A study compared an integrated language arts reading program and a strong phonics basal reading program. Subjects were first graders from five eastern Greenbrier County schools in West Virginia. The control group consisted of students in 15 classrooms, during the 1994-95 school year, when a strong phonics basal reading program was taught and tested. The experimental group consisted of first-grade students in 15 classrooms during the 1995-96 school year, when an integrated language arts reading program was taught and tested. Statistical comparison was made using the standardized Comprehension Test of Basic Skills total reading scores of 270 students in 1995 and 292 students in 1996. Results indicated a statistically significant drop in test scores for the integrated language arts program. Recommendations include: monitor the reading subtest scores in vocabulary word analysis and comprehension to discover instructional strengths and weaknesses; analyze writing and spelling standardized test scores for the 2 groups; continue to use a balance of each reading approach in first-grade reading instruction; and continue to develop reading strategies that will reach both the global holistic learner and the analytical learner. (Contains 22 references and 8 tables of data.) (RS)
A STUDY COMPARING INTEGRATED LANGUAGE ARTS AND STRONG PHONICS BASAL PROGRAMS IN FIRST GRADE READING INSTRUCTION

A Thesis
Presented to
The Faculty of the Master of Arts Degree Program
Salem-Teikyo University

In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts in Education

by
PATTY H. DILLON
April 1997

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CHAPTER 1

Introduction

Two widely used methods of reading instruction, integrated language arts and a strong phonics basal, were compared in this study. A strong phonics reading program was a popular method of reading instruction for about 20 years (1970-1990). The whole language method of reading instruction has gained popularity in the last several years (Carbo, 1996).

The phonics basal method of reading instruction is an analytical approach that treats reading as a language based skill that requires the reader to have a knowledge of phonology. The reader is required to move from part to whole when processing and reading information. Whole language reading instruction is an approach that teaches children how to use their language skills to facilitate their learning. The reader moves from whole to part when learning to read. Whole language encompasses global, tactile and kinesthetic styles of reading (Partridge, 1992).

Statement of the Problem

This is a study of the use of an integrated language arts approach to reading instruction compared to the phonics approach of reading instruction for first grades in eastern Greenbrier County Schools. The use of an integrated language arts approach for reading instruction did not cause a significant drop in standardized reading scores in five
eastern Greenbrier County first grades.

Purpose of Study

The purpose of this study was to compare an integrated language arts reading program and a strong phonics basal reading program. The integrated language arts program is "rooted in the whole language philosophy, which stresses the use of whole, uncontrived texts in reading instruction and encourages children to use language in ways that relate to their own lives and cultures" (Diegmueller, 1996, p.20). The strong phonics basal is a structured reading curriculum in which children master individual letter sounds and blends and eventually go on to read whole words in contrived texts that reinforce these skills (Diegmueller, 1996).

Generalized Research Question

The study was guided by the general research question: Would a significant drop occur in reading standardized CTBS test scores in five eastern Greenbrier County first grades when reading instruction moved from a highly structured basal reading approach to a more holistic integrated language arts approach?

Significance of Study

A study comparing the integrated language arts approach to reading instruction and a strong phonics basal approach to reading instruction may help clear the waters known as
"the great reading war" (Carbo, 1996, p.61).

Harste and Lowe (1991) believe that standardized test scores are handed down by education hierarchy as the true measure of learning and reading ability. Whole language represents an alternate view of learning and reading. Through whole language instruction knowledge is seen as dynamic and education in an invitation to inquire about the world. They state further that the current evaluation model used not only inhibits teacher's actions, but it is often used as a justification for not teaching whole language. The teaching system is one in which assessment and not curriculum dominates.

When moving from a basal reader orientation to a whole language approach, it was found that whole language instruction promoted growth in reading and writing (Brand, 1991). In classrooms where whole language was implemented total reading scores as well as vocabulary and comprehension subtest scores were found significantly favoring the whole language classes over the basal classes (Cooter & Reutzel, 1990). Baunann (1990) noted that whole language may be the right way to teach reading because ample empirical evidence and plenty of common sense appeal for many of the whole language philosophies. The children read, write, and discuss authentic children's literature. Plenty of informal assessments done by the teacher feed back into instruction
allowing for choice, ownership, risk taking, student, and teacher decision making.

Carbo and Cole (1995) suggested, "five premises to nurture a love of reading and test scores are: 1. Children learn from modeling. 2. It is natural for children to enjoy reading and to be motivated to read. 3. Learning to read should be easy and fun. 4. Good readers spend time practicing reading. 5. Students need to be stretched with high level reading materials. These five premises reflect a whole language philosophy" (pp.62-63).

The other side of the reading debate proclaims the use of phonemic awareness; rooted in the once used phonics instruction is a very powerful indicator of reading achievement in first grade (Griffith, Klesius, & Kromrey, 1992). If students are taught the concept of phoneme identity they develop an increased knowledge of phonemic awareness (Barnsley-Fielding & Byrne, 1993) With this, phonemic awareness comes increased reading skill ability (Castle, Riach & Nicholson, 1994). Weaver (1991) pointed out a document entitled "Illiteracy: An Incurable Disease or Education Malpractice? - which suggests that the cure for illiteracy is "the restoration of the instructional practice of intensive, systematic phonics in every primary school in America". (p.19)
Limitations of the Study

The limitations of this study are as follows:

1. Geographical - The study was limited to rural south eastern West Virginia.

2. Economical - The population studied belonged to lower and middle class, with a majority of the students in the study being Caucasian. The county is primarily agricultural, with a higher than state average rate of unemployment.

3. Physical - The two student groups in the study were assigned to their classrooms by the principals of each elementary school. Classroom assignment practices in this county favor mixed grouping.

In obtaining the sampling of the students taking the Comprehensive Test of Basic Skills (CTBS), there was no indicator as to whether the students had been in the classrooms the entire instructional year.

No access was allowed to individual student scores on the CTBS test because of confidentiality.

The CTBS test is a standardized test and was used as the sole testing device for the comparison in this study.

The CTBS test was given to 270 first grade students in 1995 and 292 first grade students in 1996. The test was given the third week of March each school year.

The first grade teachers for the 1994-95 and 1995-96 school years in the study schools did not involve different
personnel because of job transfers and retirement.

The teachers in the study had taught the phonics basal program for seven years. There was no way to measure how stagnant their techniques had become or what techniques that worked for reading instruction teachers carried over into the integrated language arts reading program.

4. Environmental - The school year 1995-96 lost 20 instructional days because of inclement weather.

Assumptions

The sample size of 18 was typical of the class size in the study schools and was an adequate size to test and not affect integrity of the testing instrument, the CTBS standardized test. The CTBS standardized test is a valid norm reference test with built in bias controls and was administered in mid-March of each academic year 1995 and 1996. There was adequate time to compile data.

Definition of Terms

1. authentic - worth while, not contrived (Harste & Lowe, 1991, p.46).

2. basal - an anthology of reading stories that are structured and use a contrived vocabulary (Brand, 1991, p.51).


4. cooperative groups - small groups of students working
on an activity where every member of the group has a job of equal importance (Church & Newman, 1991, p.27).

5. CTBS - Comprehensive Test of Basic Skill.

6. eastern Greenbrier County - includes the towns and schools of Alderson, Frankford, Lewisburg, Ronceverte and White Sulphur.

7. early emergent - second stage of reading in whole language (Cutting, 1990, p.15).

8. emergent - first stage of reading in whole language approach (Cutting, 1990, p.15).


11. graphophonemic - phonics in print, the letter or letters and the sounds associated with those letters (Castle, Nicholson & Riach, 1994, p.350).

12. integrated language arts - a reading instruction program rooted in whole language that teaches reading, language, and grammar skills as a whole (Macmillan/McGraw-Hill, 1995, p.3).


14. little book - small books that students can hold and read, usually used to reinforce a skill taught (Open Court, 1989, p.10).

15. maturation - level of child's development either, or; social, emotional, and cognitive.
16. mixed grouping – the practice of placing students from high, medium and low ability ranges within a classroom (Cutting, 1993, p.50).

17. national percentile – percentage scores on a standardized test reflecting the nation.

18. phonemic awareness – a knowledge of sound patterns in words and an association of letter and position used for blending, decoding and spelling words (Castle, Riach & Nicholson, 1994, p.51).


20. phonics – sound and letter association used in blending and decoding words (Open Court, 1989, p.15).


22. whole language – a teaching philosophy that teaches reading as a holistic activity where children learn to read whole-to-part (Williams, 1990, p.2-3).
Chapter 2

Review of Literature

Introduction

The purpose of this study was to compare the integrated language arts method of reading instruction and the strong phonics basal method of reading instruction. This chapter will discuss literature in the following areas: (a) history of education and reading instruction (b) whole language, phonemic awareness and integrated language arts.

History of Education

The Greek pattern of education had the greatest influence on the present education system. The quadrivium (four subjects) was established to educate the common man. The four subjects taught were arithmetic, geometry, astronomy, and religion. Through these subjects the common man was taught the practical skills of building, mapping and social interaction. There was little need or opportunity for the common man to read. The trivium (three subjects) was used to develop the leadership skills of a selected few. The three subjects included grammar (written language) rhetoric (spoken language), and logic or philosophy. The Roman Empire spread this form of education throughout western civilization.

The Roman Catholic Church provided the only educational opportunities during the Dark Ages. The main goal was to
produce clergy. The curriculum consisted of: Latin, (the common language of the Roman Catholic Church) theology, (the study of the church and God) and reading Greek, (so one could read about the Bible).

Slowly, during the Renaissance education began to change, towns and commerce were established and a need for skills training arose. From this need came a guild system of education for the common man. As the cities and states grew the need for education grew. By the 13th and 14th century three forms of education existed: the classical education, of the church, guilded education (vocational) and general education (middle class).

The Reformation brought the establishment of reform schools with Latin, Greek and theology being the subjects taught. Reform schools were for the scholarly, well educated community that wanted to read and interpret the Bible for themselves. This lead to a break from the Roman Catholic Church and ultimately settlement in America (Kauffman, Personal Communication, 1996).

In colonial America students learned to read with whatever books their parents had at home. This was usually the Bible. These stories were read over and over again to the children at home, church and school. Rudimentary instruction in sounds and the alphabet were occasionally a part of the reading instruction. Elementary schools changed very little in the 1700's but secondary schools called academics were started in many colonies. The curriculum
consisted of Latin, Greek and theology (Gillet & Temple, 1986, pp.25-26).

During the 1700's and early 1800's in an effort to create a unified nation standardized text books were used in American schools. These included Noah Websters' "Blue-Backed Speller" which helped standardize spelling and pronunciation, and "McGuffey Readers" which taught patriotism. Religion was also an important part of the school curriculum. Public schools were established and education became a right of every American during the 1800's (Boyd & King, 1980, pp.80-84).

Reading Education

For more than a century people have been searching for the best way to teach children to read. The pendulum swings from one approach to another because reading failure persists. After the "McGuffy Reader" days came the global look-say approach to reading instruction. This method of reading was popular for about 30 years from 1940-1970. Phonics, an analytical approach to reading instruction, was popular for about 20 years from 1970-1990. The pendulum took another swing to the global approach of whole language reading in the 1990's. This method is already under fire by analytical phonics supporters. Because of this constant swing in reading teaching, it is not advisable to use a single method to teach reading, but to match the learning style of the student (Carbo, 1996).
After decades of debate and research there is still substantial disagreement among educators as to what beginning reading should be like. Many educators favor a return to the phonics approach while others embrace the whole language method (Morrison & Mosser, 1993).

Those educators that favor the whole language philosophy state that literacy skills develop in much the same way as oral language and both language and literacy are mutually enhancing, natural partners for all children. Children learn language by using it, writing it, thinking it and reading it (Brand, 1991).

In a whole language classroom a literate environment exists in which good children's literature books are shared and discussed, and writing plays a major role and serves the students purpose (Brand, 1991). "In this literate environment children who are actively involved in the language process will actually read more. A case can be made for using children's literature books on that criterium alone since studies suggesting the amount of time children spend reading in school is associated with gains in reading achievement" (Eldridge & Butterfield, 1986, p.37).

Brand (1991) pointed out in a study of first graders moving from a basal reading program to a whole language program the students wanted more time reading and writing during the instructional day. The students varied in
reading levels and writing abilities, Cooter and Reutzel (1990) studied reading achievement of first graders in a whole language classroom and they found significant differences favoring whole language over basal classes on total reading scores when the Gates-MacGinitie Level A Reading Test and Subtests were used. Whole language reading instruction may be the catalyst needed to help students develop sufficient literacy to participate fully in society (Harste & Lowe, 1990).

What is Whole Language

In the early 1990's whole language philosophy was quickly being introduced into elementary classrooms. Whole language is not a set of prescriptions or guidelines but a belief that learning begins with a desire to know, with inquiring minds of both students and teachers (Ogle, 1990). "Whole language is a holistic approach where reading is treated as an integrated behavior and is not broken down into separate skills" (Morrison & Mosser, 1993, p.4). In theory whole language explains that children learn to read this way (Cutting, 1990, p.7).

Whole language is a theory of knowledge, language, learning and schooling, where the curriculum is negotiated by students (Harste & Lowe, 1991). "In this whole language curriculum the teacher reads aloud to the students regularly and teaches through story and literature instead of through predigested basal materials with controlled vocabulary and
sentence structure" (Vail, 1991, p.23).

The whole language reading method recognizes three stages of reading that all children move through emergent, early emergent and fluency. Throughout these stages children use memory, picture and language cues (Cuttings, 1990). Carbo (1996) explains these three stages as follows: "Stage 1, large amounts of connected text are read aloud to students repeatedly. After the children can read the stories independently, they move to Stage 2, in which they practice words and phrases from the stories in isolation. In Stage 3, the teacher uses some phonics, often by encouraging children to "discover" similarities in words they have encountered in their reading and writing" (p.61). As children pass through these stages a respect for language and literature which is natural and authentic occurs. Children are engaged in meaningful and productive activities not pointless drills and rote memorization (Morrison & Mosser, 1993). Children are naming the world as they see it, and sharing these visions thus starting new conversations (Harste & Lowe, 1991).

Phonemic Awareness

Thinking about words and being able to manipulate these words in our minds, is not a skill that comes automatically with knowing a language, but comes from experience with print. Children must develop a concept of word. In order to recognize a word children must be able to separate all
phonemes in spoken words (Guillet & Temple, 1986). An insight into the structure of spoken language and the ability to manipulate phonemes and blends into spoken language while reading and spelling is phonemic awareness (Griffith, et.al, 1992).

Phonemic awareness gives the child the knowledge to blend words that are not introduced in formal reading instruction. Thus the child can read independently and this leads to reading practice and reading fluency (Griffith, et.al., 1992). It is felt that through direct instruction of individual letter - sound correspondences children learn to decode, spell and read. The difference between phonemic awareness and basic skills instruction lies in the context in which phonics is taught (Castle, et.al., 1992).

In a study by Griffith, et.al. (1992) on the effects of phonemic awareness on the literacy development of first grade students in a traditional or whole language classroom, they found that the earlier the child developed phonemic awareness the better the child performed on CTBS, writing and spelling assessments regardless of the reading instruction they received. Castle, et.al. (1994) found that phonemic training increased the raw scores of students in a test of written spelling, CTBS comprehension and writing fluency. They also found that children who received phonemic training as well as formal reading instruction did better on all tests then children who were not taught with both approaches.
Integrated Language Arts

Reading instruction that uses authentic children's literature to support a child's reading strengths while teaching and practicing skills and abilities the child is ready to acquire is the theory of an integrated language arts method of reading instruction (Gillet & Temple, 1986). The main support of an integrated language arts program is children's literature that contains the finest examples of language in use (Cullinan, 1990).

Integrated language arts takes the components of whole language such as shared reading experience and extensive writing and use them to help children develop phonemic awareness (Griffith, et.al., 1992). Phonics and sequencing skills can be taught with good children's literature (Morrison & Mosser, 1993, p.6).

"Good children's authors know how to speak to children in a naturally occurring language. In an integrated language arts program children's literature is used for the following reading instruction practices: reading to children, shared and guided reading, sustained silent reading, independent reading, writing and shared writing" (Cullinan, 1990, p.47). Griffith, et.al., (1992) state that using an extensive amount of writing experiences encourages students to use phonemic awareness and sequencing. If children are involved in purposeful reading and writing
activities while being taught specific skills the total act
of reading and writing becomes meaningful to the child
(Farr, 1990).

"Integrated language arts method of reading instruction
is a balanced method that reaches more students" (Vail,
1991, p.24). A good integrated language arts program will
benefit both the analytical and global learner. The phonics
instruction will allow the analytical learner to move in a
logical order from bits of information to the whole. The
global learner will benefit from having information
presented in relation to the whole story, theme or unit
(Carbo, 1996) In classrooms where students are highly
engaged in their academic pursuits and reading and writing
well researchers have found that teachers follow an
exceptionally balanced reading strategy. Research
indicates the combination of phonics and whole language into
integrated language arts may be the most effective way to
teach children to read (Diegmeller, 1996).

Starting Reading Instruction

A study on teaching phonemic awareness to young
children found that children who enter school understanding
that words share sound relationships performed at a higher
level on reading and spelling tests using pseudo words. The
clearest differentiation in all measured aspects of reading
and spelling resulted from dividing the children into those
who had phonemic awareness instruction at the end of
preschool and those who did not (Barnsley-Fielding & Byrne, 1993). For children to be successful in reading they need to be provided explicit training in hearing individual sounds in words. This training needs to begin in the preschool years using an integrated language arts reading instruction approach (Griffith, et al., 1992).

**Real Learning**

When educators become overly concerned about children's performance on standardized tests as the only measure of learning Harste and Lowe (1991) say that children are regarded as raw products to be processed, and educators actions can be misconstrued. "To the public, and students, the test represents real learning. The emphasis is on producing results and not real learners" (p. 46).

To encourage real learning and not just producing results Carbo (1996) lists ways to improve reading instructions and ways to improve phonics instruction: 1 - Balance; focus on making literature fun. Read to students often. Use oral reading and pair reading as well as silent reading. 2 - Guard against boredom. Do not overdo worksheets. Spend only several minutes a day on phonics. 3 - Include games in phonic instruction. 4 - If phonics does not work try another approach. 5 - Have a well stocked classroom library and allow students to use it.

2 - Provide sufficient tools for decoding words. 3 - Include games for skills instruction. 4 - Provide sufficient modeling of reading aloud before expecting children to read independently.

Ways to improve most reading programs: 1 - Emphasize the fun of reading. 2 - Use older children to help make games. 3 - Use more than phonics to teach reading. 4 - Develop a good classroom library. 5 - Encourage reading in all forms in your classroom. 6 - Record stories. 7 - Send teachers to reading seminars. 8 - Learn children's reading styles.

In conclusion Harste and Lowe (1991) contend, "knowledge is socially constituted. What we know is a function of social, political, and historical times in which we live. This means that knowledge is constantly changing and created through interaction. An integrated language arts classroom allows for more interaction. Not all children need to learn the same things in order to have a good educational experience" (p.45).
CHAPTER 3

Method

This study compared the integrated language arts method of reading instruction to the phonics basal method of reading instruction in eastern Greenbrier County. The study was descriptive in nature in that it presented events using descriptive statistical methods to compare, summarize, and organize CTBS data.

The statistical comparison was done using the standardized CTBS test with focus on total reading scores. The research determined whether there was a significant difference in CTBS total reading scores when the school district changed reading programs from a strong phonics basal method to an integrated language arts method.

Background

The students in the study were of mixed ability and socio-economic levels. This study dealt with the school years 1994-1995 when a strong phonics basal was used for reading instruction and 1995-96 when a integrated language arts method was used for reading instruction. Both reading methods were implemented by the County School Board.

All 15 first grade teachers in the study had received training in both integrated language arts and the phonics method of reading instruction. These teachers averaged a minimum of five years teaching experience. The reading philosophy ranged from very traditional to holistic.
All of the first grade students in the study were required by the County School Board to take the standardized Comprehensive Test of Basic Skills (CTBS) test in mid March of each school year stated in the study, (1994-95, 1995-96). This study compared the total reading scores on the CTBS test. The total reading scores included vocabulary and comprehension.

In keeping with the policies of the school district, the first grade students in the study had been taught to read using a basal reader with a strong phonics component for eight years, (from 1987-95). The basal reading series had one pre-primer, two primers and a first reader. There were two workbooks, a set of activity pages, phonics cards for whole group phonics instruction, flash cards for both sound and sight word drill, wall cards used for phonemic awareness, small reinforcement reading books, two end of book assessments, an end of the year assessment and three teacher's manuals.

The physical environment of the strong phonics basal reading method classrooms contained fixed reading groups, learning centers with games and activities used for reinforcement of taught skills, extra worksheets, writing materials, listening centers for supplemental stories, and teacher selected reading material.

In the 1995-96 school year, integrated language arts reading instruction was implemented in the school district by the County School Board. Teacher training was provided
prior to the beginning and during the school year.

The integrated language arts program had six beginning trade books, five readers containing authentic children's literature, five workbooks for reinforcement of skills, 12 big books for shared readings, audio tapes of stories being read, extra stories, songs and poems, story strips, 26 little story books for phonics reinforcement, one word building kit, and English practice book used for skills instruction, teaching activity cards for integrating math, science, social studies, health and art, assessments for end of unit and end of year, student portfolios and six teacher manuals.

The physical environment of the integrated language arts classrooms contained flexible reading groups, cooperative learning groups, learning centers containing games and activities for reinforcement of skills, a listening center for the story being taught and supplemental stories, writing and publishing materials, and teacher and student selected reading materials.

Description of Population

The students in the study were first graders from five eastern Greenbrier County Schools in the state of West Virginia. The control group consisted of first grade students in 15 classrooms, during the 1994-95 school year, when a strong phonics basal reading program was taught and tested. The experimental group consisted of first grade
students in 15 classrooms during 1995-96 school year when an integrated language arts reading program was taught and tested.

**Research Question**

The following research question guided this study:

Will a significant difference on standardized reading CTBS test scores be found when comparing an integrated language arts reading program to a strong phonics basal program?

The question is relevant to the 'great debate' over reading instruction methods that has been debated by educators for the past several years.

**Primary Hypothesis**

The following null hypothesis was tested:

\[ H_0: \text{No significant difference on standardized reading CTBS test scores will be found when comparing a strong phonics basal reading program to an integrated language arts program} \]

\[ H_a: \text{A significant difference on standardized reading CTBS test scores will be found when comparing a strong phonics basal reading program to an integrated language arts program.} \]

**Instrumentation**

The Comprehensive Test of Basic Skills (CTBS), Level 11, Form A, given in mid March 1995-96 was used as the data
gathering instrument. 270 first graders took the CTBS test in 1995 and 292 first graders took the CTBS test in 1996. The national percentile scores were taken from the total reading achievement test scores of the students.

The CTBS test is an achievement test that attempts to measure what an individual has learned and determines his or her level of performance.

Research Design

The type of design chosen was a quasi-experimental posttest only control group design (See Table 1). This design was selected because of its controls for many sources of invalidity. This design involves the use of intact groups of subjects.

The major problems with validity associated with the study were maturation and the use of intact previously assigned classes.

The assumption was made that both groups were similar based on: all students had been enrolled in a developmental kindergarten program; both groups were instructed from the same pre-approved materials; and both groups were given the Level 11, Form A CTBS test in mid March of the school years 1995, 1996.
Table 1

Experimental Design

<table>
<thead>
<tr>
<th>Group</th>
<th>Assignment</th>
<th>N</th>
<th>Treatment</th>
<th>Post Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Experimental</td>
<td>292</td>
<td>ILA</td>
<td>CTBS</td>
</tr>
<tr>
<td>2</td>
<td>Control</td>
<td>270</td>
<td>Phonic/Basal</td>
<td>CTBS</td>
</tr>
</tbody>
</table>

Data Collection Method

Prior to the study, permission was obtained from the test coordinator of Greenbrier County Schools to gain access to the total reading, comprehension, and vocabulary national percentile scores of the first grade students taking the CTBS test in the 1994-95 and 1995-96 school years.

Access to individual scores were obtained through random sampling. A sampling was taken from each school for the given tests. Another sample was made to establish the sample size of 18. National percentile scores obtained included total reading and reading subtest; vocabulary, and comprehension.

Data Analysis Method

A two-sample t-test was used to analyze data collected. The level of significance for the study was $\alpha < .05$. If through statistical analysis a significant difference that is less than or equal to alpha at .05 is discovered, the null hypotheses will be accepted. If a difference greater than alpha at .05 is discovered the null hypotheses will not
be accepted.
CHAPTER 4

Analysis of Data

This study compared the integrated language arts method of reading instruction to the phonics basal method of reading instruction in five eastern Greenbrier County Schools for first graders. A two sample t-test was used to analyze data collected.

This chapter contains the statistical analysis performed on the data which assisted in either confirming or rejecting the statistical hypothesis proposed in the study. The information in this Chapter will be divided in two parts: (a) demographic data (b) descriptive statistics analysis.

Demographic Data

Fifteen classrooms were sampled during the 1995 and 1996 school years. The same (15) fifteen teachers taught the first grade during the 1995 and 1996 school years. There were 270 first grade students tested in 1995 and 292 first grade students were tested in 1996. The average classroom size in 1995 was 18. The average size in 1996 was 19.4, making the average classroom size 18.7.
Table 2
Demographic Data

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Classroom Instructors</th>
<th>Students</th>
<th>Students</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTBS</td>
<td>15</td>
<td>15</td>
<td>270</td>
<td>18</td>
</tr>
<tr>
<td>CTBS</td>
<td>15</td>
<td>15</td>
<td>292</td>
<td>19.4</td>
</tr>
</tbody>
</table>

The 15 first grade teachers for both the 1995 and 1996 school years were female. Five of the teachers had over 20 years teaching experience. Three teachers had between 15 and 19 years of experience. Five teachers had between 10 and 14 years experience. Two teachers had fewer than 10 years of experience. Seven of the 15 teachers had a masters degree in education. Eight of the teachers had a AB +15 degree in education.

Table 3
Teacher Demographic Data

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>15</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Experience</td>
<td>+20 years</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>19-15 years</td>
<td>3</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>14-10 years</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>-10 years</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Education</td>
<td>Masters Degree</td>
<td>7</td>
<td>46.6%</td>
</tr>
<tr>
<td></td>
<td>AB+15</td>
<td>8</td>
<td>53.5%</td>
</tr>
</tbody>
</table>
All of the students tested had completed public school kindergarten before entering the first grade. All students were randomly assigned to the first grade classrooms using homogeneous grouping.

In summary, an average of 281 students were tested with an average class size of 18 students. All of the instructors who taught and administered the CTBS test were female. Eighty seven percent of the instructors had over 10 years teaching experience. All of the instructors had taught on the first grade level for more than two years.

**Analysis of Statistical Data**

When performing the statistical analysis on the data gathered, means and standard deviations were computed using 18 as the sample size to compare the five schools in the study. When performing t-test the sample size of 18 was used to represent the average classroom size taking the test.
Table 4

Raw Data Experimental Group - 1996

<table>
<thead>
<tr>
<th>Case</th>
<th>CTBS (NP) Total Reading</th>
<th>CTBS (NP) Comprehension</th>
<th>CTBS (NP) Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>61</td>
<td>57</td>
<td>67</td>
</tr>
<tr>
<td>2</td>
<td>67</td>
<td>62</td>
<td>72</td>
</tr>
<tr>
<td>3</td>
<td>36</td>
<td>41</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>93</td>
<td>82</td>
<td>98</td>
</tr>
<tr>
<td>5</td>
<td>46</td>
<td>52</td>
<td>41</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>43</td>
<td>46</td>
<td>41</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>30</td>
<td>19</td>
<td>45</td>
</tr>
<tr>
<td>10</td>
<td>92</td>
<td>93</td>
<td>91</td>
</tr>
<tr>
<td>11</td>
<td>82</td>
<td>82</td>
<td>80</td>
</tr>
<tr>
<td>12</td>
<td>37</td>
<td>34</td>
<td>41</td>
</tr>
<tr>
<td>13</td>
<td>94</td>
<td>93</td>
<td>95</td>
</tr>
<tr>
<td>14</td>
<td>76</td>
<td>67</td>
<td>84</td>
</tr>
<tr>
<td>15</td>
<td>54</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>16</td>
<td>59</td>
<td>57</td>
<td>63</td>
</tr>
<tr>
<td>17</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>18</td>
<td>81</td>
<td>77</td>
<td>84</td>
</tr>
</tbody>
</table>
Table 5

Raw Data Control Group - 1995

<table>
<thead>
<tr>
<th>Case</th>
<th>CTBS (NP) Total Reading</th>
<th>CTBS (NP) Comprehension</th>
<th>CTBS (NP) Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>99</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>2</td>
<td>93</td>
<td>89</td>
<td>96</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
<td>56</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>96</td>
<td>89</td>
<td>98</td>
</tr>
<tr>
<td>5</td>
<td>86</td>
<td>85</td>
<td>87</td>
</tr>
<tr>
<td>6</td>
<td>72</td>
<td>60</td>
<td>84</td>
</tr>
<tr>
<td>7</td>
<td>93</td>
<td>94</td>
<td>90</td>
</tr>
<tr>
<td>8</td>
<td>48</td>
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<td>44</td>
</tr>
<tr>
<td>9</td>
<td>95</td>
<td>94</td>
<td>96</td>
</tr>
<tr>
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<td>88</td>
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<td>11</td>
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<td>66</td>
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</tr>
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<td>6</td>
</tr>
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<td>91</td>
<td>94</td>
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</tr>
<tr>
<td>14</td>
<td>92</td>
<td>85</td>
<td>96</td>
</tr>
<tr>
<td>15</td>
<td>59</td>
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<td>80</td>
</tr>
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<td>16</td>
<td>75</td>
<td>60</td>
<td>87</td>
</tr>
<tr>
<td>17</td>
<td>88</td>
<td>80</td>
<td>93</td>
</tr>
<tr>
<td>18</td>
<td>96</td>
<td>89</td>
<td>98</td>
</tr>
</tbody>
</table>

A significant difference was found in first grade (N-18) on CTBS total reading test scores. Experimental group ($x = 60.28$) as compared to the control group ($x = 78.79$) with a $t = 2.25$, $p < .05$, $V=2.101$. 

38
Table 6

t-test for Total Reading CTBS

<table>
<thead>
<tr>
<th>Variable 1</th>
<th>1996 CTBS Test (experimental group)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Mean</td>
<td>Std. Deviation</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>60.28</td>
<td>26.57</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable 2</th>
<th>1995 CTBS Test (control group)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>18</td>
<td>78.89</td>
<td>22.91</td>
</tr>
</tbody>
</table>

A significant difference was found in first grade (N=18) on CTBS comprehension test scores. Experimental group (x = 56.83) is compared to the control group (x = 73.61) with a t = 1.97, p < .05, V = 2.01.
A significant difference was found in first grade (N=18) on CTBS vocabulary test scores. Experimental group (x = 60.83) as compared to the control group (x = 2.51), p < .05, v = 2.101.
Findings

The null hypothesis, that there is no significant difference on standardized CTBS reading test scores when comparing a strong phonics basal reading program to an integrated language arts, was rejected.

Summary of Findings

In summary, there is a significant difference in the reading CTBS test scores in five eastern Greenbrier County Schools when comparing the integrated language arts method of reading instruction to the phonics basal method of reading instruction.
CHAPTER 5
SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Introduction

The focus of this study was to investigate the total reading CTBS test scores of first grade when using an integrated language arts method of reading instruction in five eastern Greenbrier County West Virginia elementary schools. The test scores for the school year 1996 and 1995 were used in the statistical analysis to determine the difference between reading instruction methods. The CTBS reading subtests were compared for the years 1995 and 1996 to determine where there were reading strengths and weakness.

Summary of Findings

The null hypothesis stating that no significant difference on standardized reading CTBS test scores would be found when comparing a strong phonics basal reading program to an integrated language arts program was rejected. A two-sample t-test was the sole statistical analysis used in this study. The study used the sample size of 18 to represent the average class size of the five schools in the study during the testing years 1995 and 1996.

1. A significant difference was found in the first grade (N=18) on total CTBS reading scores, experimental group (x=60.28) as compared to the control group (x=78.89), t=2.25, p<.05, V=2.101.
2. A significant difference was found in the first grade (N=18) on comprehension CTBS test scores, experimental group (x=56.83) as compared to the control group (x=73.61), t=1.97, p<.05, v=2.101.

3. A significant difference was found in the first grade (N=18) on vocabulary CTBS test scores, experimental group (x=60.83) as compared to the control group (x=82.5), t=2.51, p<.05, v=2.101.

When examining the CTBS reading subtest scores in vocabulary and comprehension as well as total reading a slight to moderate drop was seen in all five schools in the study. The drop occurred in the 1996 school year when the integrated language arts method of reading instruction was implemented.

**Discussion**

The discussion is grouped into four parts: (a) the difference between integrated language arts reading instruction and phonic basal reading instruction. (b) the comparison of CTBS reading test scores. (c) the instructor variables. (d) student variables.

The difference between an integrated language arts method of reading instruction and a phonics basal method of reading instruction lies in a philosophy as well as an approach. A strong phonics method of reading instruction provides direct instruction of individual letter-sound association. It is felt that through direct instruction of
letter-sound association, children learn to decode words and thus read. Reading materials are contrived in the beginning to reinforce the letter-sound association. The phonics basal approach moves from part to whole when teaching reading.

The integrated language arts method of reading instruction utilizes good children's literature through shared reading experiences. After sufficient shared reading experience the child reads the story on his or her own. The child practices isolated sentences from the story on his or her own. From the shared reading experience the child practices isolated sentences from the story with some phonics instruction, looking for patterns and similarities within words. The student is encouraged to write about his or her experiences as part of the reading instruction. The integrated language arts method of reading instruction moves from whole to part.

A significant difference was evident between CTBS test scores of the integrated language arts and the phonics basal method of reading instruction. The experimental means (60.28, 56.83, 60.83), compared to the control means (78.89, 73.61, 82.5) established enough difference to reject the hypothesis.

The teachers in this study were all experienced in teaching the first grade and had graduate hours above their undergraduate degrees. The teacher variables that can not be accounted for in this study are philosophy or method of.
instruction. While all teachers had received instruction in both methods of reading instruction the majority of the teachers may have been more comfortable with the established phonics basal reading instruction method that had been used in the district for eight years.

The student variables were significant in this study. This study compared CTBS test scores of two different in tack groups of students receiving two different methods of reading instruction. In the study the classroom placement reflected homogeneous grouping. The two groups of students came from the same socio economic backgrounds. Both groups of students had received phonemic awareness instruction in kindergarten. It was not possible to measure the developmental level of each group of students. The students in the 1996 test year missed over 20 instructional days because of inclement weather perhaps imprinting negatively on the CTBS test scores.

Conclusions

1. The results of this study does not support the research hypothesis that no significant difference in CTBS reading scores was evident when comparing integrated language arts and phonics basal reading instruction.

2. The study noted drop in CTBS reading subtest scores when comparing the two methods of reading instruction. This drop was significantly different.

3. The study did not test the writing and spelling
skills of the two groups of students. Different reading instruction methods may or may not have shown a significant difference.

Recommendations

1. Continue to investigate the two groups of students; (the ones with the strong phonics basal background and the ones with the integrated language arts background), on total standardized reading scores.

2. Continue to monitor the reading subtest scores in vocabulary word analysis and comprehension to discover instructional strengths and weaknesses.

3. Analyze writing and spelling standardized test scores for the two study groups.

4. Continue to use a balance of each reading approach (integrated language arts and phonics) in first grade reading instruction.

5. Continue to develop reading strategies that will reach both the global holistic learner and the analytical learner.
REFERENCES


Educational Psychology. 86(3), 350-359.


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