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MUGC Summer Enrichment Program and Reading Achievement: Program Evaluation

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**MUGC Summer Enrichment Program and Reading Achievement:
Program Evaluation**

Thesis submitted to
The Graduate College of
Marshall University

In partial fulfillment of
The requirements for the degree of
Educational Specialist in
School Psychology

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Abstract

This purpose of this study is to determine if participation in the Marshall University Summer Enrichment Program enhances children's reading skills and to determine if a gender difference was evident in reading achievement scores. DIBELS was used to determine reading achievement scores at the beginning, middle, and end of program. The data obtained were compared using a General Linear Model-Within Subjects Factors through ANOVA to determine the mean of benchmark 1 and 3 as well as the significance level of the reading scores. The findings of this study indicated no differences in Oral Reading Fluency in total scores or in regards to gender. However, Retell Fluency was significantly different in both measures: total scores and gender.

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MUGC Summer Enrichment Program and Reading Achievement:

Program Evaluation

Chapter I

Literature Review

Reading is a lifelong skill that is important to one's success both in the realm of education as well as throughout one's lifetime. Reading not only is directly linked with educational achievement, it has also been linked to self-esteem, productivity, and success. Poor reading skills have been linked to high school drop out rates, delinquency, and unemployment (McGill-Franzen, 1987; Kaminski & Good, 1996). Reading education is a crucial key to providing educational and lifetime opportunities to children. It is an essential skill that is taught at an early age that continues to yield benefits throughout one's life.

Reading Instruction

In 1997, the Director of the National Institute of Children Health and Human Development (NICHD) was asked by Congress and the Secretary of Education to develop a panel of representatives to assess the status and effectiveness of researched-based knowledge and approaches of teaching children to read. The NICHD and Secretary of Education created the National Reading Panel (NRP) to implement this request. The NRP consisted of fourteen highly qualified individuals who were teachers, educational administrators, parents, reading teachers, colleges of education, and leading scientists in reading research. This team identified early developmental interactions, environments, and critical skills that were imperative in the beginning of reading education (National Reading Panel, 2000).

The NRP (2000) findings resulted in identification of five essential components in reading instruction: phonemic awareness, phonics, fluency, comprehension, and vocabulary. Phonemic Awareness instruction was found to significantly improve reading skills. Phonic instruction was linked to significant benefits for children who were having difficulty learning to read in grades kindergarten through 6th. Fluency was found to have a significant positive impact with word recognition and comprehension across all grade levels. Reading comprehension and vocabulary are essential components to reading and are critically important to be able to read, understand, recall, and apply knowledge in reading within an educational environment.

Research has demonstrated scientifically based reading instruction is linked to success in teaching children to read. Scientifically based reading education is proven to be a more effective than other methods used in the classroom. Scientifically based reading instruction is a systematic, empirical approach that utilizes the five essential components of reading instruction. These methods have been subjected to rigorous data analysis and are accepted by a panel of independent experts or peer-reviewed journals through scientific, objective review. They also yield observations and measurements that are valid across multiple observers, evaluators, and measurements. Scientifically based reading instructions address specific individual strengths and weaknesses and give explicit targeted instructional strategies. They require an allotment of uninterrupted reading time, such as a 90-minute reading block. Scientific methods also ensure teachers are given proper instruction to implement the reading programs effectively to meet all students' individual needs (Moats, 2007; Virginia State Department of Education, 2002).

Curriculum Based Measurement

Curriculum Based Measurements (CBM) are a way of assessing children's educational progress through data driven decision making. CBM's are backed by research, standardized,

reliable, and valid. They represent classroom materials without being exactly the same to prevent practice and memory affects. CBM's have direct observational procedures, multiple equivalent samples, are time efficient, and easy to perform. They produce graphical data of student's performance over time. They are used to help teachers make meaningful decisions about individual student achievement. CBM's are a way of documenting student growth as well as determining instructional modifications. They gather direct evidence of student performance to support educational decisions. They can be used to help predict success in high stakes testing, measure progress toward long-term goals, or identify students who are at-risk for academic difficulties. Studies have found teachers who use CBM's for instructional planning resulted in greater student achievement compared to teachers who used other measurements. (Stecker, Fuchs, & Fuchs, 2005; Deno, 2003; Stecker, Lemble, & Fuegen, 2008).

In regards to reading curriculum based measurements, studies found oral reading fluency to be the best predictor of reading proficiency. Oral reading fluency should not be from the student curriculum, to prevent affects of previously practiced material. The number of words read correctly over a one minute time frame is tallied. This is done orally. Any substitutions, omissions, mispronunciations, or transpositions are counted incorrect. Self corrections or hesitations within three seconds are correct; after three seconds are incorrect. The total number of words read correctly within the time limit is plotted and graphed. This provides an individual data point that is compared to the estimated baseline norm. From this, desired goals and anticipated growth can be predicted and measured. Using the data, individual decisions are made regarding instructional modifications to attain specific educational goals (Stecker, Fuchs, & Fuchs, 2005).

Dynamic Indicators of Basic Early Literacy Skills

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) is a CBM that utilizes the five essential components of reading to measure individual progress. This assessment tool can be used to identify children in need of alternative reading strategies in order to improve nascent reading skills. DIBELS is brief and repeatable. This research-based system produces results that prompt teachers to change their instructional strategies and increase interventions to children who are at-risk or falling behind in reading. DIBELS data are researched-based documentation that can be used to justify and endorse the schools resources for reading instruction and prevention (Good, Kaminski, Smith, Simmons, Kame'enui, & Wallin, in press).

DIBELS uses seven indicators to measure five early reading skills. The indicators measure the following skills: Initial Sound Fluency (ISF) – ability to recognize and produce initial sounds in words. Letter Naming Fluency (LNF) – ability to recognize and name a random mixture of uppercase and lowercase letters on a page, including several fonts. Phoneme Segmentation Fluency (PSF) – ability to segment a spoken word of two to five phonemes into individual sounds. Nonsense Word Fluency (NWF) – ability to read two-letter and three-letter nonsense words, primarily consonant-vowel-consonant patterns. Oral Reading Fluency (ORF) – fluency and accuracy in reading grade level passages aloud, as measured by words read correctly per minute. Retell Fluency (RTF) – ability to retell information from a passage just read, as a measure of comprehension. Word Use Fluency (WUF) – measures vocabulary by a tally of the number of words spoken in accurate utterances or definitions in response to target words (University of Oregon Center on Teaching and Learning, n.d.).

DIBELS Oral Reading Fluency has been proven to predict reading achievement when compared to other reading measures (Vander Meer, Lentz, and Stollar, 2005; Wilson, 2005;

Shaw & Shaw, 2002; Buck & Torgesen 2003). Vander Meer, Lentz, and Stollar (2005) results indicate DIBELS ORF had a moderately high relationship to the Ohio Fourth Grade Reading Proficiency Test (OPT). Wilson (2005) found DIBELS ORF was able to predict students who were likely to meet the standards and who were not likely to meet the proficiency standards on the Arizona Instrument to Measure Standards (AIMS). Third grade student's DIBELS ORF scores directly correlated with the Colorado State Assessment Program (Shaw & Shaw, 2002). DIBELS Brief ORF accurately predicted achievement on the Florida Comprehension Assessment Test (FCAT) according to Buck & Torgesen (2003). DIBELS ORF was also found to be a predictor of students who will and will not score proficient on the North Carolina End of Grade Reading Assessment (Barger, 2003). ORF was a better predictor of reading comprehension than other DIBELS subtests when compared to the Receiver Operating Characteristic (ROC) analyses (Riedel, 2007). DIBELS ORF and Nonsense Word Fluency were the strongest indicators of student's scores on the Test of Word Reading Efficiency (TOWRE) (Burke & Hagan-Burke, 2007).

In addition to being a fluent reader another important skill is being able to understand and comprehend what is being read. DIBELS RTF is linked to this skill. RTF is not a replacement for ORF but can be an additional diagnostic tool for identifying instructional needs for struggling students. RTF can be a good measure of comprehension because it is more time efficient than fill-in-the-blank or open ended questions. RTF can be practiced, modeled, and taught within the classroom environment. Including RTF in conjunction with ORF would help teachers target interventions for maximizing effectiveness of early reading instruction (Roberts, Good, & Corcoran, 2005).

Gender Differences

Studies indicate conflicting views on gender differences in reading achievement abilities. Becker and Forsyth (1990) concluded males and females score differently in regards to vocabulary, language use, and reading. Phillips, Norris, Osmond, & Maynard (2002) found a systematic relationship between gender and reading performance in grades first through third, females achieving higher. By the end of fourth grade no such relationship was found; yielding grades fourth through six to show no gender differences in reading performance. MacFarlane (2001) found no differences in reading achievement and gender. Hyde and Linn (2000) noticed an insignificant gender difference in regards to reading comprehension and vocabulary. Wadsworth & DeFries (2005) yielded slightly higher scores in females than males, but ultimately nonsignificant gender differences were discovered. Kurdek & Sinclair (2001) found boys to have lower reading achievement scores than girls. Day and Hollingsworth (2001) research supported female's retention in reading and reading related tasks were higher than males. Concluding, the research is inconsistent when determining if reading achievement is affected by differences in gender.

Summer Enrichment

Children need to be encouraged to continue their academic education to hone their skills throughout summer vacation. Studies suggest that additional time spent on academics, such as reading, enhance one's overall ability in that area (Chmelynsky, 1998; Dougals, 2007; Kim, 2007; Viadero, 2003). Students who spend additional time on reading education in the summer months augment their skills when returning to school (Chmelynsky, 1998; Viadero, 2003). When children are not practicing their educational skills they tend to fall behind (Douglas, 2007). Children who continue reading throughout the summer break are more likely to be on grade level

when they return to school (Kim, 20007). Schacter and Jo (2005) research supported higher reading achievements in first grade students who attended a seven week summer day camp. This was accomplished by taking the children from the traditional classroom, providing opportunities for all socio-economic groups, implementing scientifically based reading curriculum, and providing early interventions.

Marshall University Graduate College Summer Enrichment Program

Marshall University Graduate College offers a summer enrichment program (MUGCSEP) to children from preschool to 9th grade. It is a clinical field-based experience for graduate students seeking certification/licensure in school counseling, school psychology, reading education, and special education. The MUGCSEP is a multi-age, multi-ability, full inclusion of students with special needs, collaborative learning model with an emphasis placed on best practices. Children are recruited through various methods, such as public and private clinics, school referrals, and parent contact. Students attend for a variety of reasons, some simply enjoy the educational experiences, while others are trying to counterbalance the typical loss of skills throughout the summer, and others are contingent on their participation for promotion in their home schools. It is a five week program from 8:00 am- 12:30 pm, Monday through Thursday. All children are given breakfast and lunch. The program costs one hundred dollars per child, but scholarships are available for children who qualify for free and reduced lunch (Krieg, Meikamp, O'Keefe, & Stroebel, 2006).

Instruction is activity based hands-on learning. Each graduate program is represented within the classroom, all working together as a team to develop differentiated instructional activities for the students of varying cognitive and developmental functioning. The curriculum focuses on literacy as the hub of instruction. Each day there is a 60 minute uninterrupted reading

block, where all team members are involved in the instructional process of reading education. Leveled reading materials, short cycle assessments, running records, and weekly regrouping based on skill level are incorporated within the classroom (Krieg, Meikamp, O'Keefe, & Stroebel, 2006). Students' reading abilities are assessed through the use of DIBELS. School psychology students implemented these assessments. The students were assessed at the beginning of the program to obtain base-line data for each individual student. During the middle of the program DIBELS benchmarks were obtained, and again at the end of the program. (Sandra Stroebel, personal communication, July 2007).

Hypothesis

The purpose of this study was to examine the relationship between reading scores and participation in the Marshall University Graduate College Summer Enrichment Program. The goal of the MUGCSEP, with its emphasis on reading, is to increase the reading skills of the participants. Based on the research presented in this study the following hypotheses are proposed:

1. Oral Reading Fluency will increase after receiving instruction in the MUGCSEP.
2. Female Oral Reading Fluency scores will be higher than male ORF scores.
3. Retell Fluency scores will increase after receiving instruction in the MUGCSEP.
4. Female Retell Fluency scores will be higher than male Retell Fluency scores.

Chapter II

Method

Subjects

The subjects of this experiment consisted of 29 students from the 2007 Marshall University Summer Enrichment Program who were present on all three of the benchmark assessment days. These students were seven to twelve years of age. This was an archival study from data previously attained. This sample consisted of 16 females and 13 males.

Instrument

The University of Oregon Center on Teaching and Learning (n.d.) created The Dynamic Indicators of Basic Early Literacy Skills (DIBELS). DIBELS are individually administered, standardized measure of early literacy development. DIBELS are short, one minute measures used for frequent monitoring of developing pre-reading and early reading skills. DIBELS are a reliable and valid research based system. DIBELS are an assessment system that provides school-based data which identifies students who may be at-risk for poor reading outcomes (Good et al, in press). It provides early assessment of literacy development and is predictive of later reading proficiency. This enables students to be identified earlier who are showing or will show reading difficulties in school (University of Oregon Center on Teaching and Learning, n.d.).

These indicators are closely linked to the five essential components of reading instruction identified by the National Reading Panel Report. Although there are seven indicators, only three to five are administered during an assessment (University of Oregon Center on Teaching and Learning, n.d.). DIBELS yields easy to analyze results in chart form. It places children in categories according to their attained score. These categories are: Established, Emerging, Low Risk, Some Risk, and At Risk. DIBELS also provides instructional recommendations on each

student assessed: At Grade Level – Benchmark, Additional Intervention – Strategic, Needs Substantial Intervention – Intensive (University of Oregon Center on Teaching and Learning, n.d.).

Marshall University Graduate College Summer Enrichment Program

In 2007 the reading instruction delivered in the 60 minute reading block consisted of four to five reading stations per grade level team/per day. The instruction focused on one of the five essential components of reading. For example, the stations included: Guided Reading, Reading Comprehension, Phonemic Awareness, and Vocabulary. The students were initially given a running record reading assessment to ascertain each child's current reading abilities. According to each individual child's need they were placed in small groups. Based upon the child's reading deficits appropriate reading activities and lessons were developed. No systematic regrouping took place; teacher opinion was used to move some subjects who were falling behind. Subjectively, the literature graduate students mentored the teachers.

Procedure

The purpose of this study was to determine if participation in the Marshall University Summer Enrichment Program enhanced reading skills and if gender affected the likelihood of reading improvement. Each student participated in a 60 minute block of uninterrupted reading daily (19 sessions total). The subject's reading skills were assessed by using DIBELS Oral Reading Fluency and Retell Fluency at three benchmarks. The benchmarks were given during week one of the program (Test 1), during week three of the program (Test 2), and during the last week of the program (Test 3). This researcher participated in administering the DIBELS, as well as other school psychology graduate students from Marshall University Graduate College.

Age and sex of each participant were obtained at this time. The data was collected and each child's name was randomly assigned to a number code in order to protect confidentiality. The key code was destroyed once link up was established to prevent later identification of the individuals who participated.

Chapter III

Results

The objective of this study was to investigate the relationship between students reading achievement scores and their involvement in the MUGCSEP. Archival data from the 2007 MUGC Summer Enrichment Program was obtained. The data was subjected to a General Linear Model-Within Subjects Factors through ANOVA as a total group (29 subjects) as well as a gender comparison from Test 1 and Test 3 in regards to both Oral Reading Fluency and Retell Fluency. ORF yielded no significant differences in either total group or within gender comparison. RTF yielded a significant difference ($F=9.622$) $p>.05$ within total group as well as gender comparison. Test 1 produced a mean of 22.69 for male scores (about 22 words spoken about the passage just read), female mean scores were 19.06, and both sexes combined totaled a mean of 20.69. Test 2 indicated the mean value for males was 28.62 and female was 31.75, with a total mean of 30.34. Thus, based upon the statistical findings Retell Fluency scores increased from Test 1 to Test 3 for total group and females scored higher than males in this area, both as hypothesized (see Table 1 and 2).

Chapter IV

Discussion

Summer enrichment programs are designed to improve the academic achievement of students. The goal of the MUGCSEP, with its emphasis on reading, hopes to increase the

reading skills of the participants. Program evaluations assess to determine if programs meet their goals. The results of this study indicate no significant difference in subject's total Oral Reading Fluency scores or gender differences from Test 1 to Test 3 in ORF. Retell Fluency scores produced significant differences in both total scores and gender differences. These results support hypothesis three and four (RTF scores will rise during the MUGC Summer Enrichment Program and female RTF will be higher than male Retell Fluency scores). RTF scores gained on average 9 words during the summer enrichment program, equivalent to 45% gain in reading comprehension.

In light of the literature presented in this study, Oral Reading Fluency would be expected to have increased in addition to Retell Fluency scores. It is surprising that ORF did not produce a significant change from Test 1 to Test 3. According to the literature, ORF is a strong predictor of reading ability amongst other measures (Vander Meer, Lentz, and Stollar, 2005; Wilson, 2005; Shaw & Shaw, 2002; Buck & Torgesen 2003).

Therefore, the results of this study suggest other factors might have contributed to the lack of progress in reading fluency. CBA's are meant to guide instruction by providing data to use differentiate instruction for regrouping. Not systematically regrouping might have interfered with ORF gains. Also, learning to read (ORF) requires a narrower skill set than vocabulary recall (RTF). This might have contributed to the lack of gain in this area. Enrichment programs that do not focus on specific reading skills may lead to increases in vocabulary but not reading fluency. RTF may be more of a measure of memory and short-term vocabulary recall due to the way it is scored. Therefore, the rise in RTF scores indicated students' vocabulary recall performance rose with participation of the MUGC summer program. Future studies could expand upon this issue.

Gender differences were found in this study. An element that might have contributed to the difference in gender scores may be attributable to the fact that all of the evaluators were females. This might have played a role in female students becoming more comfortable and connected to the female teachers and evaluators. This is also an area that would benefit future studies.

Limitations

The population of the MUGCSEP is composed of many children with academic difficulties. Some are classified as special education while others are participating to avoid retention. This limited subject sample prevents one from being able to generalize these results to the general population. Another limitation of this study is the geographical restrictions; all subjects were from a single community in West Virginia. Finally, scorer error between the two subtests may contribute to our results. ORF appears to be easier to score than RTF and less influenced by rater bias. There may be more variation between multiple evaluators for the RTF. This needs to be examined in future studies.

Recommendations

The findings of this study should be interpreted with caution due to a lack of adequate representation of student population. The findings in this study suggest that vocabulary recall performances were increased by participation in the MUGC Summer Enrichment Program along with gender playing a factor in reading achievement. The findings also suggest that reading fluency did not increase within the five week summer program. Variables such as data-based decision making, reading curriculum, instructor style, days attended, gender relations, student-teacher rapport and compatibility should be examined to determine if and what role they might

play in reading comprehension and fluency/recall within this setting. Replicating this study to increase generalizability as well as having a more diverse sample would be recommended.

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Tables

TABLE 1

Oral Reading Fluency Scores Comparing Test 1 Reading Achievement Means to Test 3 Reading Achievement Means with corresponding Standard Deviations

	Test 1 Mean	SD	Test 2 Mean	SD
Male	68.92	43.71	65.38	46.11
Female	62.13	35.65	66.13	39.93
Total	65.17	38.88	65.79	42.02

TABLE 2

Retell Fluency Scores Comparing Test 1 Reading Achievement Means to Test 3 Reading Achievement Means and corresponding Standard Deviations

	Test 1 Mean	SD	Test 2 Mean	SD
Male	22.69	15.83	28.62*	22.69
Female	19.06	11.07	31.75*	17.69
Total	20.69	13.29	30.34*	19.77

* Significantly Different ($p > .05$)