledge.

In each of the three subsequent sessions, students independently read a text. To ensure that students were not influenced by the order, the texts were counterbalanced within each text set. After reading each story, students answered literal and inferential multiple-choice reading comprehension items. Then students completed a postsurvey, which posed questions concerning their interest level, text difficulty, and familiarity. This process was repeated for the second set of texts. The prior knowledge and comprehension items that were constructed by the investigator were based on story content. To measure the effects of cultural orientation of texts, prior achievement, and prior knowledge on the students’ reading comprehension performance, the study utilized the Rasch model, and ANOVA analysis. This design affords the opportunity to explore how cultural relevance influences and interacts with interest and enjoyment indicators.

**Instruments: Selected Texts, Prior Knowledge, and Reading Comprehension**

Six stories were selected through a review of published multicultural young adult anthologies. The selection involved identifying short stories that included more than 25 cultural references. This ensured enough items to develop a quantitative measure using Rasch analysis. Stories that met this criterion were then analyzed for comparable readability and length. Two stories representing each of the cultural orientations were selected (see Appendix A for story excerpts). The Lexile readability measure was used, as reported in Table 1. This score indicates the reading demand of the text in terms of the semantic difficulty and syntactic complexity (Smith et al., 1989).

A multiculturally representative panel was formed to ensure that the general and cultural information in each story was accurately interpreted and categorized. Members of the cultural/ethnic groups that these stories represent were expected...
TABLE 1 Selected Texts

<table>
<thead>
<tr>
<th>Story Name</th>
<th>Cultural Orientation</th>
<th>Length (# of Words)</th>
<th>Lexile</th>
<th>Gender/Text Set</th>
<th>Topic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Into the Game</td>
<td>African American</td>
<td>2,976</td>
<td>600</td>
<td>Male/1</td>
<td>Changing friendship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>First paycheck</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Learning to talk to girls</td>
</tr>
<tr>
<td>Block Party</td>
<td>African American</td>
<td>3,283</td>
<td>730</td>
<td>Female/1</td>
<td>Mother-daughter relationships</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Friendship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Test preparation</td>
</tr>
<tr>
<td>Fox Hunt</td>
<td>Chinese American</td>
<td>2,799</td>
<td>690</td>
<td>Male/1</td>
<td>Family ancestry</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Friendship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Test preparation</td>
</tr>
<tr>
<td>Chang</td>
<td>Chinese American</td>
<td>7,204</td>
<td>730</td>
<td>Female/2</td>
<td>Family history</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Multiethnic heritage</td>
</tr>
<tr>
<td>Great Moves</td>
<td>European American</td>
<td>3,416</td>
<td>660</td>
<td>Female/2</td>
<td>Changing friendship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>School dance</td>
</tr>
<tr>
<td>Y2K</td>
<td>CHATRM43</td>
<td>3,565</td>
<td>620</td>
<td>Male/2</td>
<td>Changing friendship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Global politics</td>
</tr>
</tbody>
</table>

to have some degree of insider perspective and experiences with the cultural information in the stories. Five people representing each of the ethnic cultures read each of the stories and coded 25 general and cultural items. They coded the stories by identifying an item (selected phrase, word, expression, statement, or belief), providing a definition, categorizing it as general or cultural by type (social convention/custom, vocabulary word, language, fact, belief), and identifying any considerations that might influence the interpretation of the item. The panel was given working definitions for general and cultural knowledge. Because the prior knowledge and reading comprehension instruments were based on the content of the specific text, existing items were unavailable. Therefore, the author constructed these items and conducted item analysis using Rasch model analysis. The Rasch Rating Scale Model provides estimations of the difficulty of the prior knowledge and reading comprehension items (Wright & Stone, 1979). In the Rasch model, reliability is estimated for persons and items. The item separation reliability is an estimate of how well items are differentiated on the measured variable. The reliability estimate is based on the same idea as Cronbach’s alpha—percentage of observed response variance that is reproducible (Bond & Fox, 2001). The model makes it possible to provide the probability that a person at a given position should succeed on certain items and
fail on others. The Rating Scale model also allows one to determine whether or not an item or a person fits the assertions of the model.

The instruments were piloted in spring 2001 with 19 eighth-grade students. Item separation reliability on the prior knowledge instrument and reading comprehension items were 0.74 and 0.70, respectively. The Rasch item analysis also revealed that 46 prior knowledge items and 13 reading comprehension items had high misfit values; therefore, those items were not included in the instruments for the study.

The two prior knowledge assessments combined items from three of the stories, one from each cultural orientation. There were 193 prior knowledge items in text-set 1 and 198 items in text-set 2. Question formats included binary choice, free association, and multiple choice (translation, synonyms, and antonyms). The yes/no binary choice items inquired about the students’ experiences with the activities in the stories (i.e., Have you ever been on a subway train with your friends?). Students were given an opportunity to write what came to their mind on the free association questions (What do you think of when you hear the words “standardized achievement test”? ). The remaining questions tested specific knowledge, as opposed to merely self-report. Students were asked to demonstrate their vocabulary knowledge and phrase translation ability, and respond to items that related to the specific details in the story. This measurement included items that inquired about their knowledge of culture-specific vocabulary, proverbs and sayings, language style and use, and historical knowledge. Examples of the general and cultural multiple-choice items for each of the cultural orientations required the students to either answer a question or translate a phrase or saying using four answer options. They also identified the synonym or antonym for select vocabulary words. Examples of the general and cultural multiple-choice items for each of the cultural orientations include, for example, the African American text:

**African American Text**

What does “freshly clipped shape-ups” refer to? (Culturally Bound Knowledge Item)

- a. Exercise routine
- b. Flower
- c. Food
- d. Hair cut
Which of the following would you expect to see on a paycheck?

(General Knowledge Item)

a. F.I.C.A.          c. Savings account balance
b. Parents’ name    d. Lunch menu

The reading comprehension assessment for each story was administered individually after the students read the selected texts. The instruments were each composed of 30 selected response items (see Appendix A and B for examples of items or Garth McCullough (2002) for instruments).

**Measures**

The total prior knowledge student measurement included the number of correct responses to the general and culturally bound multiple choice, translation, and synonym/antonym items for all of the texts represented in both text-sets. There were 50 multiple-choice, 63 translation, 33 synonym, and 18 antonym items for text-set 1. Text-set 2 included 112 multiple-choice, 39 translation, 13 synonym, and 15 antonym items. The student measure is based on the number of multiple-choice items the students responded to correctly. The item reliability for the prior knowledge items was 0.95. In text-set 1, there were 96 general prior knowledge and 68 culturally bound prior knowledge items. In text-set 2, there were 74 general prior knowledge and 105 culturally bound prior knowledge items.

Literal and inferential item types were included and used for each text’s reading comprehension instrument. The reading comprehension instrument for each text consisted of multiple-choice items, each with four answer options. These items tested reading skills such as interpreting attitudinal meaning, understanding explicitly stated information, understanding implicit information in the text, understanding conceptual meaning, understanding relations between parts of the text, and distinguishing the main idea form supporting details. Reliability of this measurement instrument was determined by the Rasch model analysis. The item reliability for the combined reading comprehension instruments was .93. While all of the reading comprehension instruments were
combined for the item fit analysis, individual scores for each text were used when analyzing student comprehension performance.

After reading each story the students rated the text on seven interest ratings. Three of the items used a 5-point Likert scale (1 = Not Very Much to 5 = Very Much). These items included: I enjoyed reading this story; I like the main character in the story; I would like to read this story in my spare time. Students also responded to the following items: This story was (1 = Very difficult to read to 5 = Very easy to read), This story was (1 = Very boring to 5 = Very interesting). The last two items used another 5-point scale (1 = Never to 5 = Always). These items read as follows: I have done what the characters experienced; and I use the same language the characters in the story used.

Analysis

One-way ANOVA analyses were conducted on both prior knowledge and reading comprehension item difficulty and student measures to determine whether student performance varied by cultural orientation of the text. The item difficulty mean analyses reveal how challenging the items were for the students to answer correctly, and the mean analysis of student measures show the person’s ability/performance on the items. These descriptive statistics, item analysis, and one-way analyses of variance produced useful data for the linear regression analysis that was used to evaluate how well prior knowledge and the interest ratings predict reading comprehension performance for the culturally relevant texts.

Results

Prior Knowledge

Prior Knowledge Item Difficulty

The first research question asks how prior knowledge affects reading comprehension. Table 2 reflects two important relationships for this sample that examine this relationship: mean scores for the prior knowledge, and reading comprehension item difficulties by text orientation. These mean scores reveal that the items on the prior knowledge instruments concerning the African
American texts were easier for the students than the items that related to the content of the Asian and European American texts. Differences between the mean item difficulty for the African American (M = 47.13, SD = 7.08) and the Chinese American items (M = 52.77, SD = 6.21) were 5.63. This value was larger than the 4.82 differentiation between the African American and European American (M = 51.95, SD = 6.78) mean item difficulty measures. Closer inspection of these mean differences provides evidence that the African American students found the culturally relevant prior knowledge items significantly easier than the Chinese and European American items. An ANOVA provided an adequate base for statistical significance (F (2, 287) = 20.00, p = .000). These significant differences support the assumption that the students would have more familiarity with the culturally relevant prior knowledge items.

PRIOR KNOWLEDGE STUDENT MEASURES

The significantly lower item difficulty measures for the African American prior knowledge items would suggest that the student measures for the same instrument would be significantly higher than the other two cultural orientations. In fact, the mean student measure for the African American prior knowledge instruments was 53.39 (SD = 7.8), followed by the slightly lower Chinese American mean of 53.29 (SD = 7.0) and the European American mean of 53.25 (SD = 8.0). It is evident that these small mean differences were not significant (F (2,348) = .02, p = .984). Therefore, student measures for the prior knowledge instruments

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Error</th>
<th>S. D</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>30.4</td>
<td>62.51</td>
<td>47.13</td>
<td>.71</td>
<td>7.08</td>
<td>50.18</td>
</tr>
<tr>
<td>Chinese American</td>
<td>34.95</td>
<td>66.86</td>
<td>52.77</td>
<td>.65</td>
<td>6.21</td>
<td>38.54</td>
</tr>
<tr>
<td>European American</td>
<td>32.9</td>
<td>65.78</td>
<td>51.95</td>
<td>.68</td>
<td>6.78</td>
<td>45.98</td>
</tr>
<tr>
<td><strong>Reading comprehension</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>24.2</td>
<td>62.91</td>
<td>48.98</td>
<td>.84</td>
<td>6.39</td>
<td>40.78</td>
</tr>
<tr>
<td>Chinese American</td>
<td>33.5</td>
<td>64.24</td>
<td>51.64</td>
<td>1.04</td>
<td>7.64</td>
<td>58.48</td>
</tr>
<tr>
<td>European American</td>
<td>29.6</td>
<td>66.55</td>
<td>51.15</td>
<td>1.03</td>
<td>7.97</td>
<td>63.46</td>
</tr>
</tbody>
</table>
did not follow the pattern that the item difficulty results would suggest.

**Reading Comprehension Performance**

**Reading Comprehension Item Difficulty**

The descriptive statistics shown in Table 2 suggest a similar pattern among the reading comprehension mean item difficulty measures, as was recognized among the prior knowledge item measures. Following a similar trend, for the items included in the analysis from the African American reading comprehension instruments, the mean item difficulty was 48.98 (SD = 6.39), the lowest among the three story types. Conversely, the mean item difficulty measure for the Chinese American stories was slightly higher at 51.64 (SD = 7.64), which is .49 higher than the mean for the European American items (M = 51.15, SD 7.97). Even though students found the reading comprehension items easier, these differences did not produce significant differences (F (169, 2) = 2.12, p = .124). Thus, the trend of the mean values suggests that students also found reading comprehension items related to the African American reading materials easier than the Chinese and European American.

**Reading Comprehension Student Measures**

Table 3 summarizes the reading comprehension student measures for each cultural orientation. The group means indicate that the mean measure for the culturally relevant text, the African American stories, was higher than the mean measures for the Asian and European American stories. Students’ mean measure on the reading comprehension instrument for the culturally relevant texts was .56 greater than the reading comprehension measure for the European American and .64 greater than the Chinese American texts. In order to determine whether these mean differences were bigger than would be likely due to chance alone, that is to determine statistical significance, an ANOVA of statistical significance was carried out. The ANOVA results did not show an effect among the three types of cultural orientation. The results are presented in Table 4. The ANOVA does not indicate statistical significance at the p < .05 level, that is, the probability that the difference in means is by chance 5 out of 100. It could be assumed
TABLE 3 Reading Comprehension Student Measures

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>46.0</td>
<td>34.76</td>
<td>80.77</td>
<td>56.64</td>
<td>10.17</td>
<td>103.46</td>
</tr>
<tr>
<td>reading comprehension</td>
<td>(N = 111)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Chinese American</td>
<td>39.7</td>
<td>38.66</td>
<td>78.37</td>
<td>56.00</td>
<td>8.73</td>
<td>76.35</td>
</tr>
<tr>
<td>reading comprehension</td>
<td>(N = 109)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>43.0</td>
<td>32.97</td>
<td>75.93</td>
<td>56.08</td>
<td>8.49</td>
<td>72.21</td>
</tr>
<tr>
<td>reading comprehension</td>
<td>(N = 109)</td>
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</table>

that the mean reading comprehension scores for the culturally relevant texts would be higher than those for Asian and European American texts. As shown in Table 3, mean differences in these tables are quite small (African American, M = 56.6, SD = 10.2; Asian American, M = 56.0, SD = 8.7; European American, M = 56.1, SD = 8.5). As shown in Table 4, these differences did not indicate a significant effect for culturally relevant texts; F (2, 325) = .16, p = .853. In sum, the student measures for reading comprehension yielded the same outcome as was seen with the prior knowledge student measures. Based on these results, the data were then submitted to additional ANOVAs that categorized the students by prior achievement, and prior culturally bound knowledge levels.

As shown in Figure 1, this one-way analysis of variance evaluated the relationship between students’ African American culturally bound prior knowledge classification (High, Mid-Range,

TABLE 4 ANOVA for Reading Comprehension of the Three Cultural Orientation Types

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>26.85</td>
<td>2</td>
<td>13.42</td>
<td>.159</td>
<td>.853</td>
</tr>
<tr>
<td>Within groups</td>
<td>27352.52</td>
<td>325</td>
<td>84.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27379.36</td>
<td>327</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prior achievement and Culturally Bound Prior Knowledge Level

FIGURE 1 Prior achievement and culturally bound levels and reading comprehension for African American texts (Color figure available online).

Low) and their reading comprehension performance (High, Mid-Range, Low). The mean scores reveal that the students with lower reading levels with higher levels of cultural knowledge reading comprehension scores have higher scores than the students with higher reading levels that have lower levels of culturally bound prior knowledge. For example, the mean reading comprehension score for the midrange reading students with high culturally bound prior knowledge levels is greater than the mean for high-level reading students with a midrange culturally bound prior knowledge level; students with high reading levels with low levels of cultural knowledge have lower scores than the students with low reading levels and high, midrange, and low levels of culturally bound prior knowledge; and students with low reading levels and high cultural knowledge scored higher than students with midrange reading ability and low cultural knowledge. The level of cultural knowledge a student had influenced their comprehension performance despite their placement on the reading achievement spectrum.
Interest Ratings

Students in this study indicated the highest level of enjoyment, liking the main character, and likelihood that they would read the story in their spare time for the African American stories (*Into the Game* and *Block Party*), as shown in Table 5. The consistent trend found with the African American texts and the enjoyment, main character, and spare time indicators was not found in the analyses of the difficulty and interest indicators. In fact, based on the mean scores, students found the European American texts (*Great Moves* and *Y2K.CHATRM43*) as having a significantly higher level of reading ease (M = 8.94, SD = .73). It is important to note, students’ ratings of the African American texts expressed their view that these stories (*Into the Game* and *Block Party*) were the most difficult to read (M = 7.97, SD = 1.3). The Chinese American texts (*Fox Hunt* and *Chang*) received a significantly higher rating for interest (M = 5.62, SD = 1.3), while the African American texts were perceived as less interesting (M = 4.65, SD = 1.2), as illustrated in Figure 2. Between-group differences (cultural orientation) were significant for both items (Ease, F (2, 200) = 9.25, p = .000; Interest, F (2, 201) = 6.44, p = .002).

Two additional interest indicators, presented in Figure 3, assessed the students’ sense of connection with the characters’

| TABLE 5 Interest Indicators (Enjoyment, Main Character, Spare Time) by Cultural Orientation |
|-----------------------------------------------|--------|--------|--------|--------|
| I enjoyed reading this story                  |        |        |        |        |
| African American (N = 66)                     | 3.00   | 10.00  | 7.85   | 1.89   |
| Chinese American (N = 65)                     | 2.00   | 10.00  | 5.94   | 1.98   |
| European American (N = 79)                    | 3.00   | 10.00  | 7.27   | 1.98   |
| I like the main character in the story         |        |        |        |        |
| African American (N = 59)                     | 3.00   | 10.00  | 7.53   | 1.87   |
| Chinese American (N = 62)                     | 2.00   | 10.00  | 6.00   | 1.75   |
| European American (N = 72)                    | 2.00   | 10.00  | 6.86   | 1.89   |
| I would like to read this story in my          |        |        |        |        |
| spare time                                     |        |        |        |        |
| African American (N = 58)                     | 2.00   | 10.00  | 6.88   | 2.38   |
| Chinese American (N = 62)                     | 2.00   | 10.00  | 4.89   | 2.11   |
| European American (N = 70)                    | 2.00   | 10.00  | 5.97   | 2.28   |
FIGURE 2 Bar chart of ease and interest by culture.
Easy to Read: 1 = very difficult to read, 10 = very easy to read
Interest: 1 = very boring; 10 = very interesting
experiences and language. The results reveal that the students have done similar activities as the characters experienced in the African American stories ($M = 5.81$, $SD = 1.4$) more than characters represented in the other story types. This difference was significant $F (2, 200) = 12.48$, $p = .000$). In addition, students also related to the language the characters in *Into the Game* and *Block Party* ($M = 6.43$, $SD = 1.3$) used more than to the language used in the European stories ($M = 6.05$, $SD = 1.3$) and Chinese stories ($M = 5.00$, $SD = 1.3$). Students related least with the experiences and language used in *Fox Hunt* and *Chang*. These findings are consistent with the results of the analysis described above that showed the students had the least amount of prior knowledge of the Chinese American culture.

**Prior Knowledge, Interest and Reading Comprehension**

In an effort to answer the second research question, regarding which is a stronger predictor of reading comprehension performance for culturally relevant texts, prior knowledge or interest ratings, a linear regression analyses was conducted. Determining whether prior knowledge or the interest indicators (enjoyment,
like main character, spare time, reading ease, and interest) are stronger predictors of performance for African Americans will help establish where classroom time and effort should be placed in order to support achievement. The Pearson correlation between prior knowledge and interest for the African American texts was .393, \( p < .008 \), while the Pearson correlation between the prior knowledge and reading comprehension measures for African American texts was .752, \( p < .001 \). In contrast, the correlation coefficients for the interest indicators and reading comprehension were smaller and not significant (enjoyment \(-.123, p = .181\); like main character \(-.064, p = .318\); read in spare time \(-.218, p = .051\), and interest \(-.113, p = .200\)); with the exception of the relationship between reading ease and reading comprehension (.259, \( p = .026 \)) the correlations were negative. The regression equation was significant, \( R^2 = .646 \), adjusted \( R^2 = .603 \), \( F(6, 50) = 15.19, p = .000 \). Of the predictors, total prior knowledge was the most significant (\( p = .000 \)) predictor of African American reading comprehension student performance measure. The interest indicator was the only significant item (\( p = .009 \)). The other indicators; enjoyment (\( p = .688 \)), like main character (\( p = .837 \)), would read in spare time (\( p = .252 \)), and reading ease (.695) were not significant.

Several differences were noted in the results described above: students’ prior knowledge item difficulty measures differed for the three cultural orientations; achievement groups’ prior knowledge and reading comprehension student measures varied for each story type; and reading comprehension measures for students with high culturally bound prior knowledge levels were significantly different from students with mid- and low levels of reading comprehension for each cultural orientation. In terms of interest indicators, the African American texts received the highest ratings for enjoyment, while the European American texts’ reading ease was rated higher than the African American texts. The sample of this study indicated a significantly greater degree of connection to the African American characters’ activities and language, but rated their interest in the Chinese American texts higher. Support for the notion that prior knowledge is a better predictor of reading comprehension for culturally relevant texts was also presented.
This exploration of African American students’ knowledge of and response to information presented in multicultural literature revealed a complex relationship with prior knowledge and reader response variables. In regard to the first guiding question of this investigation: how do prior knowledge and interest indicators interact with multicultural text in ways that influence performance, the findings reveal that having prior knowledge of the content of the story impacted the students’ response and comprehension. Significantly lower prior knowledge item difficulties for the African American texts indicate that the students were more familiar with the information in the culturally relevant texts. In addition, the students in this sample had the highest measure of prior knowledge of the content for the two African American stories. These findings are in line with the existing research that shows how culturally relevant literature has the potential for students to make connections between their lived world and the world of the text to develop their interpretations by using their lived experiences to mediate the comprehension process (Cai, 2008; Feger, 2006; Howrey, 2005; Landt, 2006; Plata, 2008; Thein, 2009). Thus, it seems that students’ prior knowledge reinforces their high levels of connection with the language and experiences of the characters.

It would follow that their level of knowledge of these texts would also yield significantly higher reading comprehension scores. However, this was not the case. Reading comprehension student measures were higher but not significantly so, which led to additional analysis. A further examination, which categorized the students by prior achievement and prior culturally bound knowledge levels, exposed that readers’ prior knowledge of the cultural information embedded in the text does function as a support for reading comprehension and in fact can enhance performance for students at the midrange and low achievement levels. This line of investigation makes known the positive, but not clear-cut, influence prior knowledge has on reading comprehension performance when African American students engage with multicultural texts. It also sheds light on the importance of students’
familiarity with the cultural information embedded in the text.

**Inconsistency of Reader Response Indicators**

The results presented above also reveal a complex relationship between reader response indicators and multicultural texts. This sample of students may have found the African American stories and main characters more enjoyable, since they reflect urban lifestyles of African Americans similar to their own. It follows that the students may have been able to relate more to the characters portrayed in these short stories. However, the consistent trend found with the African American texts and the enjoyment, main character, and spare time indicators was not found in the analyses of the difficulty and interest indicators. In fact, based on the rating means, students found the European American texts (*Great Moves* and *Y2K.CHATRM43*) as having the highest level of reading ease, which is consistent with their average Lexile score of 640. Interestingly, students’ ratings of the African American texts expressed their view that these stories (*Into the Game* and *Block Party*) were the most difficult to read, when in fact the average Lexile score was 665 compared to the Chinese American texts’ average score of 710. When it came to the Chinese and European American texts, the interest and difficulty indicators did not follow the same pattern as the enjoyment indicators. It seems that while the students enjoyed the African American texts, they found the content of the Chinese American texts more interesting.

The inconsistent pattern of these results demonstrates the varied and distinct dimensions of interest ratings to multicultural and culturally relevant literature. Students engage with a range of aspects during their reading of culturally loaded texts. With the African American texts, the students responded to the cultural information since it was familiar, whereas the novelty of the unfamiliar cultural content in the Chinese American texts could have piqued the readers’ interest more than the familiar practices presented in the culturally relevant stories. In addition, the difficulty that students reported for the African American texts in relation to the European American texts may be due to the reality that culturally relevant literature continues not to be the typical standard in most traditional public school classrooms or basals (Gilton,
The Relationship Between Reader Response and Prior Knowledge

2007; Harris, 1992; Howard, 1991, Lerer, 2008; Lindgren, 1991). While the students may have recognized the language, practices, and beliefs presented in the African American texts, they could have reacted to a disconnect with seeing familiar cultural expressions presented in an academic context and form.

Studies have shown that literacy practices developed outside of school do not align well with school practices (Hull & Schultz, 2001, 2002; Rickford, 2001a). In school, students’ exposure to cultural representations in literature is often limited to surface representations of diversity (Hartman, 2006), unfamiliar scripts (Gutierrez et al., 1995; Gutierrez & Stone, 2000), privileged discourses (Gee, 2004), or inequitable power dynamics (Hicks, 2004). These representations don’t often align with the rich language, proverbial practices, and common culturally based beliefs they experience outside of school in their daily interactions. Restricting students’ access to their own cultural artifacts in school decreases their capacity to engage cognitive resources that they can bring to bear in the meaning-making process in their response to literature (Copenhaver, 2001).

According to the findings related to the interest indicators, students in the sample had positive reactions to the culturally relevant literature on many of the reader response indicators, but not all. In this study of 8th grade students’ reading of culturally relevant texts, it was found that African American texts were favored on the items that inquired about the students’ enjoyment, liking the main character, and whether they would read this story in their spare time. Students also indicated that they found the experiences and language of the characters in the African American texts more closely connected to their own. In contrast, students rated these same texts less interesting and more difficult than the other texts. We can turn to self-regulated learning research, particularly the metacognitive and affective model of self-regulated learning (MASRL) model to understand the students’ enjoyment and connection to the same texts that they rated less interesting and more difficult for a discussion of how metacognitive knowledge and motivation for a task interact with a person’s beliefs (Efklides, 2011). The presence of culturally relevant information in the text may have led the students to predict success and anticipate little effort expenditure for their ability to complete the comprehension task (Efklides, 2011). Perceived ease of
comprehension is a factor that contributes to situational interest. The students in this sample experienced the task of reading the African American texts as more difficult than they may have originally predicted, but they were able to use the cultural information as a metacognitive tool to support their comprehension. Their familiarity and connection to the characters’ traits, experiences, and language could have functioned as intrinsic motivation during the reading task and supported their comprehension.

This close analysis of the interest indicators also questions the common assumption that cultural relevance is synonymous with student interest. African American texts, in fact, did not receive the highest ratings for interest, the Chinese American texts did. In order to understand these results, it is important to consider the three different types of interest to determine which was activated during the students’ postreading ratings (Bray & Barron, 2004). The ratings reflect both topic and situational interest factors and the interaction of each reader’s individual “interestedness” with the “interestingness” of the particular text (Bray & Barron, 2004, p. 109). In practice it is not always possible to make a distinction between which types of interest are influencing the readers experience, since individual factors always interact with situational factors (Ainley et al., 2002).

This evidence might be interpreted as support for the argument that culturally relevant literature is not necessarily easier for the students just because it piques their interest. These results bring to bear the sociocultural perspective of reading, since it joins reading performance to the personal-social experiences of the reader (Bell & Clark, 1998; Lee, 2001, 2008). In fact, the accessibility of cultural relevance may have more to do with one’s ability to engage their prior knowledge, schemata, and cultural scripts in their interaction with the content of the text in ways that support their interpretation and elaboration, which in turn enhances their performance on measurement instruments (Gutierrez & Stone, 2000; Tobias, 1994). It may also influence the students’ persistence during the reading experience.

Prior Knowledge and Reader Response

The entangled application of two influential meditational elements, prior knowledge and reader response, does not serve
teachers or students well. When prior knowledge and interest are accepted as mutually exclusive and used as a basis for instruction, the teachers’ decision making may be misguided, since the two may have a different impact on performance. This commingling also does not provide clear priorities for teachers’ instructional decision making and use of time in the classroom. Understanding the complexities involved in the relationships between prior knowledge, interest ratings, and reading comprehension performance, it is essential that educators know how these indicators relate to student performance. In effort to explore the second objective of this study, which questions the predictability of prior knowledge and interest ratings, we recognize that student experiences are the bases for their prior knowledge, which influences their response to literature. Fortunately, the design of this study teased out the interrelationships between prior knowledge of cultural information, enjoyment, and interest, to reveal their individual influence on student performance. The linear regression analysis that evaluated prior knowledge and the interest indicators as predictors of reading comprehension performance of the African American texts demonstrated that prior knowledge was a significant predictor of reading comprehension performance. In contrast, interest was the only reader response rating that was significant. In fact, the correlations between the other response ratings and reading comprehension were negative, with the exception of reading ease. These findings support the hypothesis that prior knowledge is a better predictor of reading comprehension than the interest ratings.

Implications for Research and Pedagogy

Understanding the varying nature of interest, enjoyment, difficulty, and connection indicators is essential since these constructs are often thought of as mutually exclusive. The dependability of interest ratings for instructional decision making is complex. These findings highlight the importance of recognizing that each indicator triggers different aspects of the readers’ approach, impression, and experience of the texts.

In the quest to improve the effectiveness of reading research, it is pertinent that educators continue to develop our understanding of the role that multicultural and culturally relevant literature
can play. The discussion needs to move beyond student engagement and into the realm of empirical evidence that demonstrates the cognitive value of incorporating culture into literacy instruction. The results of this study question a few accepted assumptions concerning how and why multicultural and culturally relevant literature benefit student performance (Cai, 2008; Feger, 2006; Gilton, 2007). From an instructional psychological perspective, teachers experience students’ reactions to the inclusion of culture in instructional practice, but without empirical evidence to support what aspects of the text the students respond to, instructional decisions regarding cultural materials may be misdirected. Quantitative studies have demonstrated that African American students’ comprehension improves when they interact with texts that contain African American imagery and sociocultural themes (Bell & Clarke, 1998; Cai, 2008; Garth McCullough, 2008; Gilton, 2007). Moreover, evidence regarding the predictability of prior knowledge could lead to instructional efforts to identify, enhance, and refine students’ relevant prior knowledge before introducing a text with a high cultural load.

Classroom-level implications for this study relate to teacher choice and differentiation. Teachers are in a position to make choices regarding how to engage students, deconstruct literature to make it meaningful to their students’ lives, and honor diversity as strength through their practices (Swartz, 2009). Taking the additive approach often found in multicultural education practices could limit students’ access to cultural information and practices to mere representation and often fails to include the knowledge and perspectives of disenfranchised groups in ways that can affect performance. Preservice education training for teachers needs to include strategies not only for identifying the interest ratings that impact performance, but ways to build on the students’ interest, understanding, and use of prior knowledge (Gere, Buehler, Dallavis, & Haviland, 2009). Furthermore, these findings support the need to consciously and critically differentiate instruction based on specific knowledge of the students’ skill levels, interests, and prior knowledge. Blindly incorporating multicultural or culturally relevant literature into the classroom will not yield meaningful student performance results. A match or fit with the texts and the students’ metacognitive resources is essential when using culturally loaded reading material to enhance achievement.
Limitations

The results of this study should be interpreted after consideration of the following limitations with respect to sample size and composition, and text selection. The sample size was small and limited to one grade level; therefore it is not possible to make generalizations about application of the results to other grade levels. Only one racial group was considered for this analysis, which afforded an opportunity to investigate within-group variability but did not allow for cross-cultural comparisons. For example, a comparative group would have enabled an exploration of whether the low item difficulty measures for the African American content were indicative that they were less challenging items or whether they were only less challenging for the African American sample. Due to the statistical demands of this study, stories were selected based on the amount of cultural content presented in the text, since a large number of instances were needed for the quantitative analysis by item type. The texts were authentic, but they were not exact parallels in terms of length, story grammar, structure, and cultural load. Other characteristics of the text may have affected comprehension performance that may not be considered in the Lexile scores.

References


substance in literature for children and young adults (pp. 91–99). Fort Atkinson, WI: Highsmith.


**Appendix A**

*Story Excerpts*

“Into the Game”

African American

G-chuk-a-chuk. G-chuk-a-chuk. We made one pathetic sight. Three lonesome guys on pay day, getting jerked all the way uptown by the Number Two train. G-chuk-a-chuk G-chuk-a-chuk. That shouldn’t have been. Not when we had freshly clipped shape-ups (courtesy of the Nu Bush Cutters) and money in our pockets. G-chuk a-chuk. G-chuk-a-chuk. There we sat, staring at subway ads when there were two Brooklyn College girls in smelling range, licking their lip gloss, dying to be talked to.

What we must have looked like. My mouth was hanging open. Manny was staring off, remembering a girl who was never his. Dupree was hunched over so low, his head was under his seat. My man was gone. His head was bobbing and lips were twitching though nothing came out unless, you want to count “FFFFFICA!” as conversation.
“Fox Hunt”
Asian American

Andy Liang watched the kids from his school bus walk home with their friends. He could hear them talking together and laughing. He always got off the bus alone and walked home by himself. But this time it was different. A girl got off the bus just behind him and started walking in the same direction. He wondered why he hadn’t seen her before. She was also Asian American, which made it all the more surprising that he hadn’t noticed her earlier. As he tried to get a better look, she went into the neighborhood convenience store and disappeared behind a shelf of canned soup. He peered into the store, hoping for another glimpse of her. All he saw were some of the kids from the bus getting bags of potato chips and soft drinks.

Andy sighed. He was used to being a loner, and usually it didn’t bother him—not much, anyway. But today the loneliness was heavy. He overheard the other kids talking and he knew they were planning to study together for the PSAT. From the looks of the snacks, they were expecting a long session.

Andy would be practicing for the test, too, but he would be doing it by himself. I’m better off doing it alone, anyway, he thought. Studying with somebody else would just slow me down. The truth was that none of the others had invited him to study with them. So all right, he said to himself, they think I’m a grind. What’s wrong with that? I’ll be getting better scores on the PSAT than any of them, even if there’s nobody to coach me.

“Great Moves”
European American

But I was in no mood to be reasonable. Besides, it was easy for her to say. She had the two best guys in the freshman class ready to duel over her. How could I show up stag knowing that?

“Don’t worry about me,” I told Annie, unlocking my chin from my knuckles and swinging myself off the edge of the bed to avoid her sympathy.

I knew she’d go right on worrying, though. That’s the kind of person she is, teddy bear sweet to the core. It makes it very difficult for me to hate her, and believe me, ever since we hit Ulysses S. Grant Senior High in the fall, I’ve had reason to try: her with her perfect little figure (same poundage as before the summer, only
arranged better), her terrific mane of blond hair (out of braids and just born to be feathered), and her big blue eyes (in full focus now, thanks to new contact lenses). It used to be such an easy job, being Annie’s best friend: a couple of giggles now and then, a glass of lemonade to share. . . . I gave a mo-ment’s fantasy to reenrolling in elementary school, where you don’t need a date to play jacks.

Appendix B

Prior Knowledge Instrument Item Examples

African American

What does “freshly clipped shape-ups” refer to? (Culturally Bound Knowledge Item)
- a. Exercise routine
- b. Flower
- c. Food
- d. Hair cut

Which of the following would you expect to see on a paycheck? (General Knowledge Item)
- a. F.I.C.A.
- b. arents’ name
- c. Savings account balance
- d. Lunch menu

Asian American

Shaolin Temple is located in (Culturally Bound Knowledge Item)
- a. Colorado
- b. alifornia
- c. China
- d. Chile

When do students take the PSAT? (General Knowledge Item)
- a. After the MCAT
- b. After High School
- c. Before the GRE
- d. Before the SAT

European American

Feathered is a type of (Culturally Bound Knowledge Item)
- a. Dress
- b. Hairstyle
- c. Car
- d. Food

When something is a force of habit, it is (General Knowledge Item)
- a. voluntary
- b. Voluntary
- c. Chosen
- d. Controlled

Reading Comprehension Instrument Item Examples

African American

The boys looked lonesome even though they had just gotten
- a. A promotion
- b. A new Lexus
- c. Haircuts
- d. New clothes
The boys received the money they earned minus
a. Their lunch money  c. Dues for their membership
b. Social Security and Federal taxes  d. The cost of stamps

Asian American

To escape pressure, Andy daydreamed about
a. Being popular  c. His ancestors
b. Exciting adventures  d. Going to college

Both Lee and Andy were interested in studying for the
a. LSAT  c. PSAT
b. SAT  d. GRE

European American

The big event that Brenda and Annie were discussing in Annie’s room was
a. Christmas party  c. Birthday party
b. A Valentine’s day dance  d. A sleep over

When they were in Annie’s bedroom Brenda was having trouble being Annie’s best friend because of
a. Jealousy  c. Fear
b. Anger  d. Betrayal