

Increasing Reading Levels using
Reading Plus Program Intervention

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FACULTY APPROVAL

Increasing Reading Levels using
Reading Plus Program Intervention

Approved for the Faculty

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ABSTRACT

The purpose of this experimental research study was to significantly determine if the Reading Plus Program intervention improved seventh grade students reading scores as measured by the STARS reading assessment. To accomplish this purpose, a review of selected literature was conducted, essential baseline data were obtained and analyzed and related conclusions and recommendations were formulated. An analysis of data confirmed the Reading Plus Program significantly improved seventh grade student reading scores as measured by the STARS reading assessment.

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CHAPTER 1

Introduction

Background for the Project

Millions of American Children cannot read well enough to excel in school, a situation that has fueled a vocal debate in local school districts about the best ways to teach reading. Students at risk for educational failure represented the fastest growing segment of our school population. Often lost in arguments over teaching methods, however, are a clear understanding of the basic concepts and skills that children need to master before they can read effectively. To raise student achievement in reading in both the quantity and quality of reading, practice was needed. Monitoring and managing reading can be a daunting task for classroom teachers. To help improve literacy in the United States, Raphael (2000) recommended...

There are many participant groups, each contributing in different ways that should be intimately involved in the decisions about literacy instruction and texts. Groups include teachers and students most directly, as well as

administrators, parents, policy makers,
Community members, and researchers (p. 170).

Learning to read in school required that students master three skills. The first skill, understanding that letters of the alphabet represent sounds in words. This was also called the alphabetic principle, which means understanding the relationship between letters and phonemes to retrieve the pronunciation of an unknown printed string or to spell words correctly. The second skill was reading for meaning. By passing this skill will enabled students to apply reading knowledge and skills as a primary vehicle for learning and for enriching their lives. The third skill involved identifying words swiftly, which enabled students to maintain a reasonable learning rate while reading.

The United States has become a nation divided between those who can read and those who cannot. Every day, somewhere in America, new headlines report, "Illiteracy is increasing; our kids are not being taught to read" (Roberts, 2000, p.184). The United States spends half a trillion dollars annually on education at all levels, and on third of a trillion of

that tax money has been spent on elementary and secondary education (Johns, 2001).

Statement of the Problem

The West Valley School District (WVSD) in Yakima, Washington needed to improve students' reading scores. West Valley Middle School (WVMS) was selected to model the reading improvement plan for the WVSD. With this objective in mind WVMS administrators made the decision to adopt the Reading Plus program to improve students reading skills. To implement this program, WVMS made hour-long Reading Plus classes available to students on an elective bases. Students with lower G.P.A.'s were required to take Reading Plus classes.

Phrased as a question, the problem which represented the focus of the present study may be stated as follows: Did the Reading Plus program intervention significantly improve seventh grade students reading scores as measured by the STARS reading assessment?

Purpose of the Project

The purpose of this experimental research study was to significantly determine if the Reading Plus program intervention improved seventh grade students reading scores as measured by the STARS reading

assessment. To accomplish this purpose, a review of selected literature was conducted, essential baseline data were obtained and analyzed and related conclusions and recommendations were formulated.

Delimitations

The present study was confined to WVMS and utilized baseline data obtained for the 2000-2001 school year. All those enrolled in the Reading Plus Program were included in this experimental study. The STARS reading assessment was used to pre-test participating students during Fall trimester 2000 and to post test students at the end of Spring trimester 2001.

Assumptions

The assumption was made that students involved in the study attended classes regularly throughout both trimesters. This allowed for all students to receive equal instruction in the Reading Plus Program. The further assumption was made that the STAR test was measured correctly and represented an accurate description of the students reading grade level.

Hypothesis

Reading level scores of students who participated in the Reading Plus Program will show significant improvement as measured by the STARS assessment.

Null Hypothesis

There will be no significant improvement in reading level scores after participation in the Reading Plus Program. Significance was determined for $P \geq$ at .05, .01, and .001 levels.

Significance of the Project

Increased pressures from the school board, taxpayers, and legislators caused the WVSD and WVMS to focus on increasing student-reading scores. Therefore, the decision to adopt the Reading Plus Program, and the accompanying need to determine whether the Reading Plus Program increased student reading scores required supporting data and documentation. Accordingly, the researcher (Shayna M. Shelton) undertook the study to provide that documentation. Finally, the researcher hoped the present study would contribute to the growing body of research related to the importance of reading and language acquisition. If the Reading Plus class continues to be successful, the WVMS would model their

success to other schools as well as reaching the district's goal to improve students reading abilities, success in the content areas, and reading scores.

Procedure

Procedures employed in the present study evolved in several stages, as follows:

1. During the 2000-2001 school year WVSD officials identified low reading scores among middle-level students on the WASL exam as a major district problem in need of correction.
2. At this time WVSD administrators made the determination to adopt the Reading Plus Program in the hope of raising reading scores.
3. The STARS reading assessment was utilized to measure any student progress resulting from the adoption of the Reading Plus Program.
4. Undertaking the present study was subsequently authorized by the WVMS principal to provide in order to obtain data/documentation that might possibly indorse the WVSD decision to adopt the Reading Plus Program.

5. Throughout the 2006-2007 school year the investigator (Shayna M. Shelton) organized seventh grade experimental and control groups and obtained and analyzed data produced from the STARS reading assessment.
6. From January-May 2007 baseline data from the 2000-2001 school year were analyzed and related conclusions and recommendations were formulated.

Definition of Terms

Significant terms used in the context of the present study have been defined as follows:

Experimental Research. Research in which at least one independent variable is manipulated, other relevant variables are controlled, and the effect on one or more dependent variables is observed.

Qualitative Reading Inventory. A type of literacy assessment called an Informal Reading Inventory that measured accuracy and fluency of reading of students and then gave a grade reading placement level.

STARS Reading Program. Diagnostic comprehensive multiple-choice test given to students via the

computer that represented how students performed to a nationally representative sample of students.

T-test. Inferential statistics technique used to determine whether the means of two data groups are significantly different from one another.

T-test for independent samples. A parametric test of significance used to determine whether there is a significant difference between the means of two independent samples at a selected probability level.

Washington Assessment of Students Learning. A Washington State Learning assessment test administered to 4th, 7th, and 10th grade students.

Acronyms

I-728. Initiative 728

IRI. Informal Reading Inventory

QRI. Qualitative Reading Inventory

WASL. Washington Assessment of Student Learning

WVMS. West Valley Middle School, Yakima, WA.

WVSD. West Valley School District, Yakima, WA.

CHAPTER 2

Review of Selected Literature

Introduction

The review of selected literature presented in Chapter 2 has been organized to address;

- The Importance of Reading
- Language Acquisition
- Reading Instruction
- Standardized Reading Tests
- Summary

Research current primarily within the last 15 years were identified through an online computer search that utilized Educational Resource Information Center (ERIC), and the internet. A hand-search of selected reference materials was also conducted.

The Importance of Reading

For decades reading was regarded in a particular way as the most important aspect of education and learning. Throughout history reading was established as an indicator of absolute prominence and civilization. Without reading, society plummeted downward to a nation of imperceptive and unintelligent people. Furthermore, theologians, scholars, politics,

presidents, educationalists, and parents held the standard of reading to be of highest importance. The importance of reading and writing was emphasized in the following statement by the Education of Young Children (NAEYC, 1998):

Reading is critical to a child's success in school and later in life. One of the best predictors of whether a child will function competently in school and go on to contribute actively in our increasingly literate society is the level to which the child progresses in reading and writing (p.2).

According to the Washington State Reading Initiative (WSRI), numerous government agencies contended that the importance of reading was of such magnitude that the subject of reading alone has changed reading. Higher educational reading standards are demanded for school district across America. New stringent standards have closed the reading gap and significantly increased the number of students reading proficiently (Hasbrouck, 2003).

The No Child Left Behind Act (NCLB) passed by Congress in 2002 has become characteristic of higher

academic standards for American schools. As emphasized in the following statement:

This federal act requires accountability for all elementary and secondary school that receive Title 1 funds, NCLB requires schools and districts to meet ambitious achievement goals called Adequate Yearly Progress (AYP). By 2014, 100% of all students are expected to meet state standards (Wikipedia, NCL, 2007, p.1).

According to Johns (2001), an important step in teaching reading focused on the body of knowledge educators called phonics. As English has been considered an alphabetic language, children can be taught the 26 letters of the alphabet, the 44 sounds those letters represent, the 70 most common ways to spell and, as a result, they can read every word in English. This instruction can be provided in a matter of months, and should be introduced in first grade at the latest.

The United States has become a nation divided between those who can read and those who cannot. Every day, somewhere in America, news headlines report, "Illiteracy is increasing; our kids are not being taught to read" (Roberts, 2000, p.184). The

United States spends half a trillion dollars on education at all levels, and one third of a trillion of that tax money has been spent on elementary and secondary education (Johns, 2001).

Today, people have been drawn into the vortex of the world wide web, rushing to place a computer terminal in every classroom, and yet the simple concept of teaching our children the 26 letters of the alphabet, the 44 sounds those letters make , and the 70 common ways to spell them still baffled many. Educators must apply some common sense and stop the academic child abuse that goes on under the guise of what today was called whole language, and in the 1920's was called look and say reading instruction. Reading has become a gateway skill; without the ability to read children would be unable to go through the gate to all other areas of learning, as they all depend on this one basic skill (Roberts, 2000).

Language Acquisition

Learning to communicate has become one of the most important things we learn to do in early years. Parents are like a bridge between a young child and speaking. Children learn to speak by listening and imitating loose versions of various sounds made by

their parents. Learning to speak is the first step required for mastery of reading, writing and all school knowledge acquisition. Before you can read or write, you learn to speak and understand what people say (Notari-Syverson, Maddox & Cole, 1998).

Nash (1997) contended that parents were the first and most important teachers of language. They help babies learn language by delivering a rhythmic, high-pitched speaking style which their children first learn to recognize. There appear to be a series of windows for developing language. The window for acquiring syntax may close as early as five or six years of age, while the window for adding new words and grammar may never close. Talking to a baby significantly speeds up the process of learning new words.

Fowler (1990) collected decades of data regarding the importance of collaboration between parents and teachers of young children. A three year longitudinal study explained how language occupied a central place in a day care program for infants ranging in age from a few weeks to eighteen months. The program provided an ideal day care environment with well-lighted and well-equipped rooms, a large number of toys and learning materials, and exceptional teacher-child

ratios. The result was a highly enriched program that allowed a great deal of closely supervised free play, relaxed and stimulating care in the basic child care routines. The centerpiece of activities was sensitive, interactive care with the babies accompanied by frequent and continuous verbal interaction. The program was coordinated with a program for parents that included periodic home visits and phone communications by a parent guidance worker in methods of improving basic care and enriching language and other cognitive activities. The most interesting finding of the study focused on gains children made in language development. The children significantly exceeded the development of the comparison group of home-reared children in word usage, frequency and content of verbal interactions with other children, and receptive language comprehension.

Because of the positive findings cited above, Fowler decided to work with parents in the home concentrating on guidance in enriching their child's language environment. The chief purpose of a home-based investigation was to determine how vital language was to development and how fluent children could become as a result of furnishing highly enriched

language experiences during infancy. Parents were responsible for their child's general care and the research group furnished guidance for language enrichment beyond what individual parents would normally do in following the practices of their own cultural and educational background. Parents were guided by means of instructional methods designed to improve basic care and to enrich language and other cognitive activities when infants ranged between three and seven months of age. Most families included two-parents, with the mother caring for her first-born child at home herself during infancy. The families represented a broad spectrum of educational backgrounds and ethnic groups.

Fowler concluded that regardless of the family's social and educational background, children can benefit from special attention focused on language beginning in earliest infancy. Nearly all children in Fowler's research groups developed language skills better and at faster rates than the norms for their cultural and educational background. children began to understand and say words earlier, and to form phrases and sentences better. The educational focus deemed most likely beneficial for infants, toddlers,

and preschoolers was one that stressed language enrichment. The implications of Fowler's research related to language were stated as follows:

- An early start with an enriched environment generally has very significant positive influences on cognitive development.
- When early enrichment was centered on language experiences, it had the strongest effects on children's verbal development.
- The potential of early language gains from enrichment continued through later periods of development.
- The effects of enriching language during infancy appeared to be equally effective in both home and day care settings.
- Early enrichment was potentially equally effective with infants from all social, educational and linguistic backgrounds, when families were furnished with adequate and continuing educational guidance and social growth.

- The maintenance of quality care with enriched language need not be an elaborate enterprise.

(p.10)

Bower (1999) found that seven-month-old babies were able to discern and remember simple rules for arranging speech sounds, an ability that may foster language acquisition. Infants can develop an awareness of predictable patterns in three-syllable nonsense sequences that they heard. Grammar skills may indeed grow out of babies' recognition of patterns in the talk that they heard as infants.

McDonald (1999) agreed that infants can recognize and generalize the abstract rules of language, and ability that apparently helps humans to acquire language skills early in life. Scientists at New York (NYU) University who studied language found that the mind puts together sentence components, nouns, verbs, and adjectives, like X's, Y's, and Z's in an equation. Experiments at NYU were conducted in which an infant listened for two minutes to 16 simple "sentences" consisting of three made up words in an A-B-A or A-B-B pattern, such as "wo fe wo" or "wo fe fe". These authorities reported that when the "words" in these "sentences" were changed, more than 90 percent of

infants were able to recognize sentence patterns they had heard before. Babies recognized the pattern by observing their listening behavior and attention spans. The babies listened longer and paid more attention to sentences with unfamiliar structures. Attention spans were determined based on how long infants looked at a blinking light next to speakers from which they heard the sounds.

Schmid (1998) cited a 1991 study conducted by the National Institute of Health to determine what impact child care had on a child's acquisition of language. The study involved 1,300 families with children one month old or younger, in ten locations across the United States. Participating families were diverse in terms of race, maternal education, family income, family structure, including single-parent families, mother's employment status and the number of hours children spend in non-maternal care arrangement. The investigation determined that the higher the quality of child care in the first three years of life, the greater the child's language abilities will be at 15 months, 2 and 3 years of age. The amount of language that is directed at a child in child care is an important component of quality provider-child

interaction. Early thought and language development will occur when a child's situation is positive and language stimulated. Language stimulation is determined by how often a child is spoken to or asked questions by a child care provider.

Hart & Risley (1997) two scientists with the Schiefelbusch Institute for Life Span Studies at the University of Kansas, examined the effects of parentals behavior on the intellectual development of children. The authorites recruited 50 families from a range of socioeconomic backgrounds. All families were stable and functioning well, and all but one had a father or other male adult who was regularly involved with family matters. Once a month, an observer visited each home and observed for an hour as a parent, usually the mother, went about her business. The observer tape-recorded and took notes of everything said by the parent and child. Observations continued until the children reached age three. The results indicated no significant differences regarding race, socioeconomic status of degree of education. What mattered was what they did. For example Hart & Risley noticed the children adopted the interactional style of their parents. If parents talked a lot, so did the

children; if parents provided lots of positive feedback, so did the children. The research concluded, if parents did not talk to their preschool youngsters, their vocabulary development may lack and making up for the deficiency was deficient and, future attempts to remediate vocabulary development was more difficult.

According to Gallas et al. (1996) Just as parents established a foundation for the development of language for their children, educators must continue to boost children's language skills, vocabulary and interest. Each parental communicative encounter with a child rebounds and reverberates into other talk spaces. Oral language in classrooms has not been orchestrated solely by teachers into a coherent whole, but rather grows out of many different communicative encounters, which have influences every aspect of learning and teaching.

Students have mastered language as they repeatedly hear and retell stories. They have learned vocabulary as the teacher reads and rereads stories. This modeling has also enabled children to learn about syntax, rhythm, and pacing of language. Stories may provide comprehensible input to children because of

their predictable nature. Rich illustrations in picture books, combined with props, have created a rich contextualization, which has further enhanced the student understandings (Ferguson & Young, 1996).

Also according to Ferguson & Young, the use of literature to gain dialogue and conversation experience have benefited language development. Literature has provided language-rich illustrations of the uses of dialogue and often elicits a "chime in" response from students, thus providing a natural link to give and take of conversation, vocabulary usage, and appropriate syntactical structure. To internalize the sentence structure of dialogue, children must first hear, read, and reread the story. The text will become familiar as students "chime in" with the reading, evidencing that they are ready to dialogue using language of the predictable text.

Notari-Syverson, Maddox, & Cole (1998) contended that learning to communicate is one of the most important things we learn to do in early years. Communication has become the first step in learning to read, write and learn in school.

Reading

According to research conducted by the National Association of the Education of Young Children (1998), Early stimulation by parents for their children's language acquisition has established the groundwork for later achievements in academic areas in school. Early language development has become the first step towards learning to read. Reading to children has served to broaden their world, to introduce them to the joys of reading, and to expand their knowledge and vocabulary. Children learn what readers do, starting with simple things such as turning pages and reading from left to right and top to bottom. Later, children begin to pay attention to print and to link print to words they hear.

A research conducted by Wade & Moore (1998) found that if parents involved themselves actively in their children's development and learning, their children attained a higher level of educational development. According to these authorities, early home interactions with parents for later educational development and that book sharing played a central role in laying the foundations of literacy. Children from inner city families participated in a project of

book gifting when they were babies. The babies were observed up to their first year in school and matched with a comparison group whose families received no book gift pack. Baseline score revealed the group with book gifting was significantly further ahead in speaking, listening, reading and writing. Further, those children entering school who benefited from book gifting retained their superiority after two years of schooling. The active involvement of parents through rhymes, storytelling, and books established the foundations of literacy in children's early years. In particular, the child's early experiences related to of storytelling, making stories and sharing books positively affected educational progress.

Fowler's research revealed that Reading stories to children can become one of the most constant and useful sources of pleasure especially during infancy. Books can stimulate the imagination, give access to literature and its interpretations of life, provide diversions from daily life routine, and open doors to endless sources of information. Books and stories enrich mastery of language and abstract thinking in several ways. Most importantly, reading stories to children have developed their ability to follow events

in a logical sequence focused on themes that may be out of the context of the child's own experience.

Zemelman & Hyde (1993) argued that when children grow up in print-rich homes where parents model reading and writing, where literacy is incorporated into day-to-day family life, where stories and words are treasured, where reading aloud is a bedtime ritual, good readers have usually emerge. Without becoming too intrusive, teachers can help parents teach their own children by showing them how simple and natural literacy-building experiences can be integrated into the family routine. Zemelman & Hyde described a "work in progress" project in Chicago, Illinois, where Kindergarten classes began each week with all children from reporting about the stories their parents read to them most recently. In similar inner-city schools, teachers assumed parents cannot or will not read to their children regularly. The classroom teacher in this project simply required that some adult (eg. a grandparent, sibling, or neighbor if parents are not available) performed this role. "Reading" was not the goal. Rather the major objective was to look at the book together, read it, enjoy it, and talk about it.

Barnhart & Wham (1994) reported the activity of story book reading had many benefits for children whose parents read to them. Reading stories to children correlated with their performances on reading readiness tests, as well as their subsequent success with later reading in school, and later language achievement.

Lowery (1998) contended the power of printed words rested in the author's ability to enrich and extend ideas already within the reader. New knowledge gained from reading was actually a rearrangement of prior knowledge into new connections. If readers have little in their mental storage related to the content of what they read, they will gain little.

Parent Involvement

According to Nash (1997) one of the most crucial elements in language acquisition, as well as subsequent success with academic achievement, was the involvement of parents in their children's learning and development. Evidence continues to support the belief parental involvement from infancy and through the developmental stages was vital.

Said Nash:

What wires a child's brain is repeated experiences. Each time a baby tries to touch a tantalizing object or gazes intently at a face or listens to a lullaby, tiny bursts of electricity shoot through the brain, knitting neurons into circuits as well defined as those etched onto silicon chips. When the brain does not receive the right information or shuts it out, the results can be devastating. Parents are the brain's first and most important teachers. Wiring vision, wiring feeling, wiring language, and wiring movement are all essentials in the development of a child's brain (p.51).

The window of learning needs to be exercised early on for each system to develop. Hands-on parenting, such as finding the time to cuddle a baby, talk with a toddler and provide infants with stimulating experiences all contribute to the development of a child's brain. Deprived of a stimulating environment, the brain may not grow, thereby significantly impacting learning. Rich experiences really do produce rich brains (Nash).

Parental involvement has improved student achievement, parental attitudes, has reduced school failure, and improved attendance and school success. These kinds of positive results can be realized when there is a planned approach for involving parents (Henderson, 1987).

According to Kellaghan et al. (1993) recent years have witnessed a surge in the development of programs designed to increase families' involvement in their children's education. These authorities identified three reasons for this increase. First, the cumulative impact of research has consistently found the importance of the home in contributing to children's progress in school, at times suggesting it may be even more important than school. Second, reform efforts focused solely on the school to improve achievement, such as new materials and curricula, have not been as successful as hoped, causing policy makers to look beyond the school. Third, radical changes in the structure and function of families raised questions concerning the families' ability, under varying pressures, to provide conditions that foster children's achievement.

Drake (1995) concluded that if American public school systems were to fulfill their mission of educating all students, they will need to be guided by a people-centered approach, one that includes parents. Effective home-school collaboration occurred when parents and educators shared common goals, viewed each other as equals, and supported the student's education wholeheartedly.

Cooperation between schools and students' families was essential to the education process. Parents and teachers shared a responsibility for transmitting values and teaching skills to the next generation. To be effective, parental involvement has to be thoroughly integrated into the total school program, not treated as an adjunct project for a select group of parents or the school staff (Boger, 1990).

According to Hargreaves (1997), relationships between teachers and parents should concentrate on the most important interest that parents have in school are the achievement and well-being of their own children. This is where the emotional connection between school and community has been strongest. In today's world, schools are expected to involve parents

in school governance. Many schools welcome parents and even require them to serve as teacher aides for a prescribed number of days each year. Generally, parents are now expected to serve as educational resources for their children and to work cooperatively with teachers.

Comer (1986) recommended the need for a comprehensive plan for expanded parental involvement.

Said Comer:

Unfortunately, even when parents are invited into schools, there is frequently no mechanism for using them effectively to improve relationships there. When parents participation has not been well thought out and well structured, parents' concerns about teaching methods, the goals of the school, and even the competence of the staff can lead to conflict. (p.444)

According to Comer (1998), parents want to know what is going on in school and how their children are doing. Parents also want to know how the system works, how they can be a part of the instructional process, and what they can do with their children at home to help them achieve.

Danielson (1997) reported that parent-teacher, parent and teacher, programs that seek to educate and cooperate, without alienating families, were beneficial for children. Whatever the parental involvement program might resemble, teachers must be supportive of what parents are already doing to enhance learning. Support can begin when information is shared with parents on how to help their children. Ideally, this should be presented by means of teacher-modeling with parents and children. Danielson described an exemplary program and guiding principles which teachers could share with parents to promote their children's literacy. "Parents as Teachers" is a program that supports the home-school connection. The program is based on the philosophy that parents are child's first and most influential teacher and the school's role in the early years is to assist families in giving their children a solid educational foundation.

Essential Academic Learning Requirements

Teaching children to read has directly affected new directions in reading instruction based upon changes resulting from research and legislation. Classroom teachers have become the bridge linking research on the educational process with how to

increase student learning, how to examine current practices, and how to revise instructional programs. Much of the emphasis in the new view of reading has to do with the relation of process to content and the teaching-reading-learning setting (International Reading Association, 1998).

After an examination of current practices, the Washington State Legislature adopted the Education Reform Act of 1993 to establish common learning goals for all Washington students. These goals were intended to raise standards and student achievement, produce opportunities for all students, and to produce knowledge and skills essential accomplish the following:

GOAL 1 *Read* with comprehension, write with skill, and communicate effectively and responsibly in a variety of ways and settings;

GOAL 2 *Know and apply the core concepts and principles of mathematics; social, physical, and life sciences; civics and history; geography; arts; and health and fitness;*

GOAL 3 *Think* analytically, logically , and creatively, and to integrate experience and

knowledge to form reasoned judgments and solve problems; and

GOAL 4 *Understand* the importance of work and how performance, effort, and decisions directly affect career and educational opportunities.

(Essential Academic Learning Requirements Technical Manual, 1997, p.2).

The intent of the legislation was to provide opportunities for students to become responsible citizens, to contribute to their own and to their families and communities well-being, and to enjoy productive and satisfying lives (Essential Academic Learning Requirements Technical Manual).

The State of Washington has embarked on the development of a comprehensive school change effort in which its primary goal was the improvement of teaching and learning. The Commission on Student Learning undertook three important tasks: (a) to establish Essential Learnings that describe what all students should know and be able to do in eight content areas of reading, writing, communication, mathematics, science, health/fitness, social studies, and the arts; (b) to develop an assessment system to measure student progress towards achieving the Essential Learnings;

and (c) to recommend an accountability system that will recognize and reward successful schools and provide support and assistance to less successful schools (Ensign, 1996).

The Commission on Student Learning reported that making certain that students received the best education required takes a strong commitment from not only schools and teachers, but from students, parents, business leaders and the community. These groups are the "stake holders", the people who have the most to gain or lose by how well our schools meet the needs of the next generation of students (Raising Standards, 1995).

If students are to be better prepared for the future, schools will need to teach them to develop a much stronger set of skills in the basics as well as to be independent, complex thinkers able to solve problems and to keep up with the latest breakthroughs. Meanwhile, societal have placed pressures on the American family have put unrealistic demands on schools to do all things for all people. Without a doubt, schools today have a much bigger and more difficult job to do. The forceful combination of changing needs in our society and new insights about

teaching and learning have called for a new way of thinking about reform of our educational system. Traditional thinking about what schools should teach and what students should learn will not produce necessary results today's world demands (Raising Standards, 1995).

Memorization of facts will always be important, but schools must now more actively engage in helping students understand the meaning of facts and how to use information to solve problems creatively. In short, students must learn how to learn, and must understand how they will use basic skills throughout life (Raising Standards).

Reading Instruction

Many references were found in the review of research and literature related to: instructional strategies focused on reading two major approaches to teaching reading, phonemic awareness and whole language, received major attention by numerous authorities. These strategies have been detailed on the following pages.

Phonemic Awareness

According to the National Research Council(1998) phonemic awareness has played a significant role in

learning to read. The phonemic awareness approach introduces children to the relationships between auditory sounds and visual symbols. Letter-sound correspondence, decoding, and segmenting/blending are all components that included in the teaching of phonics. Each of these phonemic skills established the foundation for beginning reading.

Letter-sound correspondence

According to McGuinness (1997) letter-sound correspondence has become a necessary part of teaching a child to read. The child must be taught that each of the 26 symbols of the alphabet has a corresponding sound. The National Research Council found that beginning readers need to know that spoken words are made up of smaller units of sounds and become familiar with sound-letter relations. Byrne et al. (1990) claimed that to become a fluent reader, students need the knowledge of letter sounds in addition to other elements of a literacy program. Students will only succeed in reading if they are aware that each of the 26 symbols of the alphabet has a corresponding sound or sounds. Adams (1990) found that knowledge of letter-sound relationships correlated strongly with early literacy development. A strong base in letter-

sound relationships was significant for success with reading development (Morrow & Tracey, 1997).

McGuinness maintained that knowledge of letter names does not promote good reading skills, whereas the knowledge of phoneme-to-letter correspondences does. McGuinness urged claims that letter name teaching should not form any part of training at the kindergarten or first grade level. Memorizing the alphabet sequence of letter names has one major purpose, and that is to assist children in looking up words in a dictionary. The most effective method for teaching children sounds of the alphabet was to withhold teaching letter-names and to focus on teaching only sound-symbol association.

Once children have discovered that letters and spoken sounds connect, they can generalize other connections between letters and sounds from print. Students are ready for the next move once they know some letter-sound correspondence (Byrne et al., 1992) Moustafa & Maldonado-Colon (1999) stated:

"Researchers agree that proficient readers use their knowledge of language, their knowledge of letter-sound correspondences, and their

background knowledge to read (i.e., make sense of) alphabetic writing" (p.1).

In a recent 1191 study, Byrne et al. found that phonological awareness training was more successful when combined with letter-sound correspondence training. These authorities suggested combining phonological awareness with letter-sound correspondence will result in a higher level and faster rate of progress for students. Reutzel & Cooter, Jr. (1996) believed that learning letter-sound correspondence was essential to reading words and connected text.

Phonics

Phonics has been at the center of debate for a number of years, (Durica, 1996). Many educators view this method as the only way to teach reading; other educators see it as detrimental to literacy acquisition. Recent research suggested that students' ability to understand phonics are "the best predictors of the ease of early reading acquisition- better than anything else we know of, including IQ" (Stanovich, 1994, p.284). Other researchers have, provided another view of phonics. Goodman believed that the phonics relationship to reading ability was

of little importance. Phonics was not the only way to teach reading, and yet should not entirely be excluded (cited in Durica, 1996).

Phonics has become one part of an entire system of techniques and strategies used to teach effective reading skills (Morrow & Tracey, 1997). These authorities claimed "advocates of whole language should be taught in the context of reading and writing activities and not be isolated" (p.2). Phonics should not be isolated, but integrated into a literacy program. Byrne and Fielding-Barnsley (1990) suggested that educators should create activities and lessons that include phonetic activities as well as other strategies. These researchers maintained that phonics and alphabet knowledge work in combination to support the earliest stages of reading and spelling acquisition. A child should be phonologically aware, but at the same time be able to reflect upon other qualities that promote his/her reading skill. According to longitudinal evidence, phonics and literacy developed as the result of reciprocal influences. Wagner et al., (1994) suggested that phonics cannot naturally emerge from phonological

awareness. Students cannot be taught by one method alone.

Juel(1998) found studies have shown that students without phonics did not succeed as well as students with phonemic awareness. Said Juel:

"Children with little phoneme awareness usually struggle in learning to read and spell words, developing a wide achievement gulf between themselves and peers who are phonemically aware" (Juel, 1988, P.1).

Byrne et al., claimed that most children who are knowledgeable of phonics and who knew letter sounds could decode unfamiliar printed words. As stated by Murray (1998), when instruction emphasizes phoneme manipulations, children learn what they were taught" (p.470). Murray further stated:

Activities focused on the identities of individual phonemes, which make phonemes familiar and memorable, and that help children recognize their identities in words could well be incorporated into early literacy programs contain other activities known to be helpful in preparing children to read. (P.473)

Developing lessons and activities that implement phonetic activities at the early ages of kindergarten and first grade are beneficial to students reading skills (Murray, 1998).

According to the National Research Council, (NRC, 1998) there was a strong association between a child's ability to read knowledge of phonics. Phonic skills in young readers were one of the strongest predictors of reading success. The NRC contended that basic knowledge of phonemic structure of words was important for a child to understand the "alphabetic principle" that written print represented the sounds of our language (p.56). Knowledge of phonics helped children to learning that each letter has a corresponding sound and makes up part of a whole word. The NRC further mentioned (1995) that "the correlation between reading and phonemic awareness, which is already substantial by the start of school, becomes stronger during the early grades" (p.56). Educators should support children's phonics learning in the early grades to ensure strong reading skills. Yopp (1995) believed training in phonemic awareness should be part of every child's education before formal reading instruction.

Decoding

McGuinness & McGuinness (1998) described decoding as "reading by using the sound-to sound picture code of the language" (p.348). According to Byrne et al., decoding is a basic component of reading. These authorities states that decoding "forms the machinery for the well known dual route accounts of word reading" (p.313). Decoding skills have proven to play a major part in the acquisition of basic literacy skills. McGuinness (1997) found that children who had accurate "phonetic decoding skills" scored highest on reading tests. The strongest predictor of a student's comprehension on a reading test was his/her ability to decode and read one word at a time, sound by sound.

The NRC (1998) found that kindergarten students made positive growth when they were given "decodable texts developed by the Beginning Reading Program" (p188). Reutzel & Cooter, Jr., (1996) believed an early and strong emphasis on decoding skills and how these skills assisted in learning to read. One of the first stages in developing literacy skills was the decoding stage. Decoding was also one of the most important skills to be learned in early reading instruction, and a lack of decoding ability or phonics

knowledge was the main cause of reading disability. Some researchers believed that young children learned to read by teaching them how to decode letters to sounds, and sounds to words.

McCormick (1999) believed that decoding played a major role in teaching a child to read. This investigator concluded that once a child has the ability to connect sounds, he/she would be able to recognize the correct pronunciation of the word. The NRC acknowledged that skilled readers can be compared with non-skilled readers by their accuracy and speed in decoding skills. "Phonological decoding is a routing part of skilled word identification" NRC (p.65). An assessment that measured and intervened in activities for children found that "decoding facilitated by phonological awareness provided children entrée into the realm of literacy" (Troia, Roth, Graham, 1998, p.1).

Segmentation/Blending

According to Reutzel & Cooter, Jr., (1996) segmentation occurred when students were able to separate individual sounds in a spoken word. The ability to segment was essential to forming an effective identification strategy. Recent studies

have established strong correlation between "phonemic segmentation and literacy in school-aged children" (Wood & Terrell, 1998, p.2).

Blending required that students be able to combine individual sounds to form a word (Reutzel, Cooter, Jr.). Various activities can be used with groups of children which develop effective blending skills, and that will eventually guide children to becoming leaders who may assist their peers with blending activities (Yopp). A "systematic approach" to teaching successful reading instruction in blending was necessary (Shefelbine, 1998). Castle, Riach, and Nicholson (1994) found that one of the primary benefits children experienced in learning how to read was how to segment and blend sounds and how to link these sounds to the letters of the alphabet.

A study by Wood and Terrell (1998) involved activities that taught children how to blend and segment sounds, resulting in improvement in their phonological awareness. This same group of children performed better on literacy measures than other children. Treiman, Broderick, Tincoff, and Rodriguez (1998) claimed that children who know that the word "dig" is made up of three smaller sounds, are able to

understand why "dig" is spelled with three letters. Children who have this understanding were able to grasp the basis of literacy skills and to use these skills in a productive manner to pronounce words. Treiman et al., determined that children who were unable to analyze spoken words into smaller units of sound may experience more difficulty in learning to read. Murray (1998) found that some children have discovered how to combine individual sounds to form a word (blending and segmentation), and by doing so, they were able to progress to more advanced stages of reading. Said Murray: "participants taught to blend and segment across a rang of phonemes demonstrated superior improvement in phoneme manipulation"(p.470). According to Troia, et al., "segmentation training in isolation or in combination with blending instruction yields positive effects on reading achievement" (p.9). These authorities maintained the most significant perception of literacy development was the ability to recognize that some children find it more difficult to learn how to read because they do not possess an understanding of how speech is segmented into sounds and how these sounds relate to print.

Whole Language

Whole language was comprised of a combination of skills and strategies that helped to advance students learning in a variety of ways. With this approach, students participate in guided reading groups, shared readings, and independent reading activities. Students were engulfed in a range of environmental print. Together these activities provided great experiences that played a major role in learning to read (Tierney, Readence, & Dishner, 1995).

Guided Reading

According to Tierney, et al., guided reading was a teacher-dominated activity with some student support. Mooney (1990) stated "the aim of guided reading is to develop independent readers who question, consider alternatives, and make informed choices as they seek meaning" (p.47). Guided reading was intended for the teacher to guide students through the "steps" of reading, while allowing students to see how the teacher walked through the strategies of reading independently (Tierney, et al.)

The purpose of guided reading was to provide students with valuable experiences with language. Pinnell and Fountas(1989) maintained that guided

reading taught students to use information they already possessed. Said Pinnell & Fountas (1998) "Guided reading leads to the independent reading that builds the process; it is the heart of a balanced literacy program" (p.1). These authorities identified the following rationale for guided reading:

- It gives children the opportunity to develop as individual readers while participating in a socially supported activity.
- It gives teachers the opportunity to observe individuals they process new texts.
- It gives individual readers the opportunity to develop reading strategies so that they can read increasingly difficult texts independently.
- It gives children enjoyable, successful experiences in reading for meaning.
- It develops the abilities needed for independent reading.
- It helps children learn how to introduce texts themselves (pp. 1-2).

When using guided reading in the classroom, several activities may take place. Mason, Peterman,

and Kerr (1989) discussed before, during and after activities throughout guided reading lesson. For example, prior to a guided reading lesson, the teacher makes predictions orally about what the story might be about. Students observed as the teacher talks through the strategies of discovering what the story might be about. The teacher looks at the front cover, asks questions orally to help develop background knowledge, and introduces the story characters. The teacher may also look at the pictures to find out who the characters might be as well as what the setting of the story is. The teacher also might ask thought-provoking questions to ensure comprehension of the reading is taking place. Following a guided reading lesson, the teacher may elect to review story components to help students look back in the reading to find information. The teacher may also asks questions students to promote engaging activities to help promote better understanding of the material.

Shared reading

The Shared reading approach was intended to get the students involved while reading. A shared reading experience helped to motivate students into thinking they too can become successful readers and writers

(Mooney). When referencing shared reading, Pinnell & Fountas stated: "In shared reading you and the child read together from an enlarged text (a book, song, poem or chart), which may contain repeating words throughout" (p.27). These authorities maintained that during a shared reading experience, students were to read along with the teacher the parts they know. During subsequent readings of the same text, students were able to read more of the text until they eventually were be able to read the story from memory. Pinnell & Fountas offered the following suggestions for teachers to use when implementing a shared reading experience:

- Build up a store of quickly recognizable words (which we refer to as known words and draw attention to the features of words.
- Find known and unknown words within a text.
- Give explicit attention to words, word parts, letter clusters, and letters as the opportunity arises in the text.
- Enjoy and attend to sound, rhyme, and the flow of language.
- Notice letter patterns within words.

- Attend to punctuation and capitalization as they shape meaning.
- Attend to words that are written in a particular way because of what they mean.
- Find interesting or new vocabulary words (p.28).

Shared reading can provide a positive literature environment in which the child feels safe and warm within this type of interaction (Davidson, 1996). Holdaway (1979) believed shared reading allowed students to become equal participants in this experience. Students who were involved in asking questions learned from what they were experiencing with text.

Slaughter (1993) cited examples teachers can use when providing a shared reading experience. These included: Big books, student created big books, books on transparencies, scrolls, story trains, poems, songs, riddles, jingles, jump rope rhymes, predictable books, and language experience stories. Slaughter believed all these experiences allowed students to learn with a variety of literacy and language-related experiences.

Independent Reading

According to Mooney, independent reading should be a part of every student's learning. Reading independently allowed the child to make predictions within the text and "assume full responsibility for reading" (p.11). Mooney maintained, "independent reading is not a stage to be reached, but is a part of every stage of development" (p.11).

Clay (1979) encouraged students to use previous knowledge to maintain their tentative efforts. Clay recommended the following self-improving system for independent readers:

- The child monitors his/her own reading.
- He discovers new things for himself.
- He cross-checks one source of cues with another.
- He repeats as if to confirm his reading so far.
- He self-corrects assuming the initiative for making cues match.
- He solves new words by these means(p.74).

Pennel & Fountas maintained that to become a successful reader, one needs to have plenty of

opportunities to read independently. Students will read independently if given appropriate books in which they have had opportunities to read. These books may come from a shared reading or a guided reading lesson where the teacher has provided students an opportunity for independent reading. Students may also read books that have a familiar pattern similar to the one they used taught during a guided or shared reading lesson. A child can also participate in independent reading when choosing to read and participate in a variety of centers around the room. Some centers include a big book center which can include several shared readings, a poetry center, a favorite book box, a pocket chart center, classroom library, and a listening center. These centers provide students with a flourishing environment in which they can independently read and be successful.

Environmental Print

According to Schickedanz (1986), a print rich environment is an integral and necessary part of a primary curriculum. Within a "print rich" environment, students were able to see words everywhere they look. Sulzby, Teale, and Kamberelis (1989) explained that having several types of books

and "literature oriented displays" within the classroom (eg., such as poetry, alphabet letters, numbers, concept charts, and wordless picture books; as well as posters of the alphabet, bulletin boards, flannel boards), played a significant role in a students literacy experience.

Dowhower and Beagle (1998) contended that the abundance and arrangement of print can increase a students' ability to read and write. Environment print also helped to promote language development as well as a desire to learn. While providing abundant environmental print in the classroom , students were able to interact with the environment (Center, Freeman, & Gregory, 1996). Environmental print was a "tool" which students use to see and use written language.

Standardized Reading Tests

Educators and government officials throughout Washington State needed to determine a means for the educational assessment of students. Such assessments would require schools, districts, and state officials to establish a plan of action to enable all children to meet grade level standards. In 1993, The Washington State Legislature passed Engrossed Substitute House

Bill 1209, mandating that student achievement throughout the state must improve to keep up with a variety of societal and educational changes (Stanford Research Institutional, 2002).

These assessments or Standardized Reading Tests (SRT's) were valid in the sense they accurately measured what was intended. For example, SRT's measured students ability to recognize individual written words, and to comprehend precise meanings that an author of a test intended to convey.

According to Groff (2000), two factors, recognition of individual written words and comprehension of the author's meanings constitute fundamental aspects of adept reading. Moreover, these factors were prerequisite to a students' ability to read independently, to make critical judgments about the material they read, as well as reading to learn. Standardized Reading Tests have also satisfied the need to compare a student's progress in learning to read with that of his/her peers. In turn, it can be determined whether he/she was reading below, at, or above grade level. The difficulty of identifying which academic influence a student needs has become imperative. Targets needed to be established to focus

specifically on the ability to detect whether reading is being taught effectively.

The international Reading Association (2007) identified twelve English language standards inherent in most SRT's, which are used to measure a child's reading success. These include:

1. Students read a wide range of print and nonprint texts to build an understanding of themselves, and of the cultures of the world; to acquire information; to respond to the needs and demands of society and the workplace personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.
2. Students read a wide range of literature from many periods in many genres to build understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) experience.
3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their identification strategies, and their understanding of textual features (e.g.,

sound-letter correspondence, sentence structure, context, graphics).

4. Students adjust their use of spoken, written, and visual language (e.g., conversation style, vocabulary) to communicate with different audiences for different purposes.

5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, and discuss print and nonprint texts.

7. Students conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

8. Students use a variety of technological and information resources (e.g., library databases,

computer networks, video) to gather and synthesize information and to create and communicate knowledge.

9. Students develop an understanding of and respect for diversity in language use and dialects across cultures, ethnic groups, geographic regions, and social roles.

10. Students whose first language is not English make use of their first language to develop competency in the English language arts and develop understanding of content across the curriculum. Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

11. Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

12. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information) (p.1).

Summary

The review of selected literature and research presented in chapter 2 supported the following themes:

1. Reading has been regarded as the most important aspect of education and learning.
2. Early stimulation by parents for their children's language acquisition has established the groundwork for later achievements in academic areas in school.
3. Two major approaches to teaching reading focused on phonemic awareness and whole language.
4. Standardized Reading Tests endorsed by the Legislature mandated that student achievement in Washington State must improve.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The purpose for this experimental research project was to determine if the Reading Plus Program intervention significantly improved seventh grade students reading scores as measured by the STARS reading assessment. To accomplish this purpose, a review of selected literature was conducted, related baseline data were obtained and analyzed, and conclusions and recommendations were formulated.

Chapter 3 contains a description of the methodology used in the study. Additionally, the researcher included details concerning participants, instruments, design, procedure, treatment of the data, and summary.

Methodology

The researcher used a *t*-test for nonindependent samples for data analysis and to determine whether there was a significance between the means of two matched, or nonindependent, samples at a selected probability level. The research was conducted during the 2000-2001 school year.

Participants

Participants involved in the study included 25 seventh grade students from WVMS enrolled in seventh grade Humanities classrooms. Participants included 9 girls, ranging in age from 12-14.

Instruments

The STARS reading assessment was used to assess student performance. This measurement instrument has been designed to measure student growth in reading and was used to assess students' reading level. The STARS reading test helped to measure literacy skills accurately and reliably while diagnosing each students' command of phonemic awareness, phonics, and other readiness and literacy skills. The test provides valuable feedback to school districts and teachers needed to refine instructional approaches.

Design

Students in the seventh grade at WVMS in Yakima, Washington were pre-tested in the Fall 2000, using the STAR reading assessment. Reading instruction was provided in an uninterrupted, two hour per day setting, where students were instructed by the teacher with daily and oral reading activities as well. A reading specialist who designed the instructional for

individual students according to their reading strengths and weaknesses. The STARS reading assessment was then used to posttest participating students in the Spring of 2001. The design involved a pre and posttest group, as follows:

- Pre-Test: 25 seventh grade students whose reading levels was assessed prior to Reading Plus intervention.
- Posttest: Same 25 students whose reading level assessed after the Reading Plus intervention.

Procedure

During the 2000-2001 school year WVSD officials identified low reading scores among middle-level students on the WASL exam as a major district problem in need of correction. At this time WVSD administrators made the determination to adopt the Reading Plus Program in the hope of raising reading scores. The STARS reading assessment was utilized to measure any student progress resulting from the adoption of the Reading Plus Program.

Undertaking the present study was subsequently authorized by the WVMS principal in order to obtain

data/documentation that might endorse the WVSD decision to adopt the Reading Plus Program.

Treatment of the Data

A *t*-test for non-independent samples, was used in conjunction with the STATPAK statistical software program that accompanied the Educational Research: Competencies for Analysis and Applications test (Gay and Airasian, 2003). This allowed the researcher to determine if the Reading Plus Program intervention significantly improved seventh grade students reading scores as measured by the STARS reading assessment. Significance was determined for $p \geq$ at 0.05, 0.01, and 0.001 levels.

To test the null hypothesis, a *t*-test for nonindependent samples was again performed. The following formula was used to test for significance:

P. 463

$t =$

Summary

Chapter 3 provided a description of the research methodology employed in the study, participants,

instruments used, research design, and procedure utilized. Details concerning treatment of the data obtained and analyzed were also presented.

CHAPTER 4

Analysis of the Data

Introduction

The researcher sought to determine whether there was significant improvement in reading level success among participating seventh graders as indicated by the STARS reading assessment and The Reading Plus program intervention. The baseline data utilized in the study were obtained and analyzed from Fall 2000 to Spring 2001.

Chapter 4 was organized to include the following: Description of the environment; hypothesis, results of the study; findings; and summary.

Description of Environment

For purposes of the present study, the researcher worked with seventh grade students from West Valley Middle School located in Yakima, Washington. During the 2000-2001 school year, 25 seventh graders were enrolled in the Reading Plus Program. A reading specialist met with students after their referral to the Reading Plus Program to conduct an intake assessment. The reading specialist then conducted a STARS assessment and worked with students throughout the year, seven days a week.

Hypothesis

Reading level scores of students who participated in the Reading Plus Program will show significant improvement as measured by the STARS assessment.

Null Hypothesis

There will be no significant improvement in reading level scores after participation in the Reading Plus Program. Significance was determined for $p \geq$ at .05, .01, and .001 levels.

Results of Study

As shown in Table 1, 25 students were pre-tested (Fall, 2000) and posttested (Spring, 2001) to determine their reading level before and after Reading Plus Program intervention. Significantly, the mean reading level of 22 of 25 students showed improvement, using the STARS reading assessment. Specifically, the mean pre-test reading level was 2.72, as contrasted with the mean posttest reading level of 2.96.

Table 1

Summary of Pre and Posttest reading levels, Fall

2000 and Spring, 2001

	Fall 2000 Pre-Test Reading levels	Spring 2001 Posttest Reading levels	Difference
1.	2.7	2.9	+0.2
2.	3.0	3.1	+0.1
3.	2.5	3	+0.5
4.	2.5	3.2	+0.7
5.	2.7	2.6	-0.1
6.	2.6	3.2	+0.6
7.	2.5	3	+0.5
8.	2.0	2.5	+0.5
9.	2.2	2.4	+0.2
10.	2.6	2.7	+0.1
11.	2.8	2.7	-0.1
12.	3.2	3.5	+0.3
13.	3.1	3.3	+0.2
14.	2.9	3.2	+0.3
15.	2.7	2.9	+0.2
16.	3.3	3.5	+0.2
17.	2.4	2.5	+0.1
18.	2.7	2.5	-0.2
19.	3.3	3.4	+0.1
20.	2.8	2.5	-0.3
21.	2.2	3	+0.8
22.	2.3	2.8	+0.5
23.	2.5	2.7	+0.2
24.	3.1	3.3	+0.2
25.	3.5	3.6	+0.1

Mean/reading level, Fall, 2000 2.72.

Mean/reading level, Spring, 2001 2.96.

22 of 25 students improved their reading level.

Table 2

Table 2 displayed data collected from the seventh grade reading level tests of the study. The *t*-test for nonindependent variables on the Windows STATpak to accompany Educational Research:Cometencies for Analysis and Application, Sixth Edition (Gay, Mills and Airasian, 2006) was used to calculate data statistics and values.

Table 2 displayed distribution of *t* with 24 degrees of freedom. Significantly, the hypothesis was supported at 0.05, 0.01, and 0.001 levels. Specifically a *t*-value of 4.36 was produced for reading scores of subjects with 24 degrees of freedom. The formula for values used to determine significance was published in Gay and Airaisain (2003, p.561).

Table 2

Distribution of *t* with 24 degrees of Freedom (DF)

Significance: 0.05 0.01 0.001

Df=24	(2.064/4.36)	(2.797/4.36)	(3.745/4.36)
Hypothesis	Supported	Supported	Supported
Null Hypothesis	Rejected	Rejected	Rejected

Summary

The hypothesis and null hypothesis were tested using the t -test for nonindependent samples to determine if there was a significant difference between pre and posttest mean reading levels of Reading Plus Program students. The chosen probability levels were 0.05, 0.01, and 0.001 with 24 degrees of freedom. Data analysis supported the hypothesis and rejected the Null Hypothesis at all levels of probability. Accordingly seventh grade students who received treatment using the Reading Plus Program intervention showed significant growth as measured by the STARS reading assessment.

Chapter 4 provided an overview of the description of the environment, hypothesis, and results of the study.

CHAPTER 5

Summary, Conclusions, and Recommendations

Summary

The purpose of this experimental research project was to determine if the Reading Plus Program intervention significantly improved seventh grade students reading scores as measured by the STARs reading assessment. To accomplish this purpose, a review of selected literature was conducted, related baseline data were obtained and analyzed, and conclusions and recommendations were formulated.

Conclusions

From research findings and analysis of data produced by this experimental study, the following conclusions were reached:

1. Reading has been regarded as the most important aspect of education and learning.
2. Early stimulation by parents for their children's language acquisition has established the groundwork for later achievements in academic areas in school.
3. Two major approaches to teaching reading focused on phonemic awareness and whole language.

4. Standard Reading Tests endorsed by the Legislature mandated that student achievement in Washington State must improve.
5. The Reading Plus Program significantly improved seventh grade student reading scores as measured by the STARS reading assessment.

Recommendations

Based on the conclusions cited above, the following recommendations have been suggested:

1. Assuming that reading is the most important aspect of education and learning, all educators should be specifically trained and professionally prepared to facilitate student mastery of reading skills, particularly at the elementary school level.
2. To establish ground work for later achievements in academic areas in school, early stimulation by parents for their children's Language Acquisition is recommended.
3. To enhance reading skills in young children, a well balanced reading program in the elementary grades should focus on Phonemic awareness and Whole language instructional approaches.

4. Educators should acknowledge and support efforts made by the Washington State Legislature to mandate higher standards in basic academic skill content areas.
5. Educators seeking information related to reading instruction may wish to utilize information presented in this study or, they may wish to undertake further research more suited to their unique needs.
6. To improve seventh grade reading scores, adoption of the Reading Plus Program is recommended.

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