

Evidence Based Literacy Instruction as an Intervention Strategy for Improving Reading Fluency and Comprehension in Sixth Grade Students at Saugatuck Middle School

**Linda Gilbert, Jeff Pellerito, Tim Travis, and Sue Wireman
Saugatuck Public Schools**

Abstract

As students transition from elementary school to middle school a shift occurs from “learning to read” to “reading to learn.” Students who are behind in reading by middle school are at a significant disadvantage in other classes including science, social studies, and mathematics. As part of the North Central Accreditation process, Saugatuck Middle School teachers were searching for an intervention strategy for improving reading fluency and comprehension. Fifteen sixth grade students were identified at least two grades below grade level in reading. The students were given one-on-one instruction using Evidence Based Literacy Instruction (EBLI) for a period of eight weeks from November, 2006 to January, 2007. Results showed marked improvement in word identification and word attack skills. Most encouraging was an average improvement of 1.24 grade levels in reading comprehension over a four month period.

Research Question

Can Evidence Based Literacy Instruction (EBLI) be used to assist all Saugatuck Middle School students in spelling and reading fluency and can it be used to improve reading fluency and comprehension of middle and high school students who are significantly below grade level?

Explanation of Context, Problem, Issue

As students make the transition from elementary school to middle school and eventually high school there is a major shift in the instructional practices and expectations set forth by the staff in all school systems. For the most part, education shifts from a compilation of skill sets to developing excellence and knowledge base in academic areas. This is particularly true for reading. As students cross the gap between elementary and middle school education the expectation becomes that students be competent readers and that they in turn can summarize, utilize, and synthesize information presented in written form. The teaching of phonics, roots, prefixes, and affixes tends to disappear from the standard curriculum to be replaced by content expectations with very little concern for how students who are not-proficient readers will access that information.

Having students who are not proficient readers in the classroom presents a dilemma for middle school teachers. The attentive teacher is aware that there are not-proficient readers in their classroom. The teacher makes modifications and provides supports to help these students reach maximum potential. However, in-depth literacy instruction is difficult to implement when such a small percentage of a class may be in need. This project was designed to work with students for whom the simple study of vocabulary and the conventions of the written word are insufficient to support them in the curriculum in which they find themselves.

Traditionally, adolescent literacy has been a complex problem to address. With the increased emphasis on performance and independence within the curriculum, it seems that those who have not yet mastered reading have little opportunity to change their plight. Year after year, these students seem to fall further behind their peers and fall further into the frustration that results from generalized expectations that do not match up with an individual's skill set. However, the belief at Saugatuck Middle School was that all was not lost. There is a dedicated staff that is willing to exert the effort necessary to help these students to achieve. The difficulty came in not having an organized, research-based, comprehensive strategy to

identify students, streamline delivery, and measure student progress accurately. Without these components in place, the staff was faced with mediocre results, missed opportunities, and frustration. The belief of the action research team was that by addressing these obstacles, all was not lost and these students could achieve and close the gaps that remained within their skill set.

Theoretical Perspective

Evidence Based Literacy Instruction (EBLI) is an approach that takes what works from several sources and condenses the practices into a simple delivery system that is both effective and age appropriate for the students (McGuinness, C & McGuinness, G, 1998; Chahbazi, N & Hammel, C, 2005; Schrank, F. A., Mather, N & Woodcock, R.W, 2004; and Donahue, P.L. et. al. 2001). The basis of the system is in the power of phonetic awareness for all learners (Jaffe, L. & Mather, N. 2002), and the importance of reinforcing this knowledge with visuals, sounds, and motions to cement the learning and improve students' word-attack skills (Jensen, 1998). The research provided by Chahbazi (Chahbazi, N and Hammel, C, 2005) showed that this initial increase in word attack skills continues through the reading continuum and provides statistically significant growth in vocabulary, reading fluency, and reading comprehension. Research is also being conducted by Chahbazi on the overall impact of these reading strategies on student performance on standardized assessments like the ACT. Although research is not complete students attending the private EBLI clinic run by Chahbazi have shown increase in ACT test scores.

Schools that use the EBLI approach have reported improved fluency, word-attack skills, and reading comprehension (Unionville-Sebewaing Interview, 2006). Articles by Chahbazi and Hammell (Chahbazi, N and Hammel, C, 2005) cite growth of word identification skills of 3.59 grade levels on average after ten sessions with the program techniques. Additionally, the Chahbazi test group showed vocabulary growth of 2.19 grade levels, and a growth of 2.81 grade levels in reading comprehension as tested on the Woodcock Johnson Diagnostic Reading Battery.

Research Design

To select potential students for the EBLI reading program, students were identified based on scores from the Northwest Evaluation Association Measure of Academic Performance Reading Goals Survey (NWEA MAPs) reading test. Saugatuck Public Schools administers the MAPs test to all students in the district grades 2-10 in the fall and spring. Any student who had RIT score of 209 or less on the NWEA Reading Norms Chart became a potential candidate for the EBLI reading intervention. This reading score was the spring median score for 4th grade. The NWEA 2005 Norms were developed from the MAP results of 2.3 million students in 794 school districts representing 32 states (NWEA 2005 Normative Data). To determine a RIT score, MAP test items are placed on the RIT scale according to their difficulty. Each increasing RIT is assigned a numeric value, or RIT score, that indicates a higher level of difficulty. As a student takes a MAP test, he or she is presented with items of varying RITs, or levels of difficulty. Once the MAP system determines the difficulty level at which the student is able to perform and the system collects enough data to report a student's abilities, the test ends and the student is assigned an overall RIT score. The fall of 2006 MAP score for the 6-8th grade classes yielded an initial pool of 63 candidates.

The pool of 63 candidates, grades 6 -8, was singled out, and the latest MEAP reading scores from 2005-06 school year were reviewed. Students who were not proficient (scores of 3 or 4 on the MEAP reading test) remained in the pool. Next, the 63 candidates were checked for failing grades in one or more academic classes for the current and previous school year. This provided a triangulation of data. Twenty-seven students were then identified as potential candidates for further testing.

The 27 remaining students were given three Woodcock-Johnson III Diagnostic Reading Battery subtests for the final screening for the EBLI reading program. These were the Letter-Word Identification (reliability of .90), Passage Comprehension (reliability .80) and Word Attack (reliability .85) subtest (Schrank, Mather, & Woodcock). These subtests were recommended by the EBLI reading program

developers during staff training. Students were given the subtests individually by staff trained by the EBLI training staff.

Due to limited availability of staff resources, it was decided that those students making the transition from elementary to middle school would receive priority for undergoing the intervention strategies. After the Woodcock- Johnson testing, the lowest scoring 15 students were selected from sixth grade. This group of students consisted of three girls and twelve boys from the sixth grade class. One student was Hispanic, one bi-racial and the remaining thirteen were Caucasian.

Student Code	Gender	Ethnic Group	Free/Reduced Lunch
A	M	Caucasian	Yes
B	M	Caucasian	No
C	M	Bi-Racial	Yes
D	M	Caucasian	No
E	M	Caucasian	Yes
F	M	Caucasian	No
G	M	Caucasian	No
H	F	Caucasian	No
I	M	Caucasian	Yes
J	M	Caucasian	Yes
K	M	Caucasian	Yes
L	F	Caucasian	No
M	M	Caucasian	No
N	F	Hispanic	Yes
O	M	Caucasian	No

Once students were identified for this intervention, they were scheduled to meet with instructional staff for 5-12 forty-five minutes sessions, depending on how quickly the students progressed through the seven EBLI program lessons. Since student growth was merely being measured against their previous year's performance, it was felt that any increase in growth over and above the four month (.4 grade level equivalents) could reliably be attributed to the added intervention as there were no concurrent intervention programs being offered to the students during the data measurement period.

Analysis of Data

Initial scores gathered on the students who participated in the action research project have been favorable. Anecdotally, all students reported an increase in confidence and responded well to the environment and the components of the intervention. This was observed by classroom teachers when students, who prior to instruction, were reluctant to read aloud in class, started volunteering to read or did not "pass" when it was their turn to read. Students' overall attitude regarding the reading task improved and their willingness to participate increased as the trials continued as reported by the staff providing the intervention. These observations included sixth grade students asking to be taken for instruction, positive remarks by the students, and teachers reporting that students were asking when they could go to EBLI again. Obviously anecdotal results are meaningful to a teacher as a practitioner and as a person who is invested in the feelings, attitudes, and performance of children, but not necessarily meaningful in regards to research. This is the basis for the action research project. The staff felt good about it, but did it really work?

Test scores gathered from the initial test group shows that it did indeed work. As the following graphs show, average student performance on the Woodcock Johnson Diagnostic Reading battery improved significantly. The average grade level equivalent for word identification increased from 5.2 to 9.98, significantly above grade level (see Table 1). Comprehension also increased from an initial average of

3.68 grade level to a post-intervention average of 4.94 grade level (see Table 2). Expected growth in comprehension should show an increase of 4 months to 4.08 grade level. The average comprehension gain of the group is 8.6 months greater than expected based on the time that elapsed during the study, which is encouraging. This still puts these students at a disadvantage in the classroom, but goes far to close a gap that traditionally would have widened for these students as the school year continued. Word attack skills showed the greatest jump from 5.22 to 14.82 average grade level equivalent (see Table 3).

Table 1

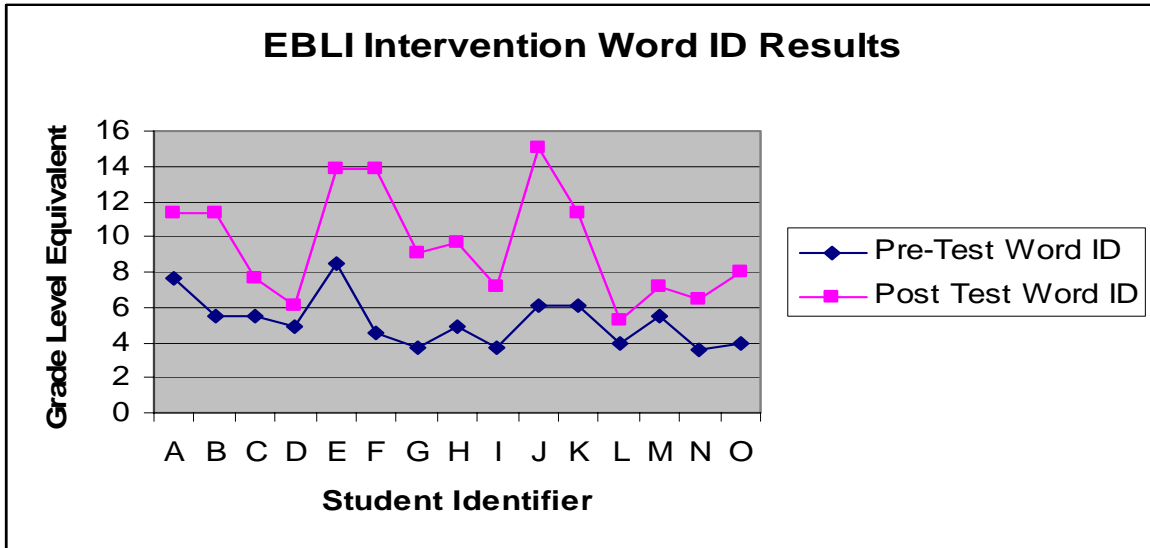


Table 2

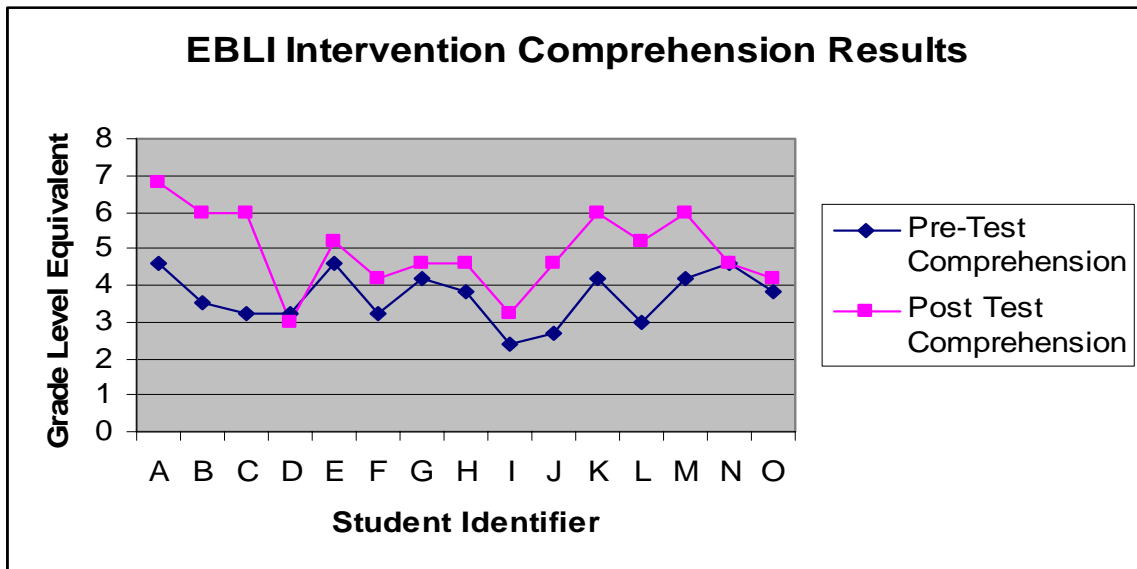
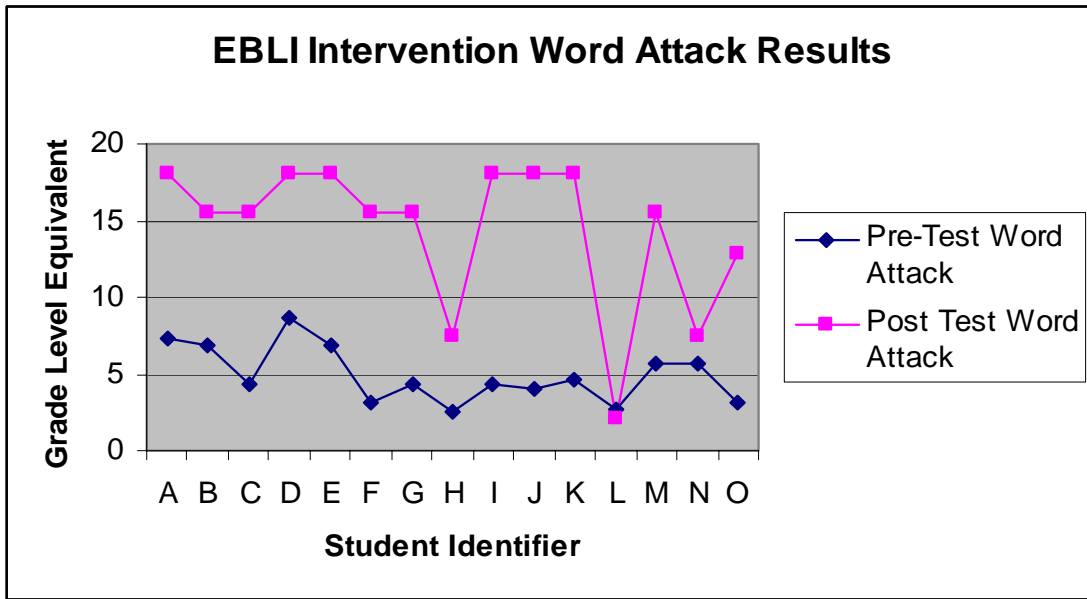


Table 3



Action Planning

Overall, the group is excited by the findings and the overall change in student achievement. This excitement is tempered by the concern of long-term sustainability of the program and student results. Over the course of the next few years, students will be monitored closely to see what the lasting results will be and how these newly acquired skills aid in the transition to high school. Findings are favorable and seem to answer the initial research question. It does appear that with intense one-on-one intervention, adolescents who struggle with literacy skills as they enter middle school can be helped and there are research-based methods to assist them.

The next steps for the group, in addition to presenting the data to the action research group as a whole, include: working with additional groups of students to seek replication of results, working with teachers to infuse some of the EBLI techniques into classroom instruction for all students, repeating the intervention with students who are still significantly below grade level to see if further results can be achieved through additional sessions, and continuing to track students who are selected for individual intervention to gauge the long-term effectiveness of the protocol and the feasibility and value of replicating these practices in the future.

Obviously the benefit for the students is clear. Anything that can be done to reduce or eliminate the barriers for student achievement is paramount to their success. It is no longer permissible to educate the few; moreover it is necessary for teachers as practitioners to investigate and implement new techniques to assist all students in achieving a high level of achievement and competency both for further education and for the workforce challenges they will face. This research opportunity has opened a dialogue for the staff to further the literary development of all learners and to present an organized assistance plan for those students who desperately need it. With this assistance, it appears that the goal of having all students be able to learn by reading is achievable.

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Appendix A

Third and Fourth Grade Spelling List

1. bat
2. rub
3. hot
4. step
5. crib
6. plug
7. lost
8. desk
9. chop
10. wish
11. truck
12. when
13. steam
14. bride
15. scoop
16. flight
17. choice
18. crazy
19. shirt
20. paper
21. plenty
22. react
23. remember
24. elevator
25. jealous

Fifth Grade Spelling List

1. bed
2. ship
3. when
4. lump
5. float
6. train
7. place
8. drive
9. bright
10. shopping
11. spoil
12. serving
13. chewed
14. carries
15. marched
16. shower
17. cattle
18. favor
19. ripen
20. cellar
21. pleasure
22. fortunate
23. confident
24. civilize
25. opposition