

## **Teaching fluency with Quick Reads: Does the integration of technology result in greater student growth?**

A proposal to the Pearson Learning, submitted by Primary Investigators:  
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### **Brief Review of Literature and Support for the Study:**

Building strong literacy skills in our children has been a priority since the beginning of schooling. Recent national reports outline the need for quality instruction and verify the difficulties children encounter when they are not successful readers and writers (National Reading Panel, NRP, 2000; Snow, Burns, & Griffin, 1998). The 1998 National Assessment of Education Progress cites that 41 percent of fourth grade boys and 35 percent of fourth grade girls read below the basic level. Research has shown that children who have not developed adequate reading skills by age 9 are likely to struggle with reading throughout school and beyond. One component of reading development identified by the National Reading Panel (2002) as critical is that of fluency. Fluency is often described as accurate, rapid, and expressive reading Kuhn & Stahl (2003), and is generally acknowledged to be an outcome of well-developed word recognition skills. It has not been until recently that researchers have placed considerable focus on the understanding of fluency development, the factors that influence fluency growth, and methods or approaches that help produce fluent readers [See Kuhn & Stahl (2003) and Rasinski & Hoffman (2003) for recent reviews].

The authors of this proposal (Erickson, Wilson & Trainin) have recently completed data collection on a study in the Lincoln Public Schools involving the integration of fluency instruction into the instructional routines of teachers who were teaching 7<sup>th</sup> and 8<sup>th</sup> grade students reading at the 3<sup>rd</sup> - 4<sup>th</sup> grade reading level. These teachers were taught a variety of research-supported fluency methods and were trained in how to integrate these methods into existing curriculum requirements and to monitor student progress using oral reading fluency probes. Two instructional methods frequently cited as effective strategies for fluency building that were taught to the teachers were assisted reading and repeated reading (Chard, Vaughn & Tyler, 2002; Kuhn & Stahl, 2003; NRP, 2000; Rasinski & Hoffman, 2003). As a way of supporting the teachers' use of assisted reading and repeated reading, each teacher was provided a classroom set of the QuickReads® fluency program (Hiebert, 2002; Published by Modern Curriculum Press, Pearson Learning Group). These materials were selected because both assisted reading and supported reading are central features of the program and suggested instructional routines. At the time the study began only the text version of QuickReads® was available.

There is a need to better understand what methods and under what conditions fluency develops in young readers. Because of the strong theoretical support that undergirds the QuickReads® program and because of the ease with which teachers are able to use this program, the primary investigators are proposing a study looking at the effectiveness of the QuickReads® program with younger children (grades 2<sup>nd</sup> – 5<sup>th</sup>) and with the integration of the technology version of the program.

The authors of the proposed study (Erickson, Wilson & Trainin) have over 50 years combined experience in researching and working with students, particularly those with reading difficulties. The primary investigators have recently completed a fluency study involving the

training of middle school teachers in a variety of fluency strategies, including the use Quick Reads®, to support the growth of struggling adolescent readers. Wilson and Trainin have had extensive experience with developing and testing several instructional strategies and assessment tools for readers of all ages. Erickson's most recent work has focused on the use of technology to support the reading and writing skills of adolescents with disabilities. All investigators have authored presentations and papers related to literacy intervention.

### **Description of Study**

#### **Participants:**

LPS has 36 elementary schools, all of which would be invited to participate in the study. We have the support of the district elementary literacy coordinator, Karen Saunders. She has agreed to send a letter to the elementary principals, seeking their agreement to participate. In schools where the principals agree to participate, the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade teachers will be invited to participate in the study. The target number of total classrooms is 72, including 6 classrooms at each grade level. Classrooms range in size from 20-28 students.

#### **Design:**

Treatment Groups with random assignment to condition:

Control -- 24 classrooms (6 at each grade level) serving as the control group

Print only -- 24 classrooms (6 at each grade level) using QuickReads® print materials

Print plus technology -- 24 classrooms (6 at each grade level) using a combination of QuickReads® print materials and the technology version of the program materials and the technology version of the program

### **Independent Variables and Assessment Instruments**

<b>Independent Variables</b>	<b>Instrument</b>
Oral reading fluency (ORF, words read per minute on grade level material)	Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002)
Reading accuracy (percent of words read accurately on grade level material)	DIBELS
Vocabulary	Gates-MacGinitie Vocabulary subtest (MacGinitie & MacGinitie, 1989) and Interactive Reading Assessment System – Revised (IRAS-R; Calfee, Norman & Wilson, 1999), Vocabulary subtest
Silent reading comprehension	Gates-MacGinitie Comprehension subtest
Knowledge of decoding: Decoding of grade level words	IRAS-R Word Recognition subtest

## Data Collection Schedule

Pre (mid September)	Mid (mid January)	Post (end of April)
Gates-MacGinitie <ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension</li> </ul>	IRAS-R <ul style="list-style-type: none"> <li>• Word Recognition</li> <li>• Vocabulary</li> </ul>	Gates-MacGinitie <ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension</li> </ul>
IRAS-R <ul style="list-style-type: none"> <li>• Word Recognition</li> <li>• Vocabulary</li> </ul>	DIBELS, oral reading fluency	IRAS-R <ul style="list-style-type: none"> <li>• Word Recognition</li> <li>• Vocabulary</li> </ul>
DIBELS, oral reading fluency		DIBELS, oral reading fluency

## Additional Data to be Collected

- Teachers will complete weekly logs documenting their use of QuickReads® (text only, technology only, and text plus technology groups), or other fluency instruction (control group).
- Site visits will be made to participating classrooms and field notes will be take regarding treatment integrity and contextual variables present in the classrooms.
- Data generated by the teachers and students through normal use of the QuickReads® program will be copied by the teacher and submitted to the research team
- Final semi-structured interviews will be conducted with a subset of treatment group participants to obtain information regarding ease, efficacy, and perceived effectiveness of QuickReads® materials.

## Procedures

Project will be managed by the three primary investigators and a graduate assistant hired to coordinate data collection. Training will be provided to teachers at the beginning of the 2005-2006 school year by the research team. Once training has occurred, teachers will be expected to implement the program as explained and to do so at least three, 15-minute sessions per week during the regular school day with all students in their classroom. Depending on the configuration of computers at each school site, the Technology Version of QuickReads® will either be implemented in a computer room or within individual classrooms. If modifications are made in how the program is implemented, teachers will report this in their weekly log and will provide an explanation/rationale for the changes made.

Research teams comprised of University of Nebraska-Lincoln students and retired teachers will conduct all assessments with the exception of the Gates-MacGinitie, which will be administered by the classroom teacher. Team members who are UNL students will be either graduate or undergraduate students, who have completed literacy coursework and have received training in the specific assessment procedures. Each team will be comprised of a Team Leader and five additional members. Teams will be assigned to specific schools and will be responsible for conducting all assessments within the designated two-week time period.

Following initial data collection and training in the use of QuickReads® materials, teachers from each of the treatment groups will be asked to participate in monthly, after school meetings. At these meetings teachers and the research team will discuss implementation of the program, review procedures, problem-solve solutions to barriers teachers may be encountering, and gain support from each other and the research team. Monthly meetings will occur throughout the first semester of the study. During the second semester, the research team will make visits to individual schools for similar purposes, but in a more individualized context.

Following the final data collection, individual interviews will be scheduled with a subset of each group. Individuals will be selected based on the following criteria: high involvement/high treatment integrity, high involvement/low treatment integrity, low involvement/high treatment integrity, and low involvement/low integrity. Involvement is defined as teachers' level of participation in all training and support sessions. Treatment integrity is defined as the teachers' adherence to procedures, routines, and weekly time dedicated to fluency instruction.

Timeline for the Lincoln Public School Participants

Month	Scheduled Activities
August, 2005	<ul style="list-style-type: none"> <li>• Notify principals about the grant</li> <li>• Give short presentation of the Technology Version at School Improvement Team meeting</li> <li>• Give full presentation of the proposed study at Principals Meeting</li> <li>• Compile a list of participating schools</li> </ul>
September, 2005	<ul style="list-style-type: none"> <li>• Compile a list of participating teachers for random assignment</li> <li>• Pretest assessment of participating students</li> <li>• Beginning fluency instruction (QuickReads® &amp; Control)</li> </ul>
October, 2005 Thru December, 2005	<ul style="list-style-type: none"> <li>• Continue fluency instruction</li> <li>• Begin classroom observations by research team</li> <li>• Begin monthly participant teacher meetings</li> </ul>
January, 2006	<ul style="list-style-type: none"> <li>• Continue fluency instruction</li> <li>• Continue classroom observations by research team</li> <li>• Mid-study assessments</li> </ul>
February, 2006 Thru March, 2006	<ul style="list-style-type: none"> <li>• Continue fluency instruction</li> <li>• Continue classroom observations by research team</li> <li>• School-based/individual teacher meetings</li> </ul>
April, 2006	<ul style="list-style-type: none"> <li>• Conclude fluency instruction at the end of the month</li> <li>• Post-test assessments of participating students</li> </ul>
May, 2006	<ul style="list-style-type: none"> <li>• Individual interviews with a subset of teachers from each group</li> </ul>

At the completion of the study all participating teachers will be given whatever QuickReads® materials they need to complete a class set of the Print Version and Technology Version of QuickReads® to use with future classes.

## Resources

The University of Nebraska-Lincoln (UNL) has many resources for completing this project. UNL and the College of Education and Human Sciences have excellent computer capabilities. Important statistical, graphics, word-processing, and web-based course support, CD-burning software, and authoring/multimedia systems are available. The Alumni Learning Technology Center at the College has a large professional staff that supports research efforts. The Center has experience in web design, distance technologies, on-line surveys, database management, and general technology support..

The three researchers are co-directors of The Great Plains Institute of Reading and Writing, which is a new regional initiative in response to the mission of UNL and the College of Education and Human Sciences. It provides the tools and guidance leading to the achievement of critical literacy in the local community, the Great Plains Region, and the nation at-large. The Institute will provide facilities for initial training as well as office space, materials, and ongoing support.

## Personnel

*Dr. Guy Trainin*, Principal Investigator, is an assistant professor of Literacy at UNL. He focuses his research in the area of reading acquisition, reading disabilities and research methods. Both a general and special education teacher for more than 10 years, Dr. Trainin has also had extensive administrative experience in positions as a director of reorganization for a special education school, and a project coordinator for a not-for-profit organization. In the past five years, he has been responsible for analyses related to a series of design experiments in early reading acquisition. Dr. Trainin teaches pre-service teacher education courses as well as graduate courses in literacy research. He is currently serving as an external evaluator to a Nebraska's Reading First Initiative and a large demonstration grant in Literacy and Art He is a co-founder and co-director of The Great Plains Institute for Reading and Writing at the UNL. He has conducted research using quantitative approaches focusing on Latent and Hierarchical Linear Models.

*Dr. Kathleen M. Wilson*, Principal Investigator, focuses her research on modes of effective professional development in literacy instruction and assessment to increase student achievement

and teacher self-efficacy. Throughout her research and teaching, she has placed particular emphasis on reading acquisition in at-risk groups. Her current research is examining the effectiveness of long-term, web-based professional development. She is a former K-8 classroom teacher, specializing in literacy instruction for students with dyslexia. As an assistant professor at UNL, she teaches undergraduate and graduate courses in Reading and Language Arts Methods; Emerging Reading and Language; the Psychology of Reading; Assessment, Evaluation and Instruction for At-Risk Readers; and Motivation and Engagement in the Literacy Classroom. She is a co-founder and co-director of The Great Plains Institute for Reading and Writing at UNL.

*Dr. Joan L. Rankin Erickson*, Co-Principal Investigator, is an associate professor in the Department of Special Education and Communication Disorders, UNL. A former literacy and special education teacher and current teacher trainer in literacy for students with disabilities, she has conducted numerous training workshops on best practices in literacy instruction. Her research focuses on instructional practices for students with disabilities, particularly the use of technology to improve reading and writing performance. Her graduate and undergraduate teaching has earned her teaching awards and establishes her strength as a trainer of pre-service and in-service teachers.