

**Early Career Scholar Application to Participate in the
2009 School Psychology Research Collaboration Conference (SPRCC)**

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Personal Research Agenda

My research agenda is defined within the broad areas of academic assessment and interventions. More specifically, my research includes validating assessment measures and assessment methods to inform instructional decision making within a response to intervention model (RtI; Brown-Chidsey & Steege, 2005). Within this model, school psychologists require assessment measures that are sensitive to changes in students' skill level over time and assessment methods that inform their decision making regarding selected evidence-based interventions. My research has targeted three areas: (1) validating the use of a novel, curriculum-based measure of reading comprehension—reading comprehension rate (RCR; Skinner, 1998) to reflect both understanding of what is read as well as time to read; (2) verifying the usefulness of the brief experimental analysis method (BEA; Daly, Witt, Martens, & Dool, 1997) by evaluating the effectiveness of identified interventions implemented across time in the area of reading fluency; and, (3) extending the effectiveness of the brief experimental analysis method to other academic target areas (e.g., math computation fluency). Below, I will discuss each of these areas, identifying previous efforts, specific questions to be addressed through the proposed research agenda, and specific implications for the practice of psychology in the schools.

Within the area of reading, curriculum-based measures of oral reading fluency have been shown to be valid indicators of both reading fluency (reflecting speed and accuracy of reading) as well as reading comprehension for the majority of students, as fluency is positively correlated with comprehension (Martson, 1989). However, researchers have shown that the correlation between reading fluency and comprehension declines as students' reading skills improve beyond 4th grade (Jenkins & Jewell, 1993), reflecting less growth in words correct per minute (Hintze & Shapiro, 1997). As a result, researchers have begun to investigate a novel measure of reading

comprehension rate. I along with colleagues conducted an initial pilot study investigating the validity of reading comprehension rate as a measure of reading proficiency by correlating it with concurrent measures of reading decoding, comprehension, and fluency with 4th, 5th, and 10th grade students (Neddenriep, Hale, Skinner, Hawkins, & Winn, 2007). The results of this study support the concurrent validity of RCR with elementary school students (4th and 5th grade) but not with 10th grade students. Additional studies are needed with students between grades 4th and 12th to answer the following questions: How valid is this measure in reflecting current skill level? How useful is this measure in reflecting growth in reading comprehension over time? Validating this measure with students between 4th and 12th grade will provide school psychologists with a valid, curriculum-based measure to reflect growth in the skill of comprehension—the ultimate goal of reading.

BEA is a method of assessment used to briefly test the effectiveness of different interventions or to determine the relative effectiveness of intervention components on a target behavior (Daly et al., 1997). This method has promise for school psychologists and educators in assisting them in identifying the most effective and efficient intervention for a given student. Research is needed, however, to answer the following questions: Can the benefit of the identified intervention be demonstrated over time? Can the BEA method be applied to and impact other target skill areas (e.g., reading comprehension, math computation). I have begun to conduct research in these areas, the most recent results of which will be presented as part of a symposium at the 2009 Annual Convention of the National Association of School Psychologists (Neddenriep & Hart, 2008; Neddenriep, Benson, Ogren, Daly, Fritz, & Carrier, 2009). Verifying the effectiveness this assessment method across time and target skills will significantly enhance the decision making ability of school psychologists practicing within a problem-solving model.

References

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- Neddenriep, C. E., Benson, S. A., Ogren, T. M., Daly, E. J. III , Fritz, A. M., & Carrier, M. E. (2009, February). Using brief experimental analysis to identify effective and efficient interventions. Symposium conducted at the annual convention of the National Association of School Psychologists, Boston, Massachusetts.
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Abstract

Multi-Site Proposal

Christine E. Neddenriep

The proposed multi-site research grant proposal seeks to extend upon a previous pilot study (Neddenriep, Hale, Skinner, Hawkins, & Winn, 2007) conducted to determine the concurrent validity of a novel measure of reading comprehension rate (RCR) in 4th, 5th, and 10th grade students. The current proposal extends this research to 4th through 12th grade students, validating this measure with established measures of reading fluency, decoding, and comprehension using the *Woodcock-Johnson III NU Tests of Achievement (WJ III NU ACH)* as a criterion measure. In addition, this proposal seeks to determine the sensitivity of the measure relative to curriculum-based measures of oral reading fluency, established by progress monitoring with both measures once per week to establish the average rate of improvement (i.e., slope) in 4th through 12 grade students. The proposed research will require approximately 100 students per grade and multiple sites to establish a representative sample across range of reading levels (e.g., frustrational, instructional, and mastery levels) to approximate the population of 4th through 12 grade students.

Multi-Site Research Proposal

Christine E. Neddenriep

Background Information and Questions to Be Addressed:

Within the area of reading, curriculum-based measures of oral reading fluency (R-CBM) have been shown to be valid indicators of both reading fluency (reflecting speed and accuracy of reading) as well as reading comprehension for the majority of students, as fluency is positively correlated with comprehension (Martson, 1989). However, researchers have shown that the correlation between reading fluency and comprehension declines as students' reading skills improve beyond 4th grade (Jenkins & Jewell, 1993), reflecting less growth in words correct per minute (Hintze & Shapiro, 1997). As a result, researchers have begun to investigate a novel measure of reading comprehension rate. I, along with colleagues, conducted an initial pilot study investigating the validity of reading comprehension rate (RCR; Skinner, 1998) as a measure of reading proficiency by correlating it with concurrent measures of reading decoding, comprehension, and fluency with 4th, 5th, and 10th grade students (Neddenriep, Hale, Skinner, Hawkins, & Winn, 2007). The results of this study support the concurrent validity of RCR with elementary school students (4th and 5th grade) but not with 10th grade students. Additional studies are needed with students between grades 4th and 12th to answer the following questions: How valid is this measure in reflecting current skill level? This first question can be answered by establishing the concurrent validity of CBM measures (i.e., R-CBM, comprehension accuracy, and RCR) with established criterion measures of reading proficiency including the following subtests of the *Woodcock-Johnson III NU Tests of Achievement (WJ III NU ACH*; Woodcock, McGrew, & Mather, 2001)—Letter-Word Identification, Passage Comprehension, and Reading

Fluency. A second question, how useful is this measure in reflecting growth in reading comprehension over time? This question can be answered by weekly progress monitoring students in 4th through 12th grade using both RCR as well as R-CBM to determine the average rate of improvement (i.e., slope) per week in comparison to R-CBM.

Participants and Setting:

To answer these questions, approximately 100 students at each grade level (4th – 12th) would be required. Multiple elementary, middle, and high schools would be required to participate.

Estimated Budget:

WJ III ACH Protocols	\$76.00 per package of 25	\$ 2736
Photocopying	6000 pages @ \$.07 per copy	\$ 420
Experimenters		
Three Graduate Research Assistants:		\$12,919
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Estimated Total		\$16,075

Advantages and Challenges of the Proposed Multi-Site Research Program:

Several advantages and challenges are inherent within the proposed multi-site research program. The advantages include obtaining a diverse and representative sample of the population of students in grades 4 through 12. Increasing the sample size and including a representative range of reading levels (e.g., frustrational, instructional, and mastery) will extend upon the limitations of the previous sample within the completed pilot study. An additional advantage of completing the project via multiple sites rather than a single site includes increasing the range of schools included beyond a single, large urban school, for example. A final advantage of completing the study across multiple sites includes the ability to achieve both objectives (i.e., concurrent validity in addition to establishing sensitivity of the measure) within one year’s time.

Challenges include coordinating across multiple sites as well as securing the support of multiple sites for consistent participation across a full school year.

References

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