

Using the Principles of Assisted Reading to Improve Fluency in the Performance of a Student Athlete with Language Based Learning Disabilities

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ABSTRACT

Through this single subject study, it is suggested that automaticity and speed can limitedly improve fluency in a learning disabled student athlete not only in learning new skills cognitively, but also in athletic performance. The intervention of assisted reading couples the two principles of speed and word recognition resulting in the study participant reading faster with less word recognition errors on each repeated reading, reinforcing the text with tape recorded backups and video illustrations, and thus performing more automatically with less hesitation.

INTRODUCTION

Assisted reading, which contends that practice builds fluency, has been successfully used to improve the reading skills of students with learning disabilities (Carbo, 1978). Assisted reading involves either a teacher-assisted condition or a tape-assisted condition. The teacher-assisted method requires a teacher on a one-to-one basis and the tape-assisted method replaces the teacher with a tape recording of the text being read (Shany & Biemiller, 1995). Building fluency in reading according to Chall (1983) assists the individual in advancing from the plateau of learning to read to the higher level of reading to learn the new (Stanovich, 1986).

When working with learning disabled students, research indicates (Stanovich, 1986) that the critical component in successful reading is not decoding, but rather the ability to automatically recognize words that inhibit fluency and thus comprehension. Fluency is a prerequisite for reading comprehension as established by Samuel (1985, 1987). He defines fluency as the ability of automaticity stating that for reading comprehension to occur, the reader must be able to automatically recognize words. Word recognition and comprehension cannot be performed simultaneously (Samuel & Naslund, 1994). In other words, access of word meanings, although necessary, is not enough for fluency to take place. Fast access to word recognition is also necessary, which can only improve with practice. Expert knowledge from practice and repeated exposure is the key to automaticity (Schneider, 1989). The faster information can be accessed from the knowledge store, the more

fluent the reader (Samuel & Naslund, 1994). Therefore, speed in word access and comprehension is the key to automaticity and instructors are responsible for implementing procedures, which improve these skills.

As instructors of learning disabled readers, we can adopt assisted reading techniques that have been identified, described, and evaluated (Mathes, Simmons, & Davis, 1992) and choose the appropriate method of instruction for each individual situation. Assisted reading techniques are formatted to maximize the benefits of reading practice by pairing repetitive readings with immediate feedback from an instructor or tape. The goal is to improve reading fluency and ultimately to improve reading comprehension. Students with lower reading ability have evidenced the greatest gains using assisted reading (Gilbert, Williams, & McLaughlin, 1996).

The purpose of the study was to find if the intervention, assisted reading techniques, affects the reading fluency, reading automaticity, and subsequent learning of new plays by a college student athlete with a reading learning disability. Concerned coaches made a request of this study's researchers for assistance in how to best teach a student athlete with language-based learning disabilities new plays. An intervention was implemented using the principles contained in assisted reading of expert knowledge from practice and repeated exposure to improve speed of word access and comprehension. If the intervention did show to be effective, then the researchers speculated that principles of assisted reading could be used to improve the reading fluency and thus athletic performance of other student athletes with similar learning disabilities.

Learning Disabilities

An individual with a disability is defined as a person who:

1. Has a physical or mental impairment, which substantially limits a major life activity;
2. Has a record or history of such an impairment; or
3. Is regarded as having such an impairment (Gerber & Reiff, 1994).

In regard to measurable learning disabilities, impaired major activities include mental and emotional processes such as thinking, concentrating, and interacting with others (EEOC, 1995). For a student athlete, the disability might substantially limit his/her ability to execute efficiently athletic performance on which his/her athletic scholarship depends. Therefore, coaches would be wise to implement teaching techniques and learning accommodations which even out the playing field for the student athlete with learning disabilities in the arenas of athletic competition. As in the case of a student athlete with a reading learning disability, assisted reading as adapted in this study could be a beneficial and appropriate accommodation.

College Students with Learning Disabilities

Although college students with learning disabilities may have the cognitive potential to handle the content presented to be learned, they lack the skills and strategies necessary for obtaining and processing the information from text and lectures (Putman, 1984). Research (Stanovich, 1986) suggests that learning disabled readers with poor comprehension would rather not read when given the choice

because their weak skills make reading an unrewarding experience. Therefore, poor readers remain inefficient in fluency and performance because they do not get enough practice. Consequently, a learning setting is needed for learning disabled students that concentrates on the repetition of content and not the mechanics of reading in order to improve automaticity.

The learning setting for this study was organized around assistance in identifying unfamiliar words, by oral previewing, by visual reinforcement, and by audio reinforcement. Assistance was provided by telling the student what the unfamiliar words of the plays were. Oral previewing by the adult instructor presented the student with a model of how the text should be read before having to read the text independently. For low performance readers, reading text independently may be frustrating, so oral previewing is appropriate for students with some reading skill, but whose fluency is weak (Dowhower, 1987). Visual reinforcement in explanation of the text being read was presented two fold: 1) in color coded index cards; and 2) in a video displaying the explanation of the written text. Audio reinforcement of the text to be learned was presented by: 1) the fore-mentioned video; 2) coaches reciting and explanation of text play on audio cassette; 3) repetition of the text on the sideline; and 4) recitation of the text play by the student athlete while reading the card and watching the video.

Participants

The single case study participant was a male college student with learning disabilities registered with the disability support office at a four year university in a Liberal Arts curriculum. He read 43 words per minute and was assessed at a 3.5 - 4th grade reading level according to the Woodcock Reading Mastery Tests (Woodcock, 1990). His testing data met the criteria for a Reading Disorder according to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (American Psychiatric Association, 1994). The attending assisting readers were a learning disability specialist in the disability support office of the university and a psychologist who is an academic support counselor at the same university.

Procedure

The researchers were approached by a coach from the university football program regarding a problem he was having with a player. The coach stated that one of his student athletes was having great difficulty remembering the plays and he wanted to know if it was possible to develop a plan to enhance the player's ability to read and remember the plays. The student athlete has a diagnosed learning disability and because of this, the coach felt the student athlete might need special assistance. The subject was an active participant in the accommodations offered by the university's disability support office. Therefore, the following data was known to the researchers.

Woodcock Reading Mastery Test in Letter Word Identification, Test #22 (Woodcock, 1990) was used to indicate the base line of reading ability. This test involved the reader researcher pointing to words for the subject to identify within four seconds. Testing continued until the subject had missed five or more consecutive items or had responded to the 150th word.

Woodcock Reading Mastery Test in Passage Comprehension, Test #23 (Woodcock, 1990) was used to indicate the base line of reading comprehension. This test involved the subject reading passages and filling in the blank spaces with appropriate words. The subject continued the test items until he had missed five or more consecutive test items or until passage number 85 was completed.

Reading Speed: Word and text reading speeds were assessed with the Six-Way Paragraphs by Walter Pauk (Pauk, 1983), using the first reading in the Middle Level text which begins at grade 4 reading difficulty. The subject in this study read 43 words per minute. The subject was timed using the Middle Level text in the Six Way series. The Middle Level was chosen because it is at a fourth grade reading level in Woodcock Mastery Reading Test of Word Identification and 4.0 in Woodcock Mastery Reading Test of Passage Comprehension (Woodcock, 1990). Dowhower (1987) documented that students reading in the 25 - 45 words per minute range were poor readers and benefited from simple repetition. Samuel's system of assisted reading (1979) by repetition and repeated exposure was chosen as the appropriate program for reading fluency improvement for the subject in this study.

Observation of Problem

Upon meeting with the coach to better determine the nature of the problem, it became evident that the student athlete in question was unable to recall plays that he had been told to run. The student athlete was told a play on the sidelines and then he would go onto the field and repeats the play to his teammates. The stated problem was that the player was not able to retain the information from the time he was told the play to the time he needed to repeat it to his teammates. He was also not able to read and comprehend the plays as reviewed in the team position meetings. The delay from the time he was told the play to the time he had to repeat it was less than one minute. In assisted reading terminology, fluency of comprehension of the quoted text was hampered. In simple terms, the player would be told the play on the sidelines and then forget it by the time he got to the huddle.

To assess the problem faced by the coach and the player, the researchers decided to observe practice. The observation would allow the researchers to see firsthand how the necessary information was being transferred to the student athlete from the coach. It would also allow the researchers to assess the most appropriate means of intervention.

During the observations of practice, it was noted that the coach would tell the play to the player and the player would then proceed to the huddle. While the coach was saying the play, there was little eye contact and there were many distractions, both auditory and visual in nature. In assisted reading terminology, the lack of one on one contact between the coach and the student and the various distractions negated the presence of oral previewing, an essential element to successful communication with language processing disabled students.

Furthermore, the coach would usually say the play only once and the player would not repeat the play to the coach. A key component to assisted reading skills is the use of instant repetitions orchestrated by the teacher (coach). Such repetitions were absent during the conveyance of information from coach to student athlete. Therefore, there was little to assure the player that he was receiving and conveying

the text correctly. Automaticity in text comprehension was not taking place.

Upon further discussion with the coach, it became clear that during meetings prior to active practice, when position coaches meet with their players, the majority of the time was spent with the coach lecturing to the players and drawing plays on the board. The players were not afforded the opportunity to discuss the information in any detail. The coach also reported that the player in question usually did not participate during the discussion that did take place in these meetings. Therefore, the player did not participate in any activities that could be equated with the part of oral previewing of written verbal text in the practice of assisted reading.

In summary, the issues prompting intervention included:

1. During position meetings, coaches reported inability of subject to read and remember plays.
2. On the field, coaches reported inability to remember plays from sideline to huddle.
3. On the field, coaches reported inability of subject to read defensive coverage and adjust for execution of called play.
4. Academic advisors reported the subject's frustration and sense of helplessness with lack of playing time.

Interventions

To address the needs of the player and coach, three interventions were decided upon:

1. Previewing of text to be learned;
2. Repeated & immediate exposure to the text to be learned;and
3. Audio as well as visual reinforcement of text to be learned.

Previewing of Text.

The play to be learned would be discussed thoroughly in the position meetings prior to practice. Discussion would include more interaction between player and coach, instead of straight lecture on the coach's part, allowing for further clarification and oral previewing of text to be learned. The coach was encouraged to give as much eye contact as possible when giving the play to the player on the sideline.

Repetition of Text.

When the player received text on the sideline, he was instructed to repeat the play to the coach orally immediately after hearing it and before proceeding to the huddle. This would ensure the accuracy of the heard text. Additional repetition of text was introduced in the form of flash cards, audiocassette with the coach's voice repeating the plays, and visual, videoed renditions of the same plays.

Visual and Oral Reinforcement.

Flash cards were developed to help the player remember the plays. To accomplish this, the coach gave the authors the playbook and a flash card was made for each

play. On one side of the card the starting position on the field for each player was drawn. On the other side of the card, the actual play was written. Each part of the play was written in different colors. For example, if a play was Right 23 Wing G O, Right would be depicted in one color, 23 in another, Wing in another, and G & O in separate colors, for visual differentiation. The student athlete was given these cards and instructed to read the cards aloud and then look at the formation on the opposite side. In addition, the player was given an audio tape and a video of the plays so he could hear the play as called in a game and see a video of the actual play being run. He would use the audio and videotapes in conjunction with the flash cards. This routine was used every day for two months in the summer months between playing seasons.

RESULTS

1. During team position meetings, coaches reported decreased errors in retention of plays to be learned by subject.
2. Researchers and coaches observed positive self esteem as seen in increased motivation to learn plays and sense of hope when guided in the specific interventions.
3. On the field, coaches reported no improvement on execution of plays.
4. Academic advisors reported the subject's increased self-esteem as told by self-report.

DISCUSSION

Through this study, it is suggested that automaticity and speed can improve fluency in a learning disabled athlete's athletic performance. Since the necessary precondition for fluency in reading is the ability to quickly and accurately access the phonological representations of words and the semantic meanings of words, then opportunities must be afforded students to increase time spent in reading along with specialized assistance in reading. Assisted reading couples these two principles of speed and knowledge. The student is exposed to a correct reading of a text reinforced with a visual and color coded differentiated script repeatedly, allowing a knowledge base to set in. In addition, speed in reading is encouraged to increase the rate of accessing the knowledge base. As a result, the fluency goal becomes reading faster with less word recognition errors on each repeated text. It can be predicted from the results of this study that an assisted reading intervention could be a useful tool in increasing the reading fluency and in this study's setting, the automaticity of athletic performance of college students with language based learning disabilities.

In this study, the baseline data for reading fluency was given, yet it was difficult to compare current athletic performance with past athletic performance as it related to learning the plays. However, a baseline of athletic performance can be obtained easily as many coaches use a grading system. Unfortunately, one was not used in this instance because of an across the board change in coaching staff during the time of the study. It is difficult to know if any improvements were legitimate because of the assisted reading interventions or because of continued practice with the team. Other factors that cannot be controlled like playing time, change in coaches, change in offense, and mental attitude can affect an athlete's performance on the field. Despite the lack of data supporting an improvement in the student athlete's performance, his coaches have reported a decrease in the number of mistakes made in calling plays.

Reality is that despite our intervention and its observed limited positive impact, our player is still not playing. No matter how well one helps an athlete learn the basic system, there are other factors that affect actual play and transfer of knowledge from one situation to another. These types of issues affect an athlete's ability to perform and offer other areas that need to be addressed.

REFERENCES

- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.
- Carbo, M. (1978). Teaching reading with talking books. The Reading Teacher, 32, 267-273.
- Chall, J. (1983). Stages of reading development. New York, NY: McGraw Hill.
- Dowhower, S.L. (1987). The effects of repeated reading on second grade transitional readers' fluency and comprehension. Reading Research Quarterly, 22, 389-406.
- EEOC guidance: disability defined. (1995, March). Americans With Disabilities Newsletter.
- Gerber, J., Reiff, B. (1994). Learning Disabilities in Adulthood. MA: Butterworth, Heinemann.
- ✓ Gilbert, L. Williams, R., & McLaughlin, T. (1996). Use of assisted reading to increase correct reading rates and decrease error rates of students with learning disabilities. Journal of Applied Behavior Analysis, 29, 255-257.
- Guthrie, B. (1991, Winter). Effective strategies for teaching fluency. Ohio Reading Teacher, 25, 39-41
- ✓ Mathes, G., Simmons, D., & Davis, I. (1992). Assisted reading techniques for developing reading fluency. Reading Research and Instruction, 31, 70-77.
- Pauk, W. (1983). Six- way paragraphs, middle level. Providence, RI: Jamestown Publishers.
- Putnam, M.L. (1984). Post secondary education for learning disabled students: a review of literature. Journal of College Student Personnel, 68-75.
- Samuels, S.J. (1979). The method of repeated readings. The Reading Teacher, 32, 403-408.
- Samuels, J. (1985). Automaticity & repeated readings. In J. Osborn, P. T. Wilson, & R. C. Anderson (eds). Reading education: Foundations for literate America (pp. 215-230). Lexington, MA: Lexington Books.
- Samuels, J. (1987). Information processing abilities and reading. Journal of Learning Disabilities, 20, 18-22.
- Samuels, J. & Naslund, J. (1994). Individual differences in reading: the case for lexical access. Reading & Writing Quarterly: Overcoming Learning Difficulties, 10, 285-296.
- Schneider, W. (1989). Domain - specific knowledge and memory performance: A comparison of high - and low - aptitude children. Journal of Educational Psychology, 81, 306-312.
- Shany, M.T., & Biemiller, A. (1995). Assisted reading practice: Effects on performance for poor readers in Grades 3 & 4. Reading Research Quarterly, 30, 384-393.
- Stanovich, K.E. (1986). Mathew effects in reading: Some consequences of individual differences in the acquisition of literacy. Reading Research Quarterly, 21, 360-406.
- Woodcock, R. (1990). Woodcock - Reading Mastery Tests. Allen, TX: DLM Teaching Resources.