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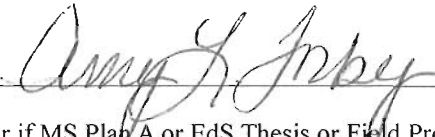
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A Literature Review of Curriculum Based Measures
and Their Use as an Indicator
Of Proficient Reading

by

Amy L. Forby

A Research Paper

Submitted in Partial Fulfillment of the

Requirements for the

Master of Science Degree

in

Education

Approved: 2 Semester Credits

Dr. Renee Chandler

A handwritten signature in black ink that reads "Renee L. Chandler". The signature is written in a cursive style with a long horizontal flourish at the end.

The Graduate School

University of Wisconsin-Stout

July, 2011

**The Graduate School
University of Wisconsin-Stout
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Abstract

A basic level of literacy is vital for individuals to be successful citizens. Oral reading fluency and reading comprehension are critical to understanding what is read. In order to produce successful students, educators must effectively teach the students how to read in a phrased and fluent manner while the students comprehend the information they are reading. To assure this is happening, it is necessary to assess all students to determine the current level on which they are able to read and comprehend. This information is then used to determine which students need extra reading assistance.

The curriculum based measures that many schools are currently using to benchmark their students merely test fluency or reading rate, with little regard to comprehension development. This paper presents a summary of selected research on oral reading fluency and its use as an indicator of proficient reading, including reading comprehension.

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Chapter One: Introduction

Becoming a successful reader demands the student incorporate several reading skills in precise ways. The most important of these reading skills include phonemic awareness, sight word recognition, fluency in reading instructional-level text and using strategies to aid comprehension (Chafouleas, Martens, Dobson, Weinstein, & Gardner, 2004). When students are unable to appropriately perform these tasks with automaticity, it can cause the student to struggle while trying to become a successful reader. When this inability to combine these necessary skills presents itself, a strain when attempting to obtain meaning from text occurs. Proficient reading is a complex performance that requires simultaneous coordination across many tasks (Fuchs, Fuchs, Hosp, & Jenkins, 2001). Competent readers are able to integrate the many reading skills and obtain meaning from the text.

Developing oral reading fluency in students helps to ensure the creation of independent, self-monitoring readers (Stayter & Allington, 1991). Every year students take standardized tests and state achievement reading tests. Along with the results from these tests, information is collected from a variety of reading inventories, running records and other teacher-gathered information, which allows us to gain a more comprehensive view of a student's reading ability (Valencia & Buly, 2004).

The correlation between comprehension and fluency is evident in student progress as measured by some form of assessment. An oral reading fluency test, such as the one given in the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), gives a way of reporting fluency performance. This assessment provides a snapshot of student progress in the area of oral reading fluency and has been correlated to the comprehension abilities of a student (Langdon, 2004). This relationship between fluency and comprehension can be furthered the more the students read. As they read more, their fluency improves, and they more easily can comprehend what they are reading. In the same manner, as comprehension improves, a student's oral reading fluency also improves (Fuchs et. al., 2001). The

correct assessments can reflect the relationships between these two reading components (Good et. al., 2001).

Statement of the Problem

As stated previously, in order to produce successful students, educators must effectively teach the students how to read in a phrased and fluent manner while the students comprehend the information they are reading. It is necessary to assess all students to determine the current level on which they are able to read and comprehend. This information is then used to determine which students need extra reading assistance. Unfortunately, the curriculum based measures that many schools are currently using to benchmark their students merely test fluency or reading rate, with little regard to comprehension development. They simply count the words a student is able to read correctly in a minute. This does not show or help the teacher understand if they are able to comprehend what they read. In some instances, these curriculum based measures provide skewed data. Students are being tested on how fast they can read. Students who are slower paced readers, or are reading carefully to comprehend, score lower on the tests. Their scores then measure the same as struggling readers. On the other hand, students who do not use meta cognitive skills while reading tend to skip the punctuation, simply read as fast as they can, and score very high on the assessment. Some schools base their remedial reading services solely on the results of the reading rate of students (Hasbrouck, Woldbeck, Ihnot, & Parker, 1999).

Purpose of the Study

A relationship between oral reading fluency and reading comprehension is very important to teachers. In a time of high-stakes assessments and a high importance level placed on teaching with fidelity and accountability, it is highly significant for educators to thoroughly comprehend the components of the reading process (Haetel & Lorie, 2004). This important relationship between oral reading fluency and reading comprehension can give educators vital information that could most

efficiently ensure students success. This information could show to be invaluable to teachers in providing best teaching practices to reach the literacy goals of their students, as well as utilizing the curriculum based measure scores they receive about their students. The relationship between oral reading fluency and reading comprehension guides instruction in a manner that is systematically and sequentially presented (Hintze, Ryan & Stoner, 2003). In providing students with such instruction, teachers are facilitating opportunities for students to succeed.

Research on this subject will help bridge the gap between quickly assessing a student's reading rate, and discovering the actual level at which they can read and comprehend. It will provide data that will show the correlation between fluency rate and comprehension. An explanation of why the oral reading rate is an indicator of proficient reading will give teachers a better understanding and help them to better use this information to guide instruction.

Definition of Terms

Accuracy. Accuracy is the ability to accurately identify words within the context of a text (Schatschneider & Torgesen, 2004).

Automaticity. Automaticity is the ability to do things without occupying the brain with the low-level details required, allowing it to become an automatic response pattern (Brown, T. L. & Roos-Gilbert, L.,1995).

Comprehension. Comprehension is the ability to grasp the meaning and understand something (Rasinski, 2003, p. 26).

Fluent. The term fluent is defined in the Merriam Webster dictionary as one who is “capable of using a language easily and accurately or effortlessly smooth and flowing (2010).”

Fluency. Fluency is the ability to read a text quickly, accurately, and with proper phrased expression (Allinder, Dunse, Brunken, & Obermiller-Krolikowski, 2001).

Prosody. Prosody is “the rhythm of spoken language, including the stress and intonation, or the study of these patterns (Encarta Dictionary, 2011).”

Literacy. Literacy is the ability to read and write (Cambourne, 2002).

Word Calling. When a student efficiently decodes the words in a text with little attention paid to the overall comprehension of the passage being read (Hamilton & Shinn, 2003).

Chapter 2: Literature Review

Importance of Literacy

Learning to read is a natural process for most students. A basic level of literacy is necessary for individuals to achieve success as employees, parents, consumers, and citizens. However, a large amount of readers have significant difficulties gaining the skills necessary in becoming successful readers. A lack in acquiring reading skills can happen for a variety of reasons. Some students that have difficulties learning to read have not been encouraged to understand the ways reading can improve their lives. Students can also experience reading difficulties due to their inability to model their reading after teachers, parents, and more competent readers and thoroughly understanding the importance of gaining reading skills (Cambourne, 2002). Frequently, struggling readers dread reading due to their limited success with the reading process. While finally, some readers may harbor a learning difficulty with the reading process that has not yet been remedied.

People who are non-readers or function at a low reading level, are at a disadvantage that can alter the quality of their life. Individuals who struggle with reading generally experience economic, physical, and emotional consequences. Research shows that there is a proven relationship between literacy levels and employment stability and income. Seventy-five percent of unemployed adults read at a low reading level or are illiterate (Roman, 2004). Having this information is very important as the school systems must make sure to meet the needs of the students.

The Reading Process

Cognitive research has been performed on the reading process and reading patterns. This research has lead to a definition of fluent reading as the ability to recognize words quickly, accurately, and with phrased expression (Nathan & Stanovich, 1991). Reading in a phrased and fluent manner is an important link between word analysis and comprehension. In the same light, “slow and disconnected oral reading makes comprehension virtually impossible” (Chafouleas et.al., 2004, p.72).

Fluent reading allows one to spend less effort decoding and identifying words and more effort on comprehending the text. Being a fluent reader has been proven to be one of the most powerful indicators regarding successful reading and obtaining meaning from text (Fuchs et. al., 2001).

Once readers are able to develop their reading skills to the point of fluent reading, oral reading can be accentuated by expression and voice inflection (Griffith & Rasinski, 2004). Fluent reading allows the reader to fully comprehend the meaning the text holds. It removes the focus being entirely on identifying and decoding the words. Once these skills have been mastered, they can use these comprehension skills to drive their oral reading. Comprehension allows them to focus on the meaning and use expression to promote that meaning.

Gaining the ability to oral read in a manner that exhibits prosody and expression allows the reader to fully experience and enjoy reading. Prosody is a term that is used to describe the rhythmic and tonal features of speech (Dowhower, 1991). In fact, fluent readers are able to read with good phrasing and expression, letting you know they understand the text during oral reading (Griffith & Rasinski, 2004). Once the student has been able to use this skill, they are able to make their reading more expressive. Students can begin to focus on reading abilities including pausal intrusions or inappropriate hesitations within orally read text (Schwanentluge, Hamilton, Kuhn, & Stahl, 2004). Accomplished readers can focus on the length of phrases and they include the correct pauses as these aid with fluency (Dowhower, 1991). This ability allows an adult to listen to a child read and gain insight into whether or not they comprehend the text.

The Need to Evaluate

After reviewing the importance of reading, it is of the same importance that we identify and intervene early with students who need additional assistance. It is of great importance that the classroom teacher evaluate his or her students. The teachers understand the curriculum, know what needs to be assessed, and know what is expected of their students. Teachers and administrators need a

practical assessment to receive a snapshot of how their students are performing in the area of reading. This reading process may vary from classroom to classroom, and student to student. Schools need uniform data to measure the effectiveness of their reading curriculum, teacher effectiveness, and information to identify students with potential reading difficulties.

Teachers need precise information about what their students know, and where there is lack of skills. Administrators and specialists need to review this data and measure the students learning progress over time. Based on results of these assessments, teachers can choose instructional materials and implement teaching strategies that attack students' areas of need (Howell & Nolet, 2000). These needs are what have lead to the change to Curriculum Based Measures (CBM).

Curriculum Based Measures (CBM)

As we know, it is the responsibility of our teachers to teach children the academic skills that they will need to take their place society. But we not only have to teach, it is also crucial that schools and teachers measure individual students acquisition and mastery of reading skills. The measurement of a student's abilities is looked on with as much importance as the teaching of those skills.

Past practices have been to use commercially prepared tests, normally from the text book companies. An alternative approach to academic assessment has recently come to the fore front. Curriculum-based measures (CBM) are becoming a heavily researched technique for making school-wide decisions regarding student eligibility for remedial services, monitoring student progress, finding appropriate intervention programs and evaluating intervention effectiveness (Hasbrouck, Woldbeck, Ihnot, & Parker, 1999). This measurement is being used within the schools because is less expensive, is fairly easy to administer, utilizes relevant materials, and has been compared with other standardized measures (Howell & Nolet, 2000).

In this approach, the individual students are given brief, timed exercises to complete, using

materials deemed grade level appropriate by the producing company. Main producers to this date are DIBELS (Dynamic Indicators of Basic Early Literacy Skills) or Aims Web. The main feature that defines a CBM is the collection of data on the same repeated tasks for all individual students. When used to evaluate and change instructional intervention programs accordingly for individual students, research findings consistently have found significantly improved outcomes. Programs for special education students are improved by allowing for validation with modification or accommodation of individual interventions, better plans can be written, and assessment can be linked to intervention (Shinn, 1995).

Reliability and Validity of CBM Results

The question of the reliability and validity of these CBMs go hand in hand with the tests. Two studies have been conducted to gauge if teachers prefer the CBM approach over the testing they had been using in their classrooms (Eckert & Shapiro, 1999; Hasbrouck, Woldbeck, Ihnot, & Parker, 1999). It was found that teachers like the CBM approach better than nationally norm referenced testing. Tanya Eckert and Edward Shapiro (1999) evaluated the link between teacher acceptance of two different tools used for evaluating academic skills difficulties. 619 elementary teachers evaluated on the ease of use and acceptability of two different testing methods. Two assessment methods were used; a CBM and a norm-referenced test. The teachers rated the CBM higher than the norm-referenced test. In the other study, they tracked the acceptance of six teachers who were against the use of CBMs, who became advocates for the assessments and now use it in their programs to assess low ability readers (Hasbrouck, Woldbeck, Ihnot, & Parker, 1999).

The results gained from the CBMs are used in a variety of important decisions that impact students. Several studies have been completed to evaluate the actual validity and reliability of the CBMs. Elliott and Fuchs (1997) evaluated the effectiveness of the CBM versus nationally referenced intelligence and achievement tests. They found that the CBM was a better developed method. They

also believe that by using a CBM to evaluate students, the negative connotations that are commonly linked with intelligence and achievement tests focusing on student's weaknesses can be avoided. CBMs also offered other distinct advantages. Classroom teachers and administrators can quickly determine the average academic performance of a class, grade, and school. By comparing a student's valid CBM score in each area to other peer's scores, the classroom teacher can better determine where that child's reading ability compares in relation to their classmates. They see CBM as a reliable approach to measure progress toward reading success.

In another study, researchers examined test-retest reliability. They administered 11 curriculum based measures with a small sample group of 30 first-grade children. The measures administered focused on letter sounds, letter identification and oral reading fluency. Test validity was measured and compared with the Woodcock-Johnson Revised Reading Mastery Test. Reliability and validity was evaluated by assessment of oral reading fluency and word-lists four months later. Mixed validity and reliability results suggested that further testing is needed with some students and that not all CBM measures are reliable or provide sufficient validity (Daly, Wright, Kelly, & Martens, 1997).

Looking at individual sub-tests more closely, Oral Reading Fluency (ORF), one curriculum-based measure that is commonly used to assess reading skills, has been demonstrated as a reliable indicator of reading ability and comprehension, and a good tool to monitor reading skills progress. Researchers administered a battery of ORF measures to 57 fourth grade students. It was determined the tests of the oral reading fluency assessments were valid. However, the relationship of ORF to reading comprehension was not explained by general cognitive ability, processing speed or efficiency (Kranzler, Brownell, & Miller, 1998).

Using Test Results to Guide Instruction and Interventions

Once results are received and reviewed from a recent CBM, a teacher can then use the information to decide what needs to be the classroom focus. The results can also determine what interventions need to take place to help all students succeed. Teachers are faced with the challenge of assuring what they are doing to help a student is working. By progress monitoring students on a regular basis using a CBM, the teacher can quickly move away from or continue using a research-based program to aid the student's learning or remediation.

While it is very important to provide appropriate and adequate support when focusing on correcting the students' reading issues, as well as their quest to overcome their reading difficulties, some of this reading support may not be what the student needs. Many typical interventions used with students experiencing difficulties with the reading process are effective holding the student at their current level, but not actually providing remediation. Many students who attend remedial programs experience difficulty developing their skills in a quick enough manner to raise their reading level to one that is equivalent to their peers (Torgesen, Alexander, Wagner, Rashotte, Voeller, Conway & Rose, 2001). This deficiency makes it difficult for students to be successful as their schooling becomes more difficult.

When used to progress monitor an instructional intervention, a CBM can give the teacher quick feedback about the effectiveness of that intervention. A CBM first allows the teacher to see if the student has acquired the skill in question and then gives the instructor an indication of the proficiency that the child has in the targeted skill. Using a CBM to monitor students' progress allows teachers to adjust reading programs as needed.

The overall goal is that all students are able to read fluently. The measurement of fluency is the main focus of a CBM. Fluency, the ability to read orally in a smooth and effortless manner, has been referred to as a critical component of the reading process (Allinder, Dunse, Brunken, & Obermiller-

Krolikowski, 2001). Fluent reading is a crucial skill for all students to develop. Readers who focus intensely on practicing their reading skills are generally able to become more fluent readers. As students graduate into more fluent readers, they are able to give a more conscious effort to comprehending the text.

The most common component of the CBM used for progress monitoring is Oral Reading Fluency. ORF is distinctly separated into two components that are critical for a student to possess prior to being able to read fluently. The two necessary components are speed and accuracy (Samuels, 1979; Schatschneider & Torgesen, 2004). Accuracy is the ability to accurately identify words within the context of the text. In order to competently read with accuracy, readers need to have a working vocabulary that enables them to recognize high-frequency words and other words that follow typical phonetic rules (Worthy & Broaddus, 2002). CBMs measure the speed and accuracy of a reader, and when monitored on a weekly or bi-weekly basis, can lead the teacher by showing improvement or the lack of improvement in a student's reading scores. This information lets the teacher know if interventions and accommodations they are doing for the student are working effectively.

Other Curriculum Based Measure Data

Typically, CBMs compare an individual student's performance to a standard of performance set by the CBM's research and data. These assessments are becoming a more widely researched technique for making school-based decisions regarding student eligibility for special education services, monitoring student progress, creating new intervention programs and evaluating intervention effectiveness (Hasbrouck, Woldbeck, Innot, & Parker, 1999). While it is increasingly being used in schools, there is little indication that it is being used by school psychologists for the purpose of special education (Hasbrouck, Woldbeck, Innot, & Parker, 1999). Shinn (1995) compared 37 learning disabled and 37 low achieving fifth grade children using a CBM. He discovered major differences between the two groups which had not been identified by standardized or norm-referenced tests. He

concluded that norm referenced tests may provide an incomplete picture of the student when used to confirm teacher referral decisions. According to Shinn (1995), CBMs are a consistent and continuous measurement.

Decisions tend to be tied to general education curricula and often to how typical students perform in that curriculum. However, the most important feature of the CBM is the collection of data on repeated standard tasks for individual students. When used to evaluate and modify instructional intervention programs for individual students, research findings consistently have found significantly improved outcomes. Programs for special education students are also improved by allowing for modification of their individual interventions. Due to this, better Individual Education Programs (IEP) can be written, and assessment can be linked to intervention (Shinn, 1995).

Chapter 3: Discussion

Review of Findings

Fluent reading is the accurate, automatic reading of encountered text. Developing fluency is a task that requires one to synthesize a number of reading skills deemed to be essential in effectively learning to read (Naslund & Smolkin, 1997). Once a student gains the ability to read fluently, they also gain the ability to enjoy reading text (McCauley & McCauley, 1992). This is because comprehension can then occur, allowing students to understand and appreciate what they are reading. This enjoyment of reading causes a person to continue to engage in the reading process and therefore, improve one's reading skills.

This research shows the importance of regularly evaluating the students' oral reading fluency rate, as well as other components in the CBMs, to gauge a current reading level and to continually progress monitor students to assure the program the teacher is using best serves the student. This constant monitoring allows the teacher to adjust or continue with a research-based intervention program to meet the individual student's needs. Curriculum based measures are becoming more widely researched in the United States and internationally. Consistent findings have shown that the school administered CBMs provide a clearer picture of the students' ability to succeed with the reading curriculum than do nationally referenced standardized tests. Classroom teachers also found the CBMs to be more user friendly and easier to administer than standardized tests. The CBMs provide quick, and accurate feedback as to where the student is performing (Howell & Nolet, 2000). Furthermore, the oral reading fluency component in the CBMs can be used within the entire class, as well as remedial reading groups. Mixed validity and reliability results suggest that further CBM development and research are needed. Oral reading fluency rate and Curriculum based measures are proving to be useful in the evaluation of the reading progress of students, and useful to teachers to guide effective instruction for their students.

Possibilities for Future Research

Future research is needed to compare results from the oral reading fluency assessments to the ability of the students' comprehension ability. This information needs to be studied over a course of time to check sustained validity of the tests, especially when they are being used for progress monitoring. Maintaining student interest in practicing and assessing a student's oral reading fluency is essential due to the motivation that a student experiences when they are interested in what they are reading. As text becomes more difficult for students, their ability to comprehend may decrease also.

Additional research is also needed regarding the validity of the assessments in diverse populations. The nature of a school's population and level of economic or racial diversity could impact the reliability of using the curriculum based measures as a true measure of the students reading ability. The prior knowledge of the student regarding passages used for checking the oral reading fluency rate could skew assessment results. Further research should be conducted with a more economically diverse population.

Recommendations

My research confirmed that curriculum based measures do serve as an indicator of proficient reading. Teachers can use these as tools to gain a snapshot of where their students are currently reading. They can also be used to monitor students' progress to track whether or not a remedial program is successful. I would recommend that classroom teachers receive quality training on how to administer and implement these assessments. Further training on how to utilize these assessments to guide instruction and gain information on their students, would also be recommended. The CBMs are very affordable and easy to administer. It would be very easy to implement this type of measure in the regular classroom environment. I am convinced that Curriculum Based Measures are a good indicator of proficient reading.

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