# PROGRAMS AND METHODS TO IMPROVE READING COMPREHENSION LEVELS OF READING RESOURCE SPECIAL NEEDS STUDENTS AT AUSTIN ROAD MIDDLE SCHOOL

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This action research project made an attempt to increase the reading comprehension levels of special education reading resource students by raising academic efficacy through public acknowledgement of improvement, scaffolded instruction through the use of differentiated teacher created matrices, and graphic organizers to solidify the relationships between events in the reading passages. Academic efficacy increased 21% P<.001. The mean reading increased .88 grade equivalents and 6% NCE score on the STAR reading test.

# School profile

Austin Road Middle School is a part of the Henry County School System, serving students in grades six through eight. Students attending Austin Road are 74% minority, largely middle class, with professional parents. The free and reduced population is 34%. Last year Austin Road made annual yearly progress (AYP), with students scoring 93% pass rates in reading, 90% in language Arts, 82% in math on the Georgia Criterion Reference Competency Test (CRCT). Students at Austin Road have a high rate of attendance. Last year the attendance rate was 95%. At times last year our attendance rate was better than all other schools in the county.

The majority of students at Austin are African-American. The African-American population has increased from 54% two years ago to 74% this school term. This population of students is largely middle class with the median house price being \$150,000. Many of these students have moved into the area recently from neighboring counties, and from out of state. Recent controversy in the governance of Clayton and Dekalb counties has brought an influx of students whose parents have moved into Austin Road's attendance zone. Austin Roads students are high achieving. Test scores have increased the last two years, with Austin Road meeting AYP for school year 2003 – 2004.

Austin Road Middle School is attempting to reach its mission: to aid each child in his/her academic, aesthetic, physical, emotional, and social development in a secure environment where high achievement for students and staff will be attained and recognized. To reach that mission and to meet the requirements of the AYP portion of The No Child Left Behind Act (NCLB) a disaggregating of the data of last year's CRCT test scores and this year's results of the Iowa Test of Basic skills (ITBS) results were undertaken. The following chart illustrates how the different groups at Austin Road performed on the spring administration of the CRCT in the area of reading, by demographic group, and the school as a whole represented by the percentage passing the reading portion of the test.

The data in Table 1 is from the 2003 - 2004 administration of the CRCT, and it shows that while the special needs students achieved well enough to make AYP, however the margin was dangerously thin.

Table 1. CRCT reading scores 2003/4

| Cite i reading scores 2000/ |       |         |       |       |         |
|-----------------------------|-------|---------|-------|-------|---------|
| School wide                 | Males | Females | Black | White | Special |
| scores                      |       |         |       |       | needs   |
| 92                          | 88    | 95      | 90    | 94    | 61      |

The ITBS, administered to eighth graders in September of 2004 showed similar discrepancies in scores. See Table 2.

Table 2. ITBS reading scores 2004

|                          | All<br>Students | Black | White | Free/Reduc.<br>Lunch | Male  | Female | Special<br>Education |
|--------------------------|-----------------|-------|-------|----------------------|-------|--------|----------------------|
| Number Tested            | 306             | +-231 | +-86  | +-75                 | +-163 | +-169  | +-28                 |
| Reading Total            | 8.2             | 7.6   | 8.9   | 7.3                  | 7.7   | 8.2    | 5.7                  |
| Reading<br>Vocabulary    | 7.8             | 7.4   | 8.4   | 7.0                  | 7.6   | 7.8    | 6.5                  |
| Reading<br>Comprehension | 8.5             | 7.9   | 9.1   | 7.5                  | 7.9   | 8.6    | 5.1                  |

In the reading category, reading comprehension showed the greatest difference, 3.2 grade equivalents, between students as a whole and the special needs students. In order to meet AYP special needs students must pass the CRCT test at the 60% level. These 15 students that are currently enrolled in eighth grade special education reading programs are the lynch pin in the effort for Austin Road to continue to make AYP.

# Problem statement

In order to ensure that Austin Road Middle School fulfills its mission and meets the requirements for AYP of NCLB, the reading comprehension levels and the reading scores of special needs students must be improved.

#### Introduction

The research problem of this action research project was to identify strategies, and methods to improve reading comprehension levels of special needs students at Austin Road Middle School. The primary topics covered in this review of literature are academic self-efficacy and its relationship to academic achievement, scaffolding as a method of differentiated reading instruction, and concept maps as a method of improving retention and therefore reading comprehension.

# Self-efficacy

In studies of students' performance there was a strong link between perceived self-efficacy and cognitive development and functioning (Bandura, 1993). Bandura (1993) discussed how efficacy beliefs have an effect on all aspects of one's behavior, and specifically in three areas: cognitive processes, motivational processes, and affective processes (Bandura, 1993).

In Bandura's studies, students who had a strong sense of self-efficacy perceived themselves as having the necessary skills and competencies to successfully complete assigned academic tasks. Students who doubted their ability tended to visualize themselves as failures, although they may have had ability levels equal to students with strong efficacy beliefs. When students saw themselves as being successful, self-efficacy levels increased and performance improved. Another important concept discussed was the evaluation of achievement. If individual progress is emphasized, self-efficacy improves. However, if a student's evaluation only consists of discussions of shortcomings, this results in a decline in self-efficacy. Teachers should describe ability as a skill that can be developed rather than a finite level of intelligence that cannot be improved. By doing this, self-efficacy in students could be improved (Bandura, 1993)

Special education students often have low academic efficacy levels. Many of these students have engaged in a persistent pattern of low achievement, resulting in academic failure. This phenomenon has also been referred to as learned helplessness (Linnenbrink & Pintrich, 2003). Tabassam and Grainger (2002)also reported in their study comparing the efficacy of students with learning disabilities to students with learning disabilities and attention deficit

hyperactivity disorder that their subjects had much lower scores for reading, math, and composite efficacy beliefs than of normally achieving students. Students with learning disabilities scored in the 27<sup>th</sup> percentile for academic efficacy as compared to the 50<sup>th</sup> percentile for normally achieving students.

There are, according to Linnenbink and Pintrich (2003), several ways to improve academic efficacy in special education students. One way is for teachers to provide specific feed back to students about their work. This feedback should be directly related to the skills, and the improvement seen in those skills that the child is working on. Teachers must be careful not to provide false praise to students. False praise doe not improve efficacy beliefs. Students must be challenged by the tasks assigned to them. Task should be difficult enough to challenge the student, but not so difficult that the task reaches the frustration level of the student. Student efficacy levels will rise when they truly achieve at higher levels. Teachers must reinforce the concept that ability to complete a task can change as a result of hard work and effort. Teachers also should promote the concept of specific efficacy beliefs. They can do this by not worrying about the global sense of self-esteem, but instead reinforce task specific efficacy by developing task of increasing difficulty in which students can be successful (Linnenbink & Pintrich, 2003).

Jinks and Lorsbach (2003) also offer some tips for teachers to increase academic efficacy of their students. Students need to be taught using materials with incremental increases in difficulty. These students must have frequent success even if these successes show only very small increases in achievement. Students with low efficacy beliefs need to be provide much more structure in instruction and they need their instruction in much smaller units so that a since of accomplishment can be developed.

In an action research project, evolving at-risk middle school children, efficacy levels were increased and academic achievement levels, measured by teacher made test, was achieved by combining a goal setting program, publicly praising students for improvement in test scores, and a poster hanging in the classroom that showed improvement points. In this study students were publicly praised for any improvement shown, regardless how small. Students set goals at the beginning of the program and evaluated them at the midpoint and at the end of the treatment period (Stenson, 1999).

# Scaffolding

Scaffolding is a means of instruction whereby students receive assistance in completing academic tasks until they possess the skills to accomplish these tasks on their own (Graves & Avery, 1997); (Martin & Martin, 2001, p. 85) ;(Fournier & Graves, 2002). Scaffolding activities would include discussing vocabulary and concepts students may have difficulty with prior to reading the selection. Activities to hook students into the content of the reading selection by relating the text to common life experiences is also very helpful. While reading students may take notes, complete graphic organizers, and engage in other activities that will help them remember the content that they are reading. One such activity would be to fill in a matrix of key ideas contained in the text. The teacher can provide hints by partially filling in some of the details as a means to differentiate instruction to meet individual students' needs. After reading is completed the instructor would conduct a discussion based on the details that should be contained in the matrix (Graves & Avery, 1997); (Larkin, 2001); (Fournier & Graves, 2002). According to Fournier and Graves (2002) students who use a scaffolded reading experience (SRE) had a 19% increase in reading comprehension as opposed to students that did not.

Learning disabled students often need this type of instruction. Many of them have decoding and comprehension problems. If some of the difficult vocabulary and key concepts can be pre-taught before reading takes place, and a structure is in place to focus students on what information is important in the reading passage, comprehension will improve (Martin & Martin, 2000). Many of these students have also been in a cycle of failure. Scaffolding provides these students with a method of being successful. It allows special educations students to have enough support to accomplish the task. Gradually as students begin to achieve on their own the amount of teacher assistance can be reduced. In this process special education students can become more independent, as their skill levels improve (Larkin, 2001);

(Warwick & Maloch, 2003).

# Graphic organizers

Graphic organizers (GO) make use of boxes, lines and other devices to categorize and prioritize information so that students can retain more knowledge thus improve reading comprehension (Guastello, Beasley & Sinatra, 2000); (Hoffman, 2003); (Ae-Hwa Kim, Vaughn, Wanzek, Shangjin Wei, 2004); (DiCecco & Gleason 2002). Graphic organizers have improved the reading comprehension levels of both students with learning disabilities and those without. According to Guastello, Beasley & Sinatra (2000) in their study students who use concept maps, a form of graphic organizer, reading scores improved six standard deviations above those students who where taught in a traditional manner using worksheets and teacher discussion. The graphic organizers allowed students to translate concepts into visual blueprint that could more easily be understood and retained. Graphic organizers also tended to focus students attention to the most important parts of reading passages.

Learning disabled students who where taught reading using graphic organizers scored much higher on reading comprehension test than those same students who were taught using standard methods of instruction (Ae-Hwa Kim, et al. 2004). Several types of graphic organizers were used in the study. These were semantic organizers, cognitive maps with and without mnemonics and framed outlines. Students performed much higher when they used any one of the graphic organizers than those students who did not. Guastello, Beasley & Sinatra (2000) also suggest that graphic organizers facilitated a drastic improvement in performance of low achieving students. A group many learning disabled students fall into.

In DiCecco & Gleason's (2002) study of middle school learning disabled students, they found that graphic organizers helped students to gain relational knowledge from the expository passages that they read. Graphic organizers link concepts so that relationships can be inferred by the student. This is extremely important to learning disabled students, because they often get bogged down in irrelevant details. Graphic organizers help LD students because the enable them to see the important parts of the text especially if the framework of the organizer is given to the students prior to reading (DiCecco & Gleason 2002).

Graphic organizers should be constructed so that the main ideas are represented by a consistent geometric shape and the supporting concepts whether they are implied or explicit should have corresponding shape to the degree of their relationship to the main topic. According to DiCecco and Gleason students knowledge gains were apparent when they had to write essays about the topics. The graphic organizers helped students build the relational bridges of the information so that they could in tern write essays explaining the topic that they had read.

According to Merkley and Jefferies (2000) that graphic organizers are an excellent prereading tool. When teacher verbally discuss the elements that are in graphic organizers it helps students to connect the inferences that the organizers represent. Students should be allowed to input information into the graphic organizers. Teachers should ask open ended questions to make sure that students understand the relationships represented by the graphic organizers. One precaution teachers should take is to make sure that their graphic organizers are not so detailed the students can avoid reading the passage.

# Summary

The improvement of academic self-efficacy is an important step in the increased academic performance of students (Bandura, 1993). Tips and practices to increase self-efficacy of special education students were offered by Jinks and Lorsbach (2003), Jinks and Lorsbach (2003), and Stenson (1999). Among these are that students need to perceive real achievement for efficacy to improve and that students need to be started at a level where they can achieve without being frustrated.

Scaffolding is an effective method for providing students with the support they need until they can accomplish the task on their own (Graves & Avery, 1997); (Martin & Martin, 2001, p. 85); (Fournier & Graves, 2002). Student can be presented with vary degrees of assistance through differentiated learning by the use of matrices to guide reading will improve reading comprehension.

Finally the use of graphic organizers helps students to draw inferences and to organize information so that reading comprehensions can be improved (Guastello, Beasley & Sinatra, 2000); (DiCecco & Gleason 2002); (Hoffman, 2003); (Ae-Hwa Kim, et al., 2004). If methods to improve efficacy are used in combination with the use of scaffolding and graphic organizers, reading comprehension should improve.

This review of literature has provided a grounding for the prospect of improving reading comprehension of learning disabled students through the use of public praise and recognition for improved performance in resource reading classes, scaffolding as a means of differentiated instruction to meet the needs of students, and the use of graphic organizers to organize and represent the concepts of reading passages. The initial self-efficacy of students was measured to establish a base line of academic self-efficacy using an academic self-efficacy instrument. Initial reading comprehension levels were reported on the 2004 administration on the Georgia CRCT. The 2005 administration of the CRCT will be used to measure the gains during the treatment period

#### Method

#### Introduction

The research problem of this action research project was to find programs and methods to improve reading comprehension levels of reading resource special education students at Austin Road Middle School. The primary components of the action research project were the relationship of academic efficacy, scaffolding as a means of differentiated instruction, and the use of concept maps to reinforce relational structures and concepts in reading passages. The primary focus of using these components together was to improve reading comprehension skills through differentiated instruction and to increase efficacy levels as a means to improve student effort and resilience.

# Design of the study

At the initial outset of the study, the reading resource students were given Albert Bandura's Children Self-Efficacy Scale (Bandura, 1995). The students were also administered the STAR test. This instrument is an individual technology based test that measured the reading level of students recorded in NCE scores and grade equivalents. Students then were informed that an improvement block would be colored in on the class improvement roster every time their score improved on reading comprehension activities. They also were informed that once they reached a 90% score on their daily assessments and that grade was maintained from one day to the next, they would continue to receive improvement blocks as evidence of satisfactory effort and mastery of the material. At the end of each three-week period the students that demonstrated adequate improvement were rewarded with an extrinsic reward. Student improvement on weekly CRCT practice book activities would also be recorded.

Teachers in the study scaffolded their instruction based on the initial scores of students on the STAR test, and if available the 2004 CRCT scores. The scaffolding method was to have students fill in a matrix of information as they read passages. The amount of information supplied by the teacher in the matrix would be determined by the student's individual reading level. As student comprehension skills improved the amount of teacher supplied information gradually was decreased.

Prior to reading passages students would be exposed to concept maps with different shapes for different levels and sub-levels of information. Then students read the passages and filled

in the previously discussed matrix. After reading the passages students discussed the passages with teachers and filled in the concept maps with teacher's assistance if necessary. Teacher assistance was reduced or removed as student's skill levels improved. Students engaged in discussions of the relationships between events in the story.

At the end of the treatment period students were re-administered the Children's Academic Efficacy Scale and the STAR reading test to measure improved performance. Students 2005 CRCT reading comprehension scores were also examined to insure that adequate yearly progress was made for this group of students. The teachers involved in implementing this study were resource teachers and collaborative reading teachers at Austin Road Middle School. The researcher completed the analysis of the data.

### Summary

The improvement of reading comprehension skills is vital to the academic success of special education students of Austin Road Middle School. It is also vitally important that these students score at the 60% pass rate on the Georgia CRCT exam, so that Austin Road Middle School will be eligible to achieve adequate yearly progress, measured by the No Child Left Behind Act.

# Results

In this analysis of the data, this researcher described the results of the pretreatment surveys, the pre and post treatment scores on the STAR reading test, the mean score on daily reading comprehension activities, improvement on bi-weekly CRCT practice exercises, and the improvement of scores on the April 2005 reading CRCT test, as compared to the April 2004 reading CRCT test. The research problem of this action research project was to find programs and methods to improve reading comprehension levels of reading resource special education students at Austin Road Middle School and implement them as practice.

The pre- and post treatment survey was Albert Bandura's Children's Self-Efficacy Scale (Bandura, 1995). The survey was given to all reading resource students prior to treatment and was re-administered to the same students following the completion of the treatment period. Data was collected form the special education reading resource teachers regarding improvement on daily comprehension activities, improvement on bi-weekly CRCT practice test, for the period between February 21, 2005 and April 19, 2005. Also anecdotal evidence was gathered for analysis of the students' attitude towards reading activities. A comparison was also made between students' 2004 CRCT reading scores and their 2005 reading CRCT scores.

The first results to be examined are scores by students on the Children's Self-efficacy Scales, which was given as a pre-treatment survey. The mean score of students on the pretreatment survey was 80.6. Fifteen students were surveyed, with the range of scores was between 50 and 97. The post treatment survey mean was 103.9. The scores ranged between 64 and 130. The gain on the efficacy scale survey was 21.5%. This gain was significant p < .001.

The second results to be discussed are the gains on the STAR reading test. Students tested averaged .88 grade equivalents of gain and 6.6% gain in NCE scores. Five students gained as much as a whole year's in grade equivalent and 10% in NCE score in the eight-week treatment period. One student gained 3.7 grade equivalents during the treatment period. The scores of students are listed on the following table. However when a t test was applied to the scores in both categories the difference was not statistically significant. (see Table 3 below).

The third piece of data to be reported was the improvement of daily reading comprehension activities. The chart at Figure 1 (below)shows how the mean scores of these activities generally tended towards improvement.

# Table 3. Pre and post test scores on the STAR reading test

|    | Pre  | Pre  | Post         | Post         |
|----|------|------|--------------|--------------|
|    | GE   | NCE  | GE           | NCE          |
| 1  | 6.0  | 30.7 | 7.2          | 40.7         |
| 2  | 2.1  | 1.0  | 2.5          | 1.0          |
| 3  | 2.7  | 1.0  | 4.9          | 21.8         |
| 4  | 3.6  | 10.4 | 4.6          | 18.9         |
| 5  | 3.2  | 6.7  | 3.3          | 13.1         |
| 6  | 1.9  | 1    | 1.9          | 1            |
| 7  | 6.3  | 34.4 | 6.0          | 30.7         |
| 8  | 6.1  | 33.0 | 6.2          | 33.0         |
| 9  | 11.3 | 59.9 | 12.4         | 62.3         |
| 10 | 6.4  | 35   | 10.1         | 55.9         |
| 11 | 3.0  | 1    | 2.5          | 1            |
| 12 | 6.0  | 35.8 | 6.4          | 40.1         |
| 13 | 3.4  | 6.7  | 3.3          | 6.7          |
| 14 | 3.6  | 10.4 | 4.6          | 18.9         |
| 15 | 2.7  | 1    | 4.9          | 21.8         |
|    |      |      | Average gain | Average gain |
|    |      |      | .88 Grade    | 6.6% NCE     |
|    |      |      | Equivalents  |              |

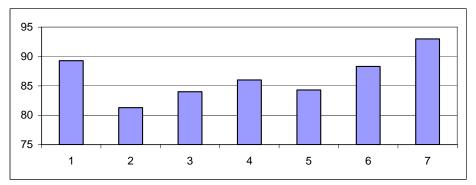


Figure 1
Mean scores on reading comprehension activities

The first activity was relatively easy, so that the students could get used to the format of the activities and so that they would have some initial success. The remainder of the scores shows a gradual increase in the mean of student scores of students on daily comprehension activities. The fourth piece of data to be reported is the CRCT practice test. The mean of the first activity was 77.5, the second was 76, and the third was 84.5. By the third activity the performance was much higher than the first test. This would be expected because the test were given roughly two weeks apart, giving the students ample time to make gains in their reading skills.

The last piece of data to be analyzed is the difference in score between the 2004 CRCT reading test and the 2005 CRCT reading results. Table 4 (below) shows the scores of the 15 students in the study.

Only seven of the fifteen students passed the reading portion of the CRCT. One student's individual education plan (IEP) called for an alternative assessment. This pass rate was disappointing. It did not meet the criteria of 60% required for NCLB.

The observed behavior of students in the resource classes during the treatment period was extremely encouraging. The students were very excited about the reward system in which they were engaged. Teachers noted that students eagerly waited to see if they qualified for an improvement sticker. These same students who had previously shown little interest in reading

or the process necessary to improve their reading skills were working extremely hard to show that they could succeed.

Table 4. CRCT Reading test Results

|    | 2004 CRCT Reading Test | 2005 CRCT Reading Tes  |
|----|------------------------|------------------------|
| 1  | 325                    | 300                    |
| 2  | 320                    | 395                    |
| 3  | 286                    | 295                    |
| 4  | 290                    | 271                    |
| 5  | 307                    | 290                    |
| 6  | No score               | 310                    |
| 7  | 282                    | 285                    |
| 8  | 326                    | 350                    |
| 9  | Alternative assessment | Alternative assessment |
| 10 | No score               | 343                    |
| 11 | 278                    | 320                    |
| 12 | 307                    | 295                    |
| 13 | 327                    | 331                    |
| 14 | 290                    | 285                    |
| 15 | No score               | 271                    |

The data gathered and analyzed for this study suggested that there was an increase in academic self-efficacy for the participants as demonstrated by the increase in scores on the Children's Self-efficacy Scale. Students reading performance improved as measured by the increased in grade equivalents and the increase in the average NCE scores on the STAR reading test. The students showed gradual improvement on reading comprehension activities that were created by their reading teachers. Their eventually was substantial improvement on the scores of practice CRCT tests. The 2005 CRCT results were not a positive as the researcher had hoped, but improvement for some students was substantial

# Discussion

The research problem of this action research project was to find programs and methods to improve reading comprehension levels of reading resource special education students at Austin Road Middle School. The treatment program of differentiated instruction through the use of scaffolding and the use of concept maps as a way to reinforce the relational structures within reading passages was conducted during a 9 week period between winter break and the beginning of CRCT testing. The analyzed data reported in Chapter 4 of this document suggested that academic self-efficacy levels were increased and reading ability was increased as tested using the STAR reading test. Students' achievement also improved on in class reading comprehension assignments and practice CRCT reading tests. Seven of 15 students passed the 2005 reading CRCT exam.

# Conclusions

The level of academic self-efficacy of the students, increased by 21.5% and was significant p<.001 as measured by Albert Bandura's Children's Self-efficacy Scale (Bandura, 1995). This was largely due to the recognition of individual improvement. Bandura, (1993) stated that if individual progress was emphasized efficacy levels would improve. This was accomplished by issuing stickers that were placed on the Hall of Fame Poster in the classroom. The recognition of students for improving their individual scores on reading comprehension assignments emphasized personal improvement rather than class competition. By teaching the skill necessary for students to improve their reading comprehension ability, through the use of scaffolding and graphic organizers, students became more confident in their ability as their skills increased. According to Linnenbink and Pintrich (2003), teachers should provide specific feed back about student improvement. The stickers on the Hall of Fame poster did exactly that.

The reading level of students in the study increased. The mean grade equivalent, of students reading levels increased by .88, and the NCE percentage rose by 6.6% in a nine week period. The scaffolded instruction allowed students to improve their skills no matter what level they

were starting from The students involved in the study started from reading levels in the first percentile, as measured on the STAR reading test, up through the fifty-ninth percentile. The scaffolding allowed for differentiated instruction so that the needs of all the children in the class could be meet. Scaffolded instruction was a multiplier of efficacy building. Students could accomplish the task increasing their efficacy and skill level. As the skill level improved scaffolding could be reduced. Students can recognize decreasing levels of teacher help. From that, they can internalize increase in their own abilities to master the material.

The graphic organizers helped students to remember the relationships of events in the story. As they filled out the graphic organizers based on the material from the matrix they completed during reading, they were able to conceptualize visually what they had read. Special education students according to DiCecco & Gleason's (2002) need the graphic organizers to help the link the events in the story so that they can infer meaning from them. The concept map acts as a blueprint that helps students visualize the material (Guastello, Beasley & Sinatra 2000).

The students' performances on the 2005 reading CRCT exam were not positive as the researcher had hoped. Of the fifteen students in the study only seven of those had passing scores on this years test. One of the students was given an alternative assessment. This was below the 60% required by NCLB. However, four of the seven students of which we had previous scores, improved their score on this years administration of the test.

# Implications for practice

The conclusion developed from this action research project indicated that there are teaching practices that can lead to the development of higher levels of academic efficacy and higher levels of reading comprehension in special education students. The first is that students need to be publicly recognized for their improvement in achievement no matter how incremental that achievement is. This recognition for achievement helps to develop efficacy. The recognition needs to be specific to the task and should not be patronizing. Another teaching method that should be implemented for all special education students in scaffolded instruction. Scaffolding allows the students to be taught where his or her abilities are. As skill levels increase the scaffolding can and should be reduced so that the students work more and more on their own. A key ingredient to the scaffolded instruction is the use of a matrix. This allows students to file the information learned into many categories so that retentions and recall of the information will be easier. A third implication for practice is the use of graphic organizers for all special education students. This helps students visualize the information in a picture form.

# Questions for further research

This action research project was a study of how to increase the reading comprehension levels of resource special education reading students by increasing academic efficacy, use of scaffolded instruction, and through the use of graphic organizers. This combined a motivational aspect as well as individual differentiated instruction. An interesting question for further research would be can this method of instruction work as well with other groups of students who's reading achievement is not up to grade level. This study required intensive planning for proper implementation by the special education teachers and the researcher. Special educations classes are small so that individualized instruction can be given. Is there a way that the elements of this study could be replicated on a larger scale so that other low achieving students could benefit from the instructional tools that were developed in this study?

# Summary

The research problem of this action research project was to identify strategies to increase the reading comprehension levels of resource special education students at Austin Road Middle School. The strategies developed were to increase academic efficacy through the use of public recognition of achievement, scaffolded instruction, and the use of graphic organizers. The mean academic efficacy levels of the students in the study increased by 21.5%. Reading levels

increased on the STAR reading test by .88 grade equivalents, and 6.6% NCE scores. The program developed during the course of this action research project improved academic efficacy and reading comprehension of resource special education students at Austin Road Middle School.

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