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Testing the National Reading Panel’s Fluency Claims: A Study Examining Repeated Readings and Tracking the Nature of Miscues

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Abstract

The National Reading Panel’s (NRP; 2000) claim that reading fluency is the direct result of phonemic awareness skills seemed to set a research direction for numerous literacy scholars. As a result, much of the reading fluency research examined the construct from a particular perspective seemingly informed by the NRP. The summative results of a generation of fluency research have subsequently defined reading fluency as a principal and predicative construct in children’s reading potential. The current study examined how children develop reading fluency skills and reports data gathered from a New York City elementary school. Specifically, the present work tracked the nature of the reading miscues. The empirical data suggest that students make nearly as many semantic mistakes as phonics miscues, even after long periods of phonics instruction. This research underscores the complexity of fluency skill development process and that providing more phonics instruction does not always ameliorate fluency deficiencies.

Keywords: cognitive/psycholinguistic, comparison of means, fluency, phonemic awareness, semantic cues, triangulation
Background

Montgomery Elementary School (pseudonym) is a short walk from New York City’s F Train and the historic Henry Street Settlement. Located on Manhattan’s Lower East Side, Montgomery Elementary seems an unlikely location for national reading policy to be examined and critiqued; nonetheless, Ms. Garcia (pseudonym), a 2nd-year teacher from the Lower East Side, is actively searching because her students’ fluency skills are not more fully developing. While engaged in this search, Ms. Garcia notes a perceptible paradox. Her students’ phonics skills are not as proficient as the Core Knowledge Language Arts (2013) and Wilson Reading’s Foundations (2014) programs recommend, yet they meet or exceed achievement levels for nearly every other first grade benchmark. In alignment with dominant pedagogical thinking on literacy, Ms. Garcia’s concern for her students centers on redressing their phonics skills; however, observing her students read, Ms. Garcia notes no measurable distinction between the types of reading miscues that they make. Puzzled, Ms. Garcia wonders if something is amiss.

Ms. Garcia—and her racial, ethnically, and financially diverse students—are enacting a reading curriculum based on the research propositions of the report from the National Reading Panel (NRP; 2000). The NRP inaugurated a cornerstone policy directive when it emphasized that reading fluency is primarily the result of decoding and phonics skills, determining the ways that early reading instruction has been studied and implemented. However, a series of fundamental questions arise from closely examining the NRP’s knowledge claims on reading fluency. One centrally important query centers on the NRP’s understanding of what accounts for a reading miscue. This question leads, in turn, to query the nature of a reading miscue. These enquiries are of central importance because, nearly 20 years later, nearly all reading fluency claims and early reading curriculums derive from the NRP’s original work.

The essential questions focus on the nature of miscues and their measurement. Shanahan (2016), the lead author of the NRP’s (2000) chapter on reading fluency, recently addressed some concerns regarding miscues. Responding to a question about measurement, Shanahan admitted some difficulties with the tools for gauging fluency. Additionally, Shanahan noted that the NRP’s fluency report could have been worded differently.

I took the lead in writing that portion of the report, and so I probably wrote it that way. Nevertheless, I doubt that my inapt wording was what triggered the all too prevalent emphasis on speed over everything else in fluency; that I’d pin on misinterpretations of DIBELS. . . . The fundamental idea that I was expressing in those quotes was that students must get to the point where they can recognize/decode words with enough facility that they will be able to read the author's words with something like the speed and prosody of language. (Shanahan, 2016, para. 1)

Shanahan candidly admitted flaws in the current application of measurement criteria and the relationship of those flaws to some of the field’s difficulties with evaluating student fluency progress.
Shanahan (2016) attributed some of the difficulties in measuring fluency to misunderstanding not to measuring miscues but to the Dynamic Inventory of Basic Early Literacy Skills (DIBELS), which has become one of the major reading fluency measures. However, Shanahan may have downplayed the NRP’s longstanding influence on reading fluency. The NRP’s report, particularly the fluency chapter, was likely the most significant report informing reading instruction over the last two decades, but it did not speak fully to concerns about miscues, even though reading miscues present obstacles to high levels of reading fluency.

NRP’s (2000) influence on a generation of fluency research problematically perpetuates a lack of scholarly attention to reading miscues. For example, Antoniou and Souvignier (2007); Bell, McCallum, and Cox (2003); Blachman et al. (2004); and Blachman et al. (2014) confirmed and built upon the NRP’s knowledge claims without addressing reading miscues. Additionally, Brannick, Yang, and Cafri (2011); Ehri, Nunes, Willows, et al. (2001); Ehri, Nunes, Stahl, and Willows (2001); and the National Early Literacy Panel (2008) all extended NRP’s assertions, again without thoroughly addressing miscues. On the whole, the essential question of how reading miscues are understood as they are demonstrated in the reading fluency process remains underexamined.

Problem Statement

The problem statement centers on NRP’s (2000) understanding of reading fluency and its insufficient articulation of what reading miscues are. The concern over this articulation extends beyond the NRP report itself, since much of the literature to date continues to underexplore miscues. This stagnation includes the acceptance and implementation of NRP’s (pp. 115–226) central claim that reading fluency is primarily established using phonics and decoding skills. Other researchers have similarly noted difficulties with the NRP report, particularly in the ways that it measured fluency and the scholarship on reading that it overlooked. For example, Lawrence et al. (2016) underscored the problems with NRP’s fluency claims, taking issue with the construct’s measurement. Haling and Spears (2015), following Theurer (2011) and Goodman’s (2006) problematization of NRP’s framework, also highlighted divergent understandings of miscues.

Literature Review

This literature review focuses on how reading miscues tend to be undertheorized, both by NRP (2000) and by the subsequent fluency literature. The NRP tended to constrict the notion of what reading fluency was, which impacted reading fluency research in ways that underemphasized reading miscues. The NRP (2000, p. 10) commented on the arguably narrow scope of its literature selection:

It is the view of the Panel that the efficacy of material and methodologies used in the teaching of reading and in the prevention or treatment of reading disabilities should be tested no less rigorously. However, such standards have not been universally accepted or used in reading education
research. Unfortunately, only a small fraction of the total reading research literature met the Panel’s stand for use in the topic analyses.

In reviewing the literature on reading fluency, it is paramount to understand the ways in which the literature that informed the NRP is confined by its own parameters, as seen in the passage above.

Overview of the NRP’s Understanding of Fluency

Reading researchers have long contended that fluency is a type of gateway leading toward the development of additional reading skills. Adams (1990), Ackerman (1987), Dahl (1974), Dowhower (1987), and LaBerge and Samuels (1974) have argued that fluency comprises a set of skills that are demonstrated in the separate categories of accuracy, automaticity, and prosody. Chard, Vaughn, and Tyler (2002), LaBerge and Samuels, Rasinski (2016), and Rasinski and Nageldinger (2015) argued that when a student reads more fluently, reading comprehension increases.

NRP (2000), however, went further in defining the construct, claiming a central role for fluency in successful reading. The NRP restrained and later reframed what reading fluency was as both a concept and a construct. Its definition of fluency was predicated on the first two chapters—“Introduction” and “Methodology and Alphabetics”—without describing the nature of reading fluency miscues. NRP’s initial chapters defined what counted as fluency research and then explained how reading skills are learned. The third chapter, “Fluency,” built on a very detailed definition of reading and reading research, and noted that “the purpose of this report is to review the changing concepts of fluency as an essential aspect of reading and to consider the effectiveness of two major instructional approaches to fluency development and the readiness of these approaches for wide use by the schools” (NRP, 2000, p. 3-5). To this end, the NRP elucidated reading fluency’s definition, what counted as fluency research, and how the construct is to be measured. Nonetheless, the chapter omits the role that semantic miscues play in developing reading fluency.

NRP’s (2000) definition of reading fluency without a definition of semantic errors subsequently informed research on early reading fluency practices. The NRP approach to reading fluency concentrates on phonemic skills at the expense of other factors in the reading fluency development process, as well as other researchers studying the concept (Goodman, 1969; Hasbrouck, Ihnot, & Rogers, 1999; Nathan & Stanovich, 1991; Strecker, Roser, & Martinez, 1998). Subsequently, Allor and Chard (2011); Ehri (2003); Ehri and Nunes (2002); and Ehri, Nunes, Willows, et al. (2001) all cited the NRP and employed its understanding of acceptable research within the domain without providing a definition of miscues. More recently, Keenan, Evans, and Crowley (2016); Rasinski and Nageldinger (2015); Rasinski, Rupley, Paige, and Nichols (2016); and Young, Valadez, and Gandara (2016) followed the same pattern. Ehri (2003), also following the NRP’s work, detailed 38 studies that met the criteria for scientific research in the domain of reading fluency. However, like the other authors mentioned above, Ehri continued to devote little analysis to the role of miscues.
Ascendance of Phonics in Reading Fluency

Both the NRP (2000) and most subsequent literature argued that reading fluency is established through phonics skills. Phonics became an essential component in this research and its primary areas of instructional focus and assessment. The cognitive/psycholinguistic body of research contends that phonics and decoding, not semantic or situated understandings of text, constitute the process by which students learn to read. Research promoting reading fluency thus stresses letter–sound correspondence to decode words. Both the NRP and the Common Core Reading Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010a, 2010b) underscored fluency’s importance and specified how and why it should be a central aspect of reading education. Reflecting on the NRP, Shanahan (2005) wrote that “these studies led to a definite conclusion that systematic phonics instruction gave children a faster start in learning to read than responsive instruction or no phonics instruction” (p. 9). The panel found that phonics instruction improved word recognition, spelling skills, and reading comprehension for kindergarteners and first graders, and improved word recognition skills for second graders. Since word recognition is a feature of fluency, phonics instruction and reading fluency have become pronouncedly connected. As a result, particularly in the wake of the NRP and the Common Core Reading Standards, phonics has retaken its cornerstone position for reading instruction in American schools.

Purpose Statement

The purpose of this research is to examine the miscues that children demonstrate during the process of developing reading fluency skills. Goodman (2006) noted that the ways fluency miscues are assessed tend to be too straightforward and relatively one dimensional, and Goodman (2006) and Theurer (2002, 2010) provided a comprehensive understanding of miscues. Goodman (1969, 1973, 2006) developed a framework that gave teachers insight into students’ reading miscues, noting that children often cobble together different knowledge sets in order to read and that miscues were often a result of complex factors, not simply decoding or phonemic mistakes. Theurer (2002, 2010) also conducted miscue analysis studies and reviewed the research perspective that informs current understandings of reading miscues.

This study is situated at an equal distance from both the NRP report and the work of Goodman (1973, 2006) and Theurer (2002, 2010), as it acknowledges the importance of reading fluency and the NRP’s insights while being informed by Goodman and Theurer’s emphasis on the complexities of reading miscues and relationships among graphophonic and semantical reading miscues (Lehner, 2017). This study, building on my previous work (Lehner, 2007, 2017), examines one first grade class’s reading miscues over one semester of an academic calendar to investigate how students demonstrated reading fluency skills and provides insights into the nature of reading miscues. Particularly, the current project examines the extent to which reading fluency miscues were semantic or phonemic in nature.
Researcher Assumptions

This study engages with claims made about fluency’s ability to ameliorate reading difficulties. Rasinski (2014) highlighted the importance of fluency:

Fluency matters simply because it is an essential element of proficient and meaningful reading. . . . Fluency is a distinguishing factor between good and struggling readers. Good readers are so automatic or effortless at the bottom up word processing requirement for reading, they can use employ their finite cognitive resources for the more important top-down requirement for reading—comprehension. Struggling readers, on the other hand, are not automatic in their word recognition, so they must use their cognitive resources for the more basic bottom-up of word recognition, thereby depleting what they will have available for more important top-down task—making meaning. (Rasinski, 2014, p. 5)

Rasinski’s (2014) claim regarding cognitive processing is congruent with NRP’s (2000) insights into the nature of reading fluency. As Rasinski noted, reading fluency is often articulated as a type of amending intervention. Such work posits the enhancing influence that fluency can bring to students who develop these skills.

Conceptual Framework

The research praxis of this study is greatly informed by Tobin (2015) and Alexakos’s (2015) notions of catalytic research. Too frequently, researchers conduct empirical research that may disenfranchise certain student populations (Denzin & Lincoln, 1994, 2000, 2005, 2011; Lehner, 2007, 2017); therefore, I purposefully have articulated my epistemological stance, especially over the past decade, as an educator who seriously considers the impact on students of underachieving in reading and other foundational skills. This study is deeply influenced by the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979) and its call to create levels of beneficence and justice for human subjects in research, who in this work are also my students.

Some literacy researchers, who may focus on macro perspectives, may claim that examination of the micro steps of reading fluency miscues lacks significant meaning. For example, significant literacy research traditions have not produced a single paper on reading fluency. This study, however, agrees with NRP (2000) and many of the researchers who underscore fluency’s importance. Rasinski (2014, p. 1) noted, “Although reading fluency has been dismissed and overlooked as an important component of effective reading instruction . . . fluency continues to be essential for success in learning to read.” The micro processes—in this study’s case, reading miscues—are important elements that inform the macro demonstrations of literacy. The process of reading fluency involves the interplay between graphophonic understandings of student cultural domains and the effects of cultural and semantical influences (Lehner, 2017).

Foucault (1999; Foucault & Burchell, 2011) argued that each segment of society has its own specific discourse and that each discourse aligns with its own logic system.
and accompanying rules. Lankshear and Knobel (2003), commenting on Foucault, noted that a power discourse is a system of communication that tends to classify, structure, and control language. This study understands reading, in its various forms, as the power discourse of education whereby school reading, particularly for an underskilled reader, is a power discourse (Lehner, 2017), and the ability to read well is one of the most important factors for students’ success across the disciplines. Students who know this discourse often navigate the domain of academic accomplishment more effectively. Additionally, the power discourse of school reading undergirds the progression of creative, critical, and imaginative thinking. Reading thus becomes the foundation for nearly all academic success; therefore, each component of reading is worthy of researchers’ utmost attention. As a significant researcher assumption, this study examines reading research claims seriously, noting the potential aspects of social reproduction for underachieving students.

Rationale and Significance

Reading is the foundation upon which many academic disciplines and language-based arts rest. Skilled reading affords students increasingly greater access to opportunities throughout their academic careers. Stanovich (1986) underscored that one important problem vis-à-vis reading is that students are often unskilled in this area and read below their grade level. Further, Armbruster et al. (2001, p. 3) noted, “Reading failure has exacted a tremendous long-term consequence for children's developing self-confidence and motivation to learn, as well as for their later school performance.” Likewise, Stanovich argued that the Matthew effect is the long-term result of reading underachievement over an extended period, which exacts a significant toll on underachieving students because their reading skills are underdeveloped for the school curriculum.

Because of the fundamental importance of reading skills, the miscues demonstrated by readers over a number of repeated readings represent an important area of research. Since NRP (2000) and the wide implementation of DIBELS, the micro examination of miscues in the reading fluency process has remained underexamined, even though the analysis of miscues informs how both teachers and researchers understand fluency. There is great significance in providing an analysis of the nature of reading miscues, since it may contribute to the field’s fuller understanding of how reading fluency is developed.

Research Questions

Research Question 1: What is the nature of reading miscues demonstrated over one semester of repeated readings for one elementary classroom?

Research Question 2: Over one semester of repeated readings, do graphophonic and semantic miscues decrease at an equivalent rate in one elementary classroom?

Overview of Methodology
This work employs a methodology for assessment of means of intergroup readings as triangulated by knowledge claims. Data were analyzed in a mixed-methods analysis of the reading miscues. Multiple methods and research designs have been employed to understand reading fluency; DIBELS, for example, may not provide enough insight into how reading fluency develops. The combination of both quantitative and qualitative methods provides insight into the multilogicality of social phenomena; this study deploys Creswell’s (2011) notions of mixed methods to examine reading fluency and miscues precisely because of the complex nature of reading miscues. This use of mixed methods provides significant benefits when studying reading fluency’s miscues. Specifically, this design accommodates an entire class of students while simultaneously examining the micro nature of miscues.

Creswell (2011) underscored educational research’s long tradition of valuing quantitative measures and called for researchers to develop complex integrations of quantitative and qualitative methods. Following the examples of both Creswell and Ellingson (2011), the current study seeks to supersede the binary of quantitative/qualitative frameworks and use sequential correlational matrices to measure phonemic and semantical miscues of readers over the course of students reading three different books. This study examines the relationships between the types of miscues by employing Denzin’s (1978, 2012) notions of triangulation.

The design accounts for three distinct data points, which triangulate a research claim, and this triangulated work closely examines the data points in light of the research questions. First, the reading data create a correlational matrix measuring phonemic compared to semantically cued miscues in the reading of Chip to the Rescue (Aboff, 2006). Secondly, the reading data produce a correlational matrix measuring phonemic compared to semantically cued miscues in the reading of Star Wars: The Clone Wars: Jedi in Training (Scott, 2009). Lastly, the reading data generate a correlational matrix measuring phonemic compared to semantically cued miscues in the reading of Turtle’s Big Race (Trumbauer, 2006). Each student read the book three times over the course of one semester. However, each student read the book at a different point in the term, since students were grouped based on Fountas and Pinnell’s (1996) notion of guided reading.

**Original Contribution**

The measurement of children’s reading fluency may not fully reflect how they demonstrate the skills of reading fluency. More needs to be known about the nature of reading miscues and how they are enacted in the process of learning to read fluently (Lehner, 2017). This research continues to examine the distinct reading miscues that are exhibited in the process of developing reading fluency.

The current study is indebted to Ellingson’s (2011) work, which spoke to the utility of multiple methods to inquire about the nature of a social phenomenon. The current study directly examines the nature of reading miscues by comparing the means of intergroup readings. This method examines reading miscues by studying the relationship between semantic and phonemic miscues. Closely abiding by the parameters of
triangulation (Denzin, 1978, 2012), three examples are provided to operationalize the construct’s measurement.

**Hypotheses and Results**

**Hypothesis**

An empirical study of multiple readings of texts should result in fewer phonemic miscues compared to semantic miscues over time.

**Null Hypothesis**

An empirical study of multiple readings of texts should result in comparable phonemic and semantic miscues over time.

**Results**

Reporting the first section of the triangulated data, this portion of the study summarizes the findings based on students’ reading of *Chip to the Rescue* (Aboff, 2006). This work employs correlational matrices as a method that systemically compares the values of graphophonic as compared to semantic miscues. Student progress was evaluated when reading *Chip to the Rescue*. All 32 student scores were recorded, and each student read the book three times, at various points. Table 1 highlights that the average student improved his or her semantic scores over his or her phonemic scores.

**Correlational Matrix for First Book**

In this section, the correlational matrix underscores how students were less prone to miscues, both semantically and phonemically (see Table 1). The table reveals a correlational relationship between miscues over three different readings, measuring for both semantic and phonemic miscues.

**Table 1**

*Book 1: Chip to the Rescue (2006)*
The correlational results between semantic or phonemic miscues in the first reading resulted in four significant relationships ($p < .01$). For example, over the course of three readings of the book, students made nearly an equal number of semantic and phonemic miscues. These miscues, particularly pronoun and similarly lettered but different words, demonstrated that nearly half of student miscues were deviations from the print that were rooted more in semantic than in phonemic miscues.

Examining Research Question 1: Correllational Matrix for Book One

What is the nature of reading miscues that an entire class demonstrates over the course of a semester of repeated readings? This study and its supporting data do not appear to support the cognitive/psycholinguistics research’s claim about the benefits of phonics-based instruction and call into question the notion that reading fluency is greatly enhanced solely by phonics and decoding instruction. While the data do support the claim that phonemic miscues decreased, the data do not account for why semantic miscues continued in spite of the increased phonics and decoding instruction, suggesting that more research is required in this area. Specifically, the results of this study point to the need to better differentiate and explain the types of reading improvement and to reexamine the relationship between the number of miscues and decoding and phonics instruction, tasks to which existing research often pays insufficient heed.
Correlational Matrix: Miscues from Book 2

The second part of the triangulated data stems from the correlational matrix found below. In this section, like in the one above, the correlational matrix underscores that students improved on their reading miscues both semantically and phonemically. However, this matrix shows a significant negative correlation between semantic and phonemic tests. That is, there is a statistically significant negative correlation between the two variables, semantic and phonemic miscues.

As in Example 1, the miscues were scored over three different readings, measuring for both semantic and phonemic miscues. In this case, the correlational matrix clearly demonstrates that phonemic improvement correlates negatively to semantic improvement; therefore, the two variables have no statistical relationship. In this example, the null hypothesis, that multiple readings of texts should result in comparable phonemic and semantic miscues over time, must be rejected. However, it is not a simple matter of accepting the hypothesis that multiple readings of texts should result in fewer phonemic miscues compared to semantic miscues over time. If the results demonstrated the hypothesis, then the negative relationship between semantic and phonemic miscues would not exist. The statistically significant negative correlation seems to contradict the hypothesis and the strength of the relationship between semantic and phonemic improvement.

Table 2

*Book 2: Star Wars: The Clone Wars: Jedi in Training (2009)*
Table 2 that no linear fluency improvement exists. With this absence, the data implies a more complex relationship between semantic and phonemic than the NRP (2000) notion of linear progression. Because of the improved scores, it would seem natural to attribute this success to reading fluency theory, which posits that reading fluency improves with repetition (Kuhn & Stahl, 2003; Therrien & Kubina, 2006).

### Correlational Matrix: Miscues from Book 3

The third section of the triangulated data is presented in Table 3. Like the previous results, this correlation also analyzes semantic and phonemic reading miscues. As do the two previous examples, Matrix 3 also scores miscues over three different readings. This matrix, like Table 2, plainly demonstrates a statistically significant negative correlation between semantic and phonemic test results. Again, the two variables have no relationship, even though both show fewer miscues. These results too militate against the null hypothesis because they show fewer miscues over time. However, neither do these results, showing little statistical strength in the relationships between semantic and phonemic improvement, fully support the hypothesis, again highlighting a more complex relationship than is often proposed between the variables for miscue improvement.

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</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).
Table 3

*Book 3: Turtle’s Big Race (2006)*

<table>
<thead>
<tr>
<th></th>
<th>ST2-ST1</th>
<th>ST3-ST2</th>
<th>ST3-ST1</th>
<th>G2-GT1</th>
<th>G3-G2</th>
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<td><strong>Semantic Test 2</strong></td>
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<td>-.128</td>
<td>.845**</td>
<td>-.141</td>
<td>-.252</td>
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<td>Sig. (2-tailed)</td>
<td>.491</td>
<td>.000</td>
<td>.448</td>
<td>.171</td>
<td>.062</td>
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<tr>
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<td>.422*</td>
<td>.404*</td>
<td>-.262</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<td>.018</td>
<td>.024</td>
<td>.154</td>
<td>.768</td>
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<td>.422*</td>
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<td>.089</td>
<td>-.372*</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.018</td>
<td>.635</td>
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<tr>
<td><strong>Graphophonics 2</strong></td>
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<td>.404*</td>
<td>.089</td>
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<td>.024</td>
<td>.635</td>
<td>.101</td>
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<tr>
<td><strong>Graphophonics 1</strong></td>
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<td>-.262</td>
<td>-.372*</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.154</td>
<td>.039</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.126</td>
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<tr>
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</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed).**Correlation is significant at the 0.01 level (2-tailed).

**Discussion**

This study provides evidence that the contention that phonics instruction straightforwardly improves reading fluency may be misleading. This research calls for a reexamination of the role that miscues play in the development of reading fluency, as its findings suggest that the empirical positivism employed by many cognitive/psycholinguistic researchers is insufficiently complex to understand how reading skills are developed, especially for a diverse target population. The lack of significant statistical relationships found between semantic and phonemic improvement, and the finding that student miscues derived from semantic than phonemic miscues underscore the need to more fully explore the nature of reading miscues. More research into the nature of miscues and the interrelationships among the two primary categories of miscue and the current pedagogical focus on phonics may provide insight into how reading miscues occur during the process of becoming a fluent reader.

While this reading fluency research accounts for 4 months of investigation, its sample size is admittedly small, and its findings need to be tested using larger student...
populations. It is always possible, for example, that a number of variables specific to the instructor and her methods, the particular assemblage of students, and their relationship in this particular class had some bearing on the measured testing outcomes. Thus, the study’s results can perhaps be best viewed as preliminary findings. However, based on the statistical strength of the relationships demonstrated, both positive and negative, they can also be viewed as a call to further study and a rethinking of the status quo in literacy research and instruction.

Much of the dominant cognitive/psycholinguistic research falls upon an epistemological divide (Denzin & Lincoln, 1994, 2000, 2005, 2011) whose positivistic methods and measurements often do not align with classroom practice. A better alignment might be achieved by following Deeney’s (2010) argument that fluency can be assessed in connected texts, a claim that future research may employ so that fluency instruction could be targeted in line with classroom materials and the broader curriculum.

In addition, this study’s results suggest that how students become more fluent readers is more complicated than current research and practice acknowledges. Alternative ways of measuring the construct must be considered. Again, Deeney (2010) considers that students’ difficulties with fluency may stem from difficulties with paragraph-level skills such as word reading, decoding, and letter–sound correspondence. This may seem like a framework proposed by cognitive/psycholinguistic research, but, given Deeney’s (2010) call for fluency contextualization, it is likely this type of approach may prove fruitful.

Like Goodman (1969, 2006), Goodman and Watson (2005) and Theurer (2002, 2008, 2010), Deeney (2010) suggested more sophisticated ways to measure reading fluency and understand reading miscues and suggested that students read books in which they have interest. Many struggling readers are not interested in reading books that teachers recommend; therefore, teachers should have a variety of accessible texts, in terms of readability and availability. Deeney (2010) also mentioned the power of repeated reading, which, as repeated reading research (Kuhn & Stahl, 2003) has shown, assists with fluency. Because it assists with fluency, it can also assist with endurance, which may encourage students to reread longer texts, including books. The lack of connection between phonic and semantic miscues in this study’s results points to the need for such multifarious approaches to address the multiple sources of student difficulty in developing reading fluency.

Conclusions: Reconsidering Common Core’s Reading Fluency

These study results demonstrate further research is needed into how miscues are understood. Particularly, this work and its results, while admittedly drawn from a small sample, call into question the efficacy of the cognitive/psycholinguistic framework that is currently so widely accepted. Goodman’s (1969, 2008) and Theurer’s (2002, 2008, 2010) frameworks tracking phonemic or semantic miscues may add to the cognitive/psycholinguistic framework; yet, the majority of the cognitive/psycholinguistic
research overlooks the micro examination of miscues, relegating Goodman (1969, 2006) and Theurer’s (2002, 2008, 2010) work to counter-narrative status. The questions and findings of this study provide a starting place to begin necessary change.

Reading researchers continue to face a complex task when investigating the learning-to-read process because a large epistemological and methodological divide exists between the cognitive/psycholinguistic model of reading and sociocultural approaches. As illustrated in these findings, the cognitive/psycholinguistic model stresses the principle role of phonics in the development of reading skills and narrowly defines reading as a psychological process, rooting the research in positivistic and statistical methodological frameworks. As educators, we must continue to critically examine the epistemological and methodological perspectives that insist that reading is solely a psychological act and to broaden and nuance our models of how students become better readers.

References


National Governors Association Center for Best Practices and Council of Chief State School Officers. (2010a). *Common Core State Standards for English language arts*


