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The Effect of Repeated Reading on Student Fluency: Does Practice Always Make Perfect?

Angela R. Roundy and Philip T. Roundy

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***Abstract*—**Fluency is a skill that, unfortunately, many students lack. This deficiency causes students to be frustrated with, and overwhelmed by, the act of reading. However, research suggests that the repeated reading method may help students to improve their fluency. This study examines the effects of repeated readings on student fluency. The study's overarching question is: What effect do increases in repeated reading have on reading fluency among middle school students from diverse backgrounds? More specifically, the authors examine whether repeated reading improves the fluency, reading speed, reading-oriented self-esteem, and confidence of students of diverse academic abilities, socio-economics statuses, and racial and ethnic backgrounds. To examine these questions the authors conducted a study using repeated reading strategies with a sample of students from an urban, middle school in the southeastern United States. We found that, on average, the use of repeated reading strategies increased students' fluency, words per minute (wpm) reading score, reading-oriented self-esteem, and confidence.

***Keywords*—**Comprehension, Diverse Learners, Reading Fluency, Repeated Reading.

I. Introduction

READING is inarguably one of the most important and critical educational skills, in part because it influences virtually all academic disciplines. Due to reading's universal influence, reading competency is a primary concern in today's schools [1]. Fluency is a major component of reading competency and the reading process [2]. Fluency is defined as "the ability to read connected text rapidly, smoothly, effortlessly, and automatically with little attention to the mechanics of reading, such as decoding" [3]. If children do not acquire the fundamentals of reading, which is based largely on reading fluency, at a young age it places them at a considerable disadvantage in their future academic pursuits. For this reason, the ability to read fluently at an early age has become increasingly emphasized [4]. Unfortunately, fluency remains a skill that many students struggle to master. This study examines how one instructional strategy – repeated reading – can potentially help teachers to increase fluency among their struggling readers. However, the study examines not only whether there is a link between repeated reading and fluency in middle school adolescents, but also whether or not this link holds for students from a diverse set of backgrounds.

A. R. Roundy is an educator with Leander Independent School District, Austin, TX 78726 USA (email: angela.roundy@leanderISD.org; phone: 512-249-9361).

P. T. Roundy is a doctoral student in the Department of Management, McCombs School of Business, University of Texas, Austin, TX 78712 USA.

II. Literature Review

Repeated reading is an instructional strategy originally developed by Dahl and Samuels [4]-[5]. The aim of the strategy is to help non-fluent readers build automatic word identification skills [5]. The repeated reading method consists of a non-fluent student orally reading a passage several times. With this method, students are instructed not to proceed to the next section of the text, or next passage, until the desired level of fluency is achieved. The reading passages provided to students are chosen so that they are at the students' reading level and are, approximately, 100 to 200 words in length. Repeated reading is effective because by reading the same passage over and over the number of word recognition errors decreases, reading speed increases, and oral reading expression improves [3].

The repeated reading method is based on the theory of automatic information processing [7]. This theory explains how individuals read and decode text. As LaBerge and Samuels explain, in the automaticity process fluent readers are able to decode text smoothly and effortlessly (i.e. automatically) [7]. However, non-fluent readers lack the ability to decode text rapidly. As a result, non-fluent readers have difficulties in both reading speed and comprehension. This difficulty arises because such readers must focus their attention on decoding the words. The result is that meaning is lost [8].

Moreover, Samuels contends that students who are able to comprehend what they read, but who are still non-fluent readers, have the necessary word attack skills but need additional practice reading in order to be proficient in both comprehension *and* fluency [2]. The repeated reading method, with its iterative cycles of readings, provides the required practice for struggling, non-fluent readers. In fact, Herman argues that less able, non-fluent readers benefit the most from the repeated reading method [9]. Another benefit of the repeated reading method is that the fluency gains made in one session of repeated reading have been found to carry over to future readings [7]. Similarly, research has found that the repeated reading of a particular passage can effectively improve students' overall reading fluency and comprehension ability [10]. Specifically, Moyer found that the multiple readings of a single passage increase overall fluency because it reinforces all levels of written language structure [11]. He states, "repetition of entire passages give the poor reader the needed practice in using higher linguistic structure (contextual and syntactic cues) as well as in extracting

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grapho-phonemic word structure" [11]. Finally, Dowhower has found that with repeated reading, "students are able to read a passage faster, more accurately, and with understanding" [12].

There are several other theories that attempt to explain why repeated reading may have a positive influence on fluency. For instance, Schreiber suggests that the success of repeated reading does not stem from one particular practice but from the discovery of learned morphological and syntactical cues [13]. Further, he believes that these cues are necessary for fluency to develop. However, the problem is that fluency is not often taught beyond primary grades and therefore the necessary cues are not developed. Then, as the reading material grows more complex, students begin to struggle with fluency and complexity, which has a negative influence on comprehension [14]. Deficiencies in fluency negatively influence comprehension because fluency serves as a bridge between word recognition and comprehension. In other words, because fluent readers do not have to concentrate on decoding the words, they can focus their attention on what the text means [14]. This allows them to make connections among the ideas in the text and between the text and their background knowledge. In this way, fluent readers recognize words and comprehend at the same time.

Finally, the positive influence of repeated reading on fluency has been found to foster other benefits for students. For example, Blum and Koskinen found that repeated reading not only helps to improve reading fluency and comprehension, but that it also helps students become more confident in their reading and more motivated to read [15]. In this regard repeated reading influences a student's reading-oriented self-esteem.

III. Repeated Reading and Diverse Learners

Repeated reading is not a new instructional concept. In fact, while it has not always been referred to as "repeated reading", the method has been practiced in the United States since, at least, the 19th century and it has been used in the Orient for centuries [6]. In fact, in many cultures the primary way children learn reading is by practicing a specific text numerous times until they can read it fluently. However, despite repeated readings' widespread use in the past, today's primary and secondary education classrooms are experiencing significant transformations [16]. The question then becomes, is repeated reading an appropriate and effective instructional strategy for the modern classroom? This question is especially pertinent when one considers that today's classrooms are composed of an increasingly diverse set of readers [16]-[17]. This diversity of academic ability, socio-economic status, and race and ethnic background, may dampen the positive influence of repeated reading on fluency. Therefore, before recommending the implementation of the repeated reading method, it is necessary to examine whether the method indeed produces increased fluency in classrooms composed of diverse learners.

IV. Methodology

A. Participants

The participants in this study were 110 middle-school (grade 7) students. The location of the study was "Ames" Middle School, an urban school in the southeastern, United States.

A diverse sample of students was chosen. Specifically, the sample was 44% white, 26% Hispanic, 24% Black, 3% Multiracial and 2% Asian/Pacific Islander. Socio-economically, over half of the sampled students (55%) were classified as economically disadvantaged. Also, the sample was representative of several different levels of academic achievement. In descending order of academic competency, there were students who were classified as gifted, honors, regular, and intensive. At the same time there were students in the sample who were reading "below grade level", "at grade level", and "above grade level". The participants in this study were in 7th grade language arts classes that had an average of twenty-three students. The language arts classes lasted for 50-minute periods and integrated reading, writing, and grammar.

B. Procedures

Because of the longitudinal nature of the relationship between repeated reading and fluency, the study was designed to last five weeks. Data were obtained from student interviews, a student reading survey, teacher observations, and reflections that included students' behavior, attitudes toward reading, and reactions to repeating reading experiences. Pre-tests, post-tests, student (individual and class) fluency charts and observations of the repeated reading group sessions, which were audio taped and transcribed, were also used.

First, reading surveys were used to measure students' attitudes and reactions to reading. Namely, the Garfield Elementary Reading Attitude Survey was administered. This survey measures students' attitude toward reading situations, both academic and recreational. Next, the pre-test, teacher observations, and reflections were administered. The pretest was used to establish a baseline record of the students' abilities and reading levels. Specifically, a words-per-minute test was given to each participant. Then, the repeated reading method was introduced to each student in the study. Once students understood fully the method, the repeated reading sessions began. The *Timed Reading Plus* series was the reading basal used for all participants. It consisted of a variety of nonfiction and fiction stories and was chosen because students had no prior exposure to the readings. The repeated reading sessions took place three times a week for five weeks. During the sessions, students individually read stories ranging from 4-6 pages; there was no cooperative learning during the study. Students began with the first story in the basal series and worked their way through it. They then read, rehearsed, and re-read each story until they demonstrated a score of 120 words per minute (the teacher kept track of and announced the time at one-minute intervals). After the wpm criterion was met, students moved on to the next story. Before moving on,

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each student individually recorded and calculated their results on a bar graph to show their progress. The time for each reading session varied; however, twenty minutes was allotted for each session. As a posttest measure, after each story was completed, students were given a wpm test. This procedure was employed for all readings. In addition, at the end of the five-week period, students were given a final wpm test to determine the fluency and progress they had made during the study. Also, during this five-week period, interviews, reflections, and observations were completed. Finally, at the conclusion of the repeated reading experiment, post-reading surveys, post-student interviews, and teacher observations and reflections were conducted.

C. Data Analysis

According to Hubbard & Powers (2003), when engaged in qualitative research, multiples sources of data are necessary to "triangulate" the correct explanation for a phenomenon. Since at the completion of the study we had data from several different types of sources, triangulation was achieved. Specifically, student interviews and surveys were transcribed and coded, teacher observations and reflections were examined and coded, and each student's fluency score was analyzed, compared, and examined for emerging patterns.

D. Findings

The results of the Garfield Reading Attitudes Survey showed that most students felt they were able to read "well" and "fast." For example, a student named "Evan" said, "I can read fine. I can read really fast. 120 words per minutes is nothing. I can read a whole comic book in less than twenty minutes" (Observation notes, October 6, 2006). Many students also felt that their comprehension was adequate. However, according to the repeated reading pre-test, this was not the case. On average, at the beginning of the study students were not able to reach the target goal of 120 wpm. For example, "Evan" only scored 90 wpm on the first initial reading and did not reach the target reading rate of 120 wpm until the fifth reading of the same story. Therefore there was a discrepancy between most students' perceived and actual fluency, and most had considerable room for improvement.

Data analysis indicated that the repeated reading program was effective. As previously stated, researchers collected data by observing and listening to students in the classroom, from reading students' writings, and from reviewing students' fluency and comprehension graphs. Teacher reflection surveys, teacher observation logs, fluency graphs, and comprehension graphs were also used during observations.

At the onset of the study, some students possessed a negative attitude towards both repeated reading and reading in general. For instance, a student named "Frank" was frustrated at the beginning and claimed, "I don't need this [repeated reading] to help me read. I can read fine on my own. I think this is stupid – why do we have to read the same thing over and over?" (Observation notes, October 6, 2006). But as time passed, results showed there to be an increase in favorable comments towards reading and repeated reading. For example, "Kayla" who struggled early on, said, "I feel like a new reader. I can read faster and it seems a lot easier" (Observation notes, October 30, 2006). This suggests an increase in the students' reading-oriented confidence.

Reviewing students' fluency charts showed that, on average, there was a noticeable increase in reading fluency. Between weeks one and five the average wpm (above the 120 wpm target threshold) of the students sampled nearly doubled. Specifically, between weeks two and three and weeks four and five there was an approximately 2 word per minute increase (above the 120 wpm threshold); while between weeks three and four there was a 1 word per minute increase. So in addition to increasing their wpm scores to achieve the 120 wpm goal, on average students increases in wpm *above* the 120 wpm threshold increased each week. Also, after the third week of the study many students went from requiring the maximum amount of time to complete a session, twenty minutes, to needing only twelve minutes. It was obvious that students were reading with increased ease. For example "Michael" said during the third week, "I did it [achieved the 120 wpm goal]! I did it on the first try [the first reading]. I did 120" (Observation notes, October 27, 2006). In fact, as an increasing number of students met the target goal of 120 wpm, students began to request for the goal to increase from 120 wpm to 130 or 140 wpm. However, for consistency, the target goal for the study remained at 120 wpm. But, students did achieve scores that far surpassed the 120 wpm goal. As fluency scores increased, both behavior and attitudes continued to change. For example, "Brooke" said, "I feel better when I read. I don't hate it [reading] as much as I did. I think repeated reading has probably helped" (Observation notes, November 1, 2006). Overall, from the initial reading to the last reading in week five, there was, on average, a five word per minute increase above the 120 wpm threshold.

As discussed above, poor fluency has a negative impact on reading comprehension. But as fluency increased, there was evidence that comprehension was positively affected. For example, "Trisha", who originally had a very negative attitude towards reading, stated, "Look! (she pointed to her paper) I went up in score. I did better this week than last. And I missed only one comprehension question too" (Observation notes, October 27, 2006). While another student, "Andrew", said, "I like this activity [repeated reading]. I can't believe I understand most of the words." (Observation notes, October 31, 2006). There was considerable evidence that improvements in fluency were positively related to improved reading comprehension.

Finally, it was evident that the achievements made were both academic and emotional. At the end of the study, students seemed more motivated and less frustrated about repeated reading, and reading in general. Many of the students became more willing to learn and strove to improve their reading ability. On average, reading oriented self-esteem and confidence also increased. A by-product of this was that as self-esteem increased, disruptive behaviors decreased. Also,

since students saw immediate improvements, they became more motivated to give repeated reading "a chance". Each session became more routine and more assimilated into the classroom procedures. In addition, students received considerable satisfaction from meeting the target goal and also from individually graphing their reading rates for each reading session. By graphing the results, students were able to notice, almost instantly, the improvements they were experiencing. Ultimately, the repeated reading program led to significant improvements in fluency and attitudes among the diverse learners in the study.

V. Discussion

The primary goal of this study was to determine whether repeated reading would have a positive influence on the reading fluency of diverse learners. As previously stated, fluency has been defined as "the ability to read connected text rapidly, smoothly, effortlessly, and automatically with little conscious attention to the mechanics of reading, *such as decoding*" (emphasis added) [3]. When students must focus on decoding, they often do not have enough available attention left for comprehension. Samuels writes, "the problem facing the beginning reader is that at any given moment there is a limited amount of processing space or attention available for decoding and comprehension, and each task by itself occupies a considerable amount of the limited processing space available" [3]. For many of the struggling readers in this study, it was evident that they lacked the ability to process and decode words smoothly. Because of this, most of the students lacked the ability to comprehend, and consequently became frustrated with the reading process. We believe this lack of confidence contributed to the negative attitudes and behaviors at the beginning of the study. Students came into the repeated reading program feeling overwhelmed, frustrated, and disenchanted with their own reading abilities. These feelings were directly attributable to deficiencies in fluency.

Moreover, studies of adolescents, and especially of middle school-aged children with reading difficulties, have found that struggling readers have language comprehension skills that often exceed what their decoding skills allow them to read [18]-[24]. In other words, even though children may be able to orally understand the words and information contained in a text, they may still be unable to read that text independently [19]. For instance, despite the fact that all of the students could read, during our pre-test observations, it was interesting that when we asked the students what they had read or what the text was about, in many instances the students had no idea. They were able to read the words but were not able to process and make connections about what the words meant. But once the students started to decode the text using the repeated reading method, and hence to improve their fluency, their comprehension significantly improved.

Many studies have also shown that students' who develop proficient decoding and reading skills at a young age have higher levels of text comprehension [23]-[27]. This was also true in the present study. On average, the higher-level readers reached the wpm target goal on the first reading, or at least, sooner than other readers. For them, the repeated reading method was very easy. However, they still increased their fluency and decoding skills.

Research has shown that repeated reading is an effective way for students to develop reading fluency. In this study, it was clear that students using repeated reading did, in fact, increase their reading fluency. The participants doubled their average wpm increase from the first reading to the last readings. Interestingly, Samuels compares readers to athletes and musicians in training [6]. He points out that coaches and music teachers take a complicated activity and break it into sub-skills until the sub-skills can be mastered. This is precisely what the repeated reading of a passage strives to do [6]. And, for students in this study, this is exactly what was accomplished. Students were able to break down readings in order to achieve the target reading wpm score. As students re-read and rehearsed each story, they improved their fluency, added greater intonation and expressiveness to their reading, and began to process and to derive meaning from the text. For many of these struggling readers, reading a passage one time was not enough. The repeated reading method gave these students an opportunity to revisit, revise, and improve their reading and comprehension of the text.

Unfortunately, Allington found that students in most classrooms do not have adequate opportunities to practice and refine their reading skills and that struggling readers actually have fewer opportunities to practice than skilled readers [28]. Research has also found that the best readers are typically given the most opportunity to practice developing, decoding, fluency, and reading skills and that the worst readers, the ones who arguably need the most practice, are given the least opportunity to develop these skills [28]. In this study, the struggling readers were provided with the same reading opportunities as the best readers. However, one factor that could not be equalized was absences. Many of the worst readers were frequently absent, which caused them to not participate in each reading session. Because of these absences, the struggling readers ended up having fewer chances to develop decoding and other skills, and to increase their fluency.

Finally, Dowhower claims that the effects of repeated reading are so strong that it should be "woven into the very fabric of daily literacy instruction" [12]. Providing children with opportunities to practice reading with constructive feedback and direction should be the intention of every educator of young children. According to Dowhower, this time-intensive, individualized literacy intervention should be sustained over a very long period of time [12]. Clearly, developing reading fluency requires practice. Unfortunately, due to time constraints and curriculum deadlines in the classroom, repeated reading is not an activity that can be implemented daily. However, if repeated reading could be implemented more frequently into the curriculum, the magnitude of increases in reading scores and improved

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attitudes might increase dramatically. This is evidenced by the fact that within this study, which was of minimal duration, there were significant improvement in fluency and attitudes about reading.

VI. Limitations, Implications, and Contribution

A. Limitations of the Study

The study had three primary limitations. First, the limited time frame of the experiment (5 weeks) makes it impossible to make claims about the mid-range and long-term effects of repeated reading on fluency. Second, due to absences, and since the study's duration was not long enough to schedule "make-up" repeated reading sessions, the repeated reading scores for some students could not be included in the analysis. Finally, the most significant limitation of this study is that the nature of its context made it impossible to have a control group. Since the same teacher taught the entire population of students, it would not have been appropriate for that teacher to use the repeated reading method on some students (i.e. the sample) and not on others. Therefore a control could not be constructed. And, without a control group, it could be argued that the gains made in fluency were due to, say, the passage of time (or some other factor), rather than to the repeated reading strategy.

B. Implications for Practitioners

This study has shown that repeated reading can positively affect the reading fluency of diverse learners. However, as previously stated, it has been found that long-term, individualized repeated reading instruction with multiple opportunities to practice each passage of text, is too hard for most teachers to easily weave into their daily literacy instruction. But fortunately, researchers have found ways to reduce the burden on the classroom teacher by using less-structured, adaptive reading methods. For example, some have experimented with peer coaching strategies where the students are taught to listen to each other read and to then provide feedback [29]-[30]. According to Schumm and Vaughn, in these activities students read a passage individually for the teacher and then practice with a peer several times before reading for the teacher a second time [29]. This method helps to relieve the time constraint on the teacher and gives students a daily opportunity to practice oral reading fluency with feedback [29]-[30]. In addition, repeated reading computer technology is available that provides students with feedback activities that monitor their reading and comprehension [29]. With this software, students read passages aloud into a microphone, and the computer provides assistance as needed. In addition, the computer also keeps track of performance and encourages students to meet target goals (Schumm and Vaughn, 1991). This kind of technology makes repeated reading a more easily implanted literacy method.

C. Theoretical Contribution

The primary contribution of this study is that it has extended the prior research examining repeated reading and fluency to learners of diverse backgrounds. Specifically, this study has shown that repeated reading is not merely a method that is effective on the "typical" student; but rather, it is an instructional strategy that successfully improves fluency in students of various academic abilities, socio-economic statuses, and racial and ethnic backgrounds.

VII. Conclusion

If teachers are to provide their students with the most effective reading instruction possible, then they need to first identify their students' reading levels and skill levels in order to design an appropriate literacy program that is tailored to accommodate each student's reading abilities. Consequently, it is important for teachers to analyze and to be aware of their students' weaknesses and strengths. While doing so, teachers may find that some students are deficient in fluency. If this problem is not addressed, then these students will struggle to become proficient readers – with all of the problems that non-proficiency entails. However, repeated reading is a viable means for improving fluency deficiencies. Ultimately, akin to a domino effect, as students improve their fluency they will improve their comprehension, increase their reading level, increase their reading-oriented self-confidence, and expand their understanding and enjoyment of language.

References

[1] L.S. Fuchs, D. Fuchs, M. K. Hosp, J. R. Jenkins. "Oral Reading Fluency as an Indicator of Reading Competence: A Theoretical, Empirical, and Historical Analysis." *Scientific Studies of Reading*, 5, 239-256, 2001.

[2] M. Wolfe and T. Katzir-Cohen. "Reading Fluency and its Intervention." *Scientific Studies of Reading*, 5: 211-239, 2001.

[3] S. Samuels. *Reading fluency: Its development and assessment. What research has to say about reading instruction*. Newark: International Reading Association, 2002, pp. 166-183.

[4] C. E. Snow, M.S. Burns, and P. Griffin. *Preventing reading difficulties in young children: Intellectual property in the information age.* Washington, DC : National Academy Press, 1998.

[5] P.R. Dahl. "An experimental program for teach high speed word recognition and comprehension skills." In J. E. Burton, T. Lovitt, & T. Rowland (Eds.), *Communications research in learning disabilities and mental retardation.* Baltimore: University ParkPress. 1977, pp. 33-65.

[6] Samuels, S. "The method of repeated readings." *The Reading Teacher*, 32: 403-408. 1979.

[7] D. Laberge and S. Samuels. D. "Toward a theory of automatic information processing in reading." *Cognitive Psychology*, 6: 293-323, 1974.

[8] C. Tovani. *I read it, but I don't get it: Comprehension strategies for adolescent readers.* Denver, CO: Pearson Education, 2000.

[9] P. Herman. "The effects of repeated readings on reading rate, speech pauses, and word recognition accuracy. *Reading Research Quarterly*, 20: 553-565, 1985.

[10] W. Thieren. "Fluency and comprehension gains as a result of repeated reading: a meta-analysis." *Remedial and Special Education*, 25: 252-262, 2004.

[11] S. B. Moyer. "Repeated reading." *Journal of Learning Disabilities*, 45: 619-623, 1982.

[12] S. Dowhower, "Effects of repeated reading on second-grade transitional readers' fluency and comprehension. *Reading Research Quarterly*, 22: 389-406, 1987.

[13] R. Schreiber "On the acquisition of reading fluency." *Journal of Reading Behavior*, 12: 177-186, 1980.

[14] J. Worthy. "Fluency beyond the primary grades: From group performance to silent independent reading." *The Reading Teacher*, 55: 334-42, 1982.

Open Science Index, Educational and Pedagogical Sciences Vol:3, No:9, 2009 publications.waset.org/15850/pdf

[15] I. H. Blum and P. S. Koskinen. "Repeated reading: a strategy for enhancing fluency and fostering expertise. *Theory into Practice*, 30: 195-200, 1991.
[16] J. D. Wilson and L. H. Casey. "Understanding the recreational reading patterns of secondary students." *Reading Improvement*, 44: 40-49, 2007.
[17] K. H. Au. "Social constructivism and the school: Literacy learning of students of diverse backgrounds." *Journal of Literacy Research*, 30: 297-319, 1998.
[18] P. Bertelson, "The onset of literacy: Liminal remarks." *Cognition*, 24: 1-30, 1986.
[19] F. Conners and R.K. Olson. "Reading comprehension in dyslexic and normal readers: A component-skills analysis." In D.A. Balota, G.B. Flores d'Arcais, and K. Rayner (Eds.), *Comprehension processes in reading*. Hillsdale, NJ: Erlbaum, 1990, pp. 557-579.
[20] U. Frith, U. and M. Snowling, M. "Reading for meaning and reading for sound in autistic and dyslexic children." *British Journal of Developmental Psychology,* 1: 329-342, 1983.
[21] W. A. Hoover and P. B. Gough. "The simple view of reading." *Reading and Writing*: *An Interdisciplinary Journal*, 2: 127-160, 1990.
[22] C. Juel, P. L. Griffith, and P. B. Gough, P.B. "Acquisition of literacy: A longitudinal study of children in first and second grade." *Journal of Educational Psychology*, 78: 243–255, 1986.
[23] C. A. Perfetti. *Reading Ability*. New York Oxford University Press, 1985.
[24] K. E. Stanovich. "Word recognition: Changing perspectives." In R. Barr, M. L. Kamil, P.B. Mosenthal, and P. D. Pearson (Eds.), *Handbook of reading research* (Vol. 2, pp. 418-452). New York: Longman, 1991.
[25] L. C. Bell and C. A. Perfetti. "Reading Skill: Some adult comparisons." *Journal of Educational Psychology*, 86: 244-255, 1994.
[26] M. Bruck. "The word recognition and spelling of dyslexic children." *Reading Research Quarterly*, 23: 51-69, 1988.
[27] A. E. Cunningham, K. E. Stanovich, and M. Wilson, "Cognitive variation in adult college students differing in academic ability." In T.H. Carr and B.A. Levy (Eds.), *Reading and its development: Component skills approaches.* New York: Academic Press, 1990.
[28] R. Allington. "If they don't read much, how are they ever going to get good?" *Journal of Reading*, 21: 57-61, 1977.
[29] J. S. Schumm and S. Vaughn. "Making adaptations for mainstreamed students: General classroom teachers' perspectives." *Remedial and Special Education*, 12: 18-27, 1991.
[30] J. S. Schumm, S. Vaughn, L. Saumell, L. "Assisting students with difficult textbooks: Teacher perceptions and practices." *Reading Research and Instruction*, 34: 39-56, 1994.

Open Science Index, Educational and Pedagogical Sciences Vol:3, No:9, 2009 publications.waset.org/15850/pdf