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Literacy, school reform, and literature-based reading programs

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LITERACY, SCHOOL REFORM, AND LITERATURE-BASED READING PROGRAMS

A Thesis

Presented to the

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In Partial Fulfillment

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by

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Abstract

The question under investigation in this study was whether or not student reading and language achievement test scores would significantly increase after the first year of implementation of a literature-based reading program. The 4th, 5th, and 6th grade student Metropolitan Achievement Test (mat-6) SCORES FOR 1988, 1989, AND 1990 (the year of literature-based implementation) from a demographically well-mixed elementary school district in a rapidly growing Inland Area of California furnished the data for this study (2,063 females and 2,036 males). The 4th, 5th, and 6th grade teachers from this same district were surveyed for their attitudes regarding the new reading program. The achievement test scores were analyzed with multiple analyses of variance; grade level, year of test, and sex of student were the independent variables. When statistically significant effects were found for year of test, preplanned *t* tests were performed, comparing the mean of years 1988 and 1989 with the scores obtained in 1990. Statistically significant mean effects for year of test were found for 4th and 5th grade students in language (all *p*'s<.005). A striking finding was strong sex differences favoring females in almost every academic area (*p*'s=.0001). Pearson product moment correlation coefficient indicated a negative

relationship between number of years of teaching and teacher attitude toward the newly-adopted reading program. Implications for further research were discussed.

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Introduction

> From the time that I can remember having any thoughts about anything, I recall that I had an intense longing to learn to read.
>
> --Booker T. Washington

Historical Perspective of American School Reform

It is 1990. The term "school reform" generally refers to the school reform movement of the 1980s (Shea, Kahane, & Sola, 1989), but a recent term paper (1988) on the life of John Dewey begins this way: "In the year that Horace Mann died, John Dewey was born to carry the torch of educational reform." John Dewey was born in 1859. Horace Mann--the radical educational reformer of his day--(Kraig, 1988) was born in 1796 and in 1837 turned away from his law practice to become the first secretary of the Massachusetts Board of Education (Cremin, 1965), and Benjamin Franklin (also seen as an educational reformer) founded America's first academy in Philadelphia in 1751 (Ryan & Cooper, 1988). If America's first academy was viewed as an act of educational reform, just how far back in time and space (Brooks, 1990) does American school reform go?

American school reform goes back in time to before there ever was a public school or academy on American soil, and it goes back in space to Europe and every other continent from whence Americans came. There was a "promise

first made on this continent: All, regardless of race or class or economic status, are entitled to a fair chance to the tools for developing their individual powers of mind and spirit to the utmost." (National Commission on Excellence in Education [NCEE], 1983, p. 8). This promise on this continent was a commitment to reform the inequality of educational opportunity which had been the order of the day on other continents.

The school reform movement of the 1980s was our nation reaching back--as Abraham Lincoln in The Gettysburg Address reached back, "four score and seven years'" to The Declaration of Independence, and the fundamental American founding idea of equality (Kessler, 1989). And it was Thomas Jefferson, the author of that manifesto (Flannery, 1984), who said, "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be." (Ryan & Cooper, 1988). "We are the inheritors of a past that gives us every reason to believe that we will succeed." (NCEE, 1983, p. 34).

Literacy Defined as an Empowering Force

The American Heritage Illustrated Encyclopedia Dictionary (1987), in its definition of literacy, focuses especially on the power to read, to write, and to use language. California's Superintendent of Public

Instruction, Bill Honig, takes this definition one step further and defines literacy as the ability to think, read, and write in a certain area (California State Department of Education [CSDE], 1988a). For the purposes of this study Superintendent Honig's description of literacy is a fundamental starting point, and the next logical step is consideration of the ability to think as part of the definition of literacy. In 1957, Jerome Bruner, at the Harvard Center for Cognitive Studies, defined thinking as "going beyond the information given" (Halpern, 1984, p. 4). Halpern's comment on Bruner's definition was: "We take new information, combine it with information stored in memory and end up with something more than and different from what we started with" (p. 4). Literacy is a triad: thinking, reading, writing.

In her book, Reading process and practice (1988), Constance Weaver describes the benefits of literacy in a very powerful and dynamic way:

> In complex technological societies, literacy is an empowering force. Those who read can find out what others know and those who write can share what they know...written language is an effective vehicle for the exchange of information, beliefs, and values across time and space....Suppressive regimes carefully control access to information and the dissemination of ideas through print. On the other hand, democratic societies take pride in freedom of information and freedom of press.

American School Reform in the 1980s

School Reform After World War II. John Goodlad (1966) ended his book, The Changing School Curriculum, with one question, "What kinds of person do we wish our schools to produce?" Goodlad gave historical perspective to the sweeping changes in American schools since World War II. He noted that our schools were neglected during the 20 years of economic depression and World War II. "The near absence of scientific and mathematical comprehension among school graduates, revealed by the wartime testing programs, showed that something was wrong with our educational institutions. It was an alarming situation...." (p. 9). (References cited later in this paper present this alarming situation as still present.) Concerns were voiced by parents, educators, and other interested citizens. Thus began substantial elementary and secondary curricula reform.

Goodlad (1966) noted that the reform was distinguished by being "discipline-centered rather than child or society centered" (p. 9). Its emphasis was updating and reorganizing of the academic disciplines basic to pre-collegiate curriculum. Goodlad (1966) also observed that this "affair" was primarily a middle-class and upper-middle-class round of school curriculum reform, and it was primarily concerned with the college-bound student. Only a barely-heard whisper was the cry of the disadvantaged.

In 1962 Goodlad (1966) noted that many saw the curriculum approaching imbalance and called then for rejuvenation in the arts, English, and the social sciences. in 1956 the natural sciences had been in a sorry state, and in 1966 the social sciences were back where the natural sciences had been. As this study continues building toward the 1980s and school reform it reaches back to the definition of literacy as the ability to think, read, and write in a certain area (Honig, 1988). This becomes critically important as one considers that the natural sciences, by 1966, had taken the academic pre-eminence, apparently at the expense of reading--fundamental to literacy in any area. perhaps the seeds of academic destruction had been sown in all academic areas by 1966 (whether or not it was apparent at that time in the natural sciences) when reading instruction had reached a sorry state. In order to be literate in the natural sciences, one must be able to <u>read</u> the natural sciences.

In view of this chronology of American education since World War II, it is perhaps really not surprising that in 1983 and open letter would be sent to the American people with an urgency akin to that of a messenger herald from ancient times sent to warn of impending attack. This open

letter was entitled, A nation at risk (1983).

A Nation at Risk: The Imperative for Educational Reform (NCEE, 1983). "If an unfriendly foreign power had attempted to impose on American the mediocre educational performance that exists today, we might well have viewed it as an act of war....This report seeks to generate reform of our educational system in fundamental ways and to renew the Nation's commitment to schools and colleges of high quality throughout the length and breadth of our land." (pp. 5-6).

After that trumpet blast the report articulated the goal of American educational reform (p. 7):

> "Knowledge, learning, information, and skilled intelligence are the new raw materials of international commerce...we must dedicate ourselves to the reform of our educational system for the benefit of all...learning is the indispensable investment required for the information age we are now entering."

The report reached back to Thomas Jefferson by quoting him (p. 7):

> "I know no safe depository of the ultimate power of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion."

Thirteen risk indicators were identified by the report (pp. 8-9), and they are listed below:

- International comparisons of student achievement, completed a decade ago, reveal that on 19 academic tests American students were never first or second and, in comparison with other industrialized nations, last seven times.

- Some 23 million American adults are functionally illiterate by the simplest tests of everyday reading, writing, and comprehension.

- About 13 per cent of all 17-year-olds in the United States can be considered functionally illiterate. Functional illiteracy, among minority youth may run as high as 40 per cent.

- Average achievement of high school students on most standardized tests is now lower than 26 years ago when Sputnik was launched.

- Over half the population of gifted students do not match their tested ability with comparable achievement in school.

- The College Board's Scholastic Aptitude Tests (SAT) demonstrate a virtually unbroken decline from 1963 to 1980. Average verbal scores fell over 50 points and average mathematics scores dropped nearly 40 points.

- College Board achievement tests also reveal consistent declines in recent scores in such subjects as physics and English.

- Both the number and proportion of students demonstrating superior achievement on the SATs (i.e., those with scores of 650 or higher) also dramatically declined.

- Many 17-year-olds do not possess the "higher order" intellectual skills we should expect of them. Nearly 40 per cent cannot draw inferences from written material; only one-fifth can write a persuasive essay; and only one-third can solve a mathematical problem requiring several steps.

- There was a steady decline in science achievement scores of U.S. 17-year-olds as measured by national assessments of science in 1969, 1973 and 1977.

- Between 1975 and 1980, remedial mathematics courses in public 4-year colleges increased by 72 per cent and now constitute one-quarter of all mathematics courses taught in those institutions.

- Average tested achievement of students graduating

from college is also lower.

- Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation. The Department of the Navy, for example, reported to the Commission that one-quarter of its recent recruits cannot read at the ninth grade level, the minimum needed simply to understand written safety instructions. Without remedial work they cannot even begin, much less complete, the sophisticated training essential in much of the modern military.

Six of these risk indicators were directly related to reading and language arts and an additional four were indirectly related to reading and language arts. When the Commission listed its five "Findings Regarding Time," (p. 22) one was directly related to elementary school reading: "A California study of individual classrooms found that because of poor management of classroom time some elementary students received only one-fifth of the instruction others received in reading comprehension."

The Commission's "Findings Regarding Teaching" (pp. 22-23) stated "that the professional working life of teachers is on the whole unacceptable....individual teachers have little influence in such critical professional decisions as, for example, textbook selection."

The final phase of the Commission's open letter to the American people contained recommendations, an affirmation, "American Can Do It" (p. 33), and "A Word to Parents and

Students" (p. 34).

California's Response to the Challenge

The Power of the Schools Was Given to the States. The Tenth Amendment to The Constitution of the United States of America (Ceaser, et. al, p. 652, 1984) reads:

> The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

The states have the power of the schools.

California, in terms of population, agricultural and industrial productivity, economy, and its educational system, is practically a nation-state. California is a leader--and in the early 1980s it was leading the nation in the decline of public school standards. Or was it? Even before the cry A nation at risk was sent forth, California had taken action. Bill Honig (Honig, 1985) began--in 1979--to stump for California's top schools job, Superintendent of Public Instruction. He ran on a traditional education platform. He had been an attorney, then a school teacher, then a district superintendent. In 1982 the voting citizens of California elected Bill Honig to be Superintendent of Public Instruction, and in 1985 the dean of the school of education at the University of California, Berkeley, called him "the most important man in public education in the country" (Honig, 1985).

Traditional Education. Californians were not just newly interested in school achievement. Before Honig's traditional education platform, the hue and cry was "back to basics" (Honig, 1985, p.6). In his book, "Last chance for our children, Honig (1985) compares and contrasts these two approaches to education. Back to basics is characterized by repetition of the fundamentals, drill, and rote learning in the pursuit of mastery. Traditional education, while including mastery of the basics, expands the boundaries of education much further out; Honig;s description of traditional education (p. 7).

> ...expansive, ennobling, and...the belief that there is a core of knowledge in arts and sciences that every member of our society is entitled to encounter. Indeed, to be ignorant of this birthright is to e seriously handicapped in the pursuit of the good life--economic, social, and spiritual--which our civilization offers....A traditional education is ennobling because it trains the mind to think independently--to probe, to sift, to weigh, and to conclude, always with the truth as the lodestar drawing it on....

Honig (1985) also describe the two identifying hallmarks of traditional education:

1. ...overall emphasis on the development of a command of language--what the Roman philosopher Quintilian called 'eloquence'--the ability to convey to an audience precisely what one has in mind (pp. 7-8).

2. ...an 'explicitly moral tenor'. A traditional education isn't content to impart skills and knowledge for their own sake. It also seeks to form a student's character according to that pattern of individual responsibility and civic virtue which is

the great ethical bequest of Western Civilization. (p. 8).

California and Educational Reform Legislation.

California enacted major educational reform legislation in 1983 (U.S. Department of Education, 1984b). The major components of the reform package were:

1. Mandatory graduation requirements and adoption of model graduation requirements. The mandatory requirements included 3 years each of English and social studies; 2 years each of mathematics and science; 1 year of fine arts or foreign language; 2 years of physical education.

2. Student testing, which included consideration of regarding school districts for improved achievement test scores.

3. More money was made available for textbooks.

4. Increase in length of school year and school day, for the purpose of significantly increasing the amount of instructional time in school.

5. Improved classroom discipline....

6. Funding toward teacher certification-preparation programs, which included computer literacy, and requirements for professional growth.

7. State funding for increases in teacher salaries.

8. The mentor teacher program.

9. Funding to establish programs to help meet the need for teachers in critical areas and science.

10. A streamlining of procedures for dismissal of ineffective teachers.

11. Encouragement of and funding for professional growth and development of both teachers and administrators.

Literature and Literacy: What the California State Department of Education Has to Say. The model graduation requirements ("approved unanimously by the California State Board of Education on June 10, 1983") (p. i) were published in the form of a softcover book entitled Raising Expectations (CSDE, 1983). In regard to English instruction, four years of English in high school is the model requirement, and page 10 eloquently puts forth the rationale for this requirement:

> English, as the written word, forms the basis of nearly all academic disciplines. The ability to read, analyze, and draw conclusions from written language is necessary for students to succeed in their study of English, science, social studies, higher mathematics, and other subjects. In the communications age, written and oral language assume stature int he transmission of new ideas and new technologies beyond their traditional scope, and this strengthens the case for yearly coursework in English during high school.

And then it has this to say about literature:

> The study of English is enhanced by an in-depth focus on literature. It is through the study of literature that students come to know the power of language in conveying philosophies, values, emotions, and truths about the human condition.

In 1982--before the major educational reform legislation was a reality--legislators and educators were locked in an impasse, and the "quid pro quo" offered by newly elected Superintendent Honig was: "more school money in exchange for quality reform" (Honig, 1985, p. 112). The

quality reform aspect of the drama--and specifically how it relates to literacy and literature-based reading programs--is the focus of this study, but it is first fitting and appropriate to respectfully say that after Bill Honig assumed office, Assemblywoman Teresa Hughes of Los Angeles (chief sponsor of California Assembly Bill No. 170, 1983) and State Senator Gary Hart of Santa Barbara (sponsor of California Senate Bill No. 813, 1983), in a collaborative effort, brought about state funding to finance educational reform (Honig, 1985). And although the story of the funding is not the focus of this study, it certainly is worthy of study, and the lofty quality of the reform is built upon that strong funding.

The new edition of the Handbook for planning an effective writing program was published in 1986 (CSDE). More than twenty people collaborated in this effort. The result was inspiring, and in the present furnishes rationale for the curriculum priorities in California's 1990 classrooms; writing has a very high priority, as do strong staff development efforts for the teaching of writing (CSDE 1986). Superintendent Honig (p. iv) set the stage:

> I am...convinced of the consequences to our society if we are imprecise or illogical in our use of language and if we ignore its beauty of debase its heritage....It is through what we say and what we write that we maintain our history as a civilized society. Language is our link with both the past and the future--with who we were and who we will

> inevitable be. As a people who value the lessons of history, we must realize that our very survival depends primarily on our collective abilities to speak and write clearly and precisely and to e understood as we strive to understand others.

He clearly stated commitment to give the highest priority to staff development to help all involved in education "gain the language skills they need to communicate well. Without such skills....students and educators alike remain crippled in whatever they attempt to do" (CSDE, 1986, p. iv).

The interrelatedness of all the language arts, and how much more difficult they are to learn in isolated bits and pieces was one of the handbook's first messages. It specifically mentioned the conventions of language such as grammar, spelling, punctuation, and diction--and said these are learned most effectively through integration of the language arts into the total curriculum. Also, the more students witness the agonies of other people (such as their parents and teachers) as they grapple with the many stages in the writing process, the more able they are to grapple with and endure these stages themselves (CSDE, 1986).

The handbook for planning an effective writing program (CSDE, 1986) was followed by the English-Language Arts Framework in 1987. In its Foreword (p. v), Superintendent Honig articulated the goals of "our educational reform

movement":

> ...to prepare all students to function as informed and effective citizens in a democratic society, to function effectively in the world of work, and to realize personal fulfillment. The main features of an English-language arts curriculum that reinforces the goals of our reform movement include:
>
> . A systematic literature program with a meaning-centered approach based on intensive reading, writing, speaking, and listening
>
> . A clearly communicated sense of common values and common goals that respect diversity
>
> . An emphasis on delight in the beauty and heritage of our language
>
> Revitalizing English-language arts instruction through a literature-based curriculum is a critical part of our overall educational reform movement.

The Framework (CSDE, 1987) then called both teachers and students "to unlock the doors of language and to discover the best that human beings have thought, written, and spoken" (p. vi). It was a collaborative effort that produces this Framework (CSDE, 1987), and it made a clear call for integration of the language arts and for a very strong literature-based program, designed "To capture the breadth of human experience" (p. 7):

> If the end of English-language arts programs is developing a literate, thinking society, then surely the means to that end must be devising for students, meaningful encounters with the most effective sources of human expression...the language of great, classic literature speaks most eloquently to readers and writers...To touch students' lives and to stimulate their minds and hearts, we need a literature-based language-arts curriculum that engages students with the vitality of ideas and

> values greater than those of the marketplace or the video arcade (pp. 6-7)

Another collaborative work related to a literature-based curriculum was published by the California State Department of Education in 1988: the English-language arts model curriculum guide: Kindergarten through grade eight. The model curriculum guide contains six sections, the first one is "Emphasizing significant literary works," and guideline number 1 says (p. 7):

> All students at every grade level, including students whose primary language is other than English, receive intensive, directed instruction which helps them to comprehend, respond to, and appreciate significant core works of literature and which helps them become more fully aware of values, ethics, customs, and beliefs.

The third and fourth sections are entitled, "Developing an Interrelated Program," and "Developing an Integrated Program Across the Curriculum." These two sections are the largest and the most comprehensive in the curriculum guide, and when taken with the other sections, the message is quite clear that the classroom experience in California is to be literature-based and related across the curriculum, as opposed to unrelated bits and pieces of information.

Another document (also a collaborative work by educators) was produced for California educators in 1988 (CSDE, C), Handbook for planning an effective literature program: Kindergarten through grade twelve. The handbook

stated its central purpose: "to promote the return to a literature-based English language arts curriculum" (p. 3). The handbook, as it declares the value of literature, is a model of powerful, delightful, elegant writing, rich with exciting citations from literature--literature thus speaking in its own behalf. Three quotes especially reveal the rationale of this handbook (pp. 6-7):

> As no other discipline can, the study of literature invites us to peer deeply into the nature of our humanity free from the habits imposed by fashion or personal experience and to see ourselves and the world we inhabit in fresh perspective.
>
> ...literature is eminently useful in its own right....literature is one of those essential subjects that once learned, help students to master all the rest.
>
> What exactly do we hope to accomplish by teaching literature? The answer is: several things at the same time. We expect...to encourage the growth of students...by honing their intellectual skills; by developing their allegiance to the highest ideals of citizenship in a democracy; by refining their feelings, their personalities, and their relationships with others; and by deepening their sense of ethical responsibility.
>
> Education proposes nothing less than leading students to the wisdom and virtue of the examined life and has never been an occupation for the faint of heart.

The handbook (CSDE, 1988c) includes a broad range of elements of an effective classroom literature program, these are: the reasons for teaching literature, a program profile, the role of the teacher, aids to the program's

effectiveness, and a checklist for assessment.

Perhaps California's pinnacle work on literacy to date, and certainly a document of national importance which other states are using as a mode (Flannery, 1989), is the History-social science framework: For California public schools, kindergarten through grade twelve (CSDE, 1988a). The way this document deals with literacy is analogous to a natural science phenomenon: When light is passed through a prism, the effect is a view of the color spectrum (the component parts of light). In like manner, the History-social science framework (CSDE, 1988a) passes literacy through the prism of its "Goal of Knowledge and Cultural Understanding" (p. 12), and the reader sees literacy's component parts: Historical literacy, ethical literacy, cultural literacy, geographic literacy, economic literacy, and sociopolitical literacy. (Even this rich array, however, does not include all of the components of literacy, such as scientific literacy and mathematical literacy.) This framework, along with the English-Language Arts Framework, the handbooks, the model curriculum guide, and model graduation requirements (CSDE, 1983, 1986, 1987, 1988a,b,c) are exciting reading, and have had significant impact upon California's textbook adoptions and upon decisions regarding textbooks made by individual district curriculum committees. Before some of these

textbook decisions are discussed, some of the salient issues in regard to literacy, especially as it pertains to reading and language arts instructional programs will be examined.

The Teaching of Reading and Language Arts

Controversy. Is there a magic formula for teaching reading? Evidently not; if there were, Rudolph Flesch (Weaver, 1988, p. 446) may not have had a broad popular audience for his sequence about reading (it's almost humorous): Why Johnny can't read, published in 1955; Why Johnny still can't read, published in 1979; Why Johnny still can't read, published in 1981.

Views, Theories and Approaches to Reading and Reading Instructional Programs. The verb, to read, is defined this way in The Oxford English dictionary (1989, p. 260):

> "5.a. To inspect and interpret in thought (any signs which represent words or discourse); to look over or scan (something written, printed, etc.) with understanding of what is meant by the letters or signs...5.b. To peruse books, etc. written in (a certain language); esp. to have such knowledge of (a language as to be able to understand works written in it...."

In regard to the different views and theories of reading and reading instruction, Bernice Endres (1990), of Houghton Mifflin Company's Palo Alto office, recommended Reading process and practice; from socio-psycholinguistics to whole language (1988), on the strength of its comprehensive coverage of the theories of language

acquisition and reading, its thorough presentation and comparison of the differing views and theoretical approaches to reading instruction, and its painstaking documentation. The book's author, Constance Weaver, is a professor of English at Western Michigan University and has authored other works on reading and psycholinguistics.

Weaver's (1988) basic thesis is that reading is an active process of predicting, sampling, and confirming or correcting what we have hypothesized about the written text. Weaver (1988) describes the reading process as "psycholinguistic" (p. xvii) in nature, which simply means it is:

> ...a transaction between the mind of the reader and the language of the text...this transaction occurs within a particular social and sociolinguistic context...social factors contribute to making reading not only a psycholinguistic process, but a socio-psycholinguistic process of incredible complexity...(p. xvii).
>
> Reading instruction is most often based--implicitly or explicitly--on one of three views:
>
> View 1 Learning to read means learning to pronounce words.
>
> View 2 Learning to read means learning to identify words and get their meaning.
>
> View 3 Learning to read means learning to bring meaning to a text in order to get meaning from it (p. 15).

View 3 represents a psycholinguistic view which can be described as a transaction between the reader's mind and the

text's language. Psycholinguistics is a hybrid discipline which has arisen since the 1950's and underlying concepts are the mind, the study of language, and dhow they interrelate (Weaver, 1988).

There are two contrasting models of reading and language comprehension (Weaver, 1988). The commonsense model assumes that language is processed from part to whole, i.e., language processing is a progression from sounds to letters to words to sentences to paragraphs; the socio-psycholinguistic, transactional model asserts that language processing occurs just as much or more from whole to part, i.e., "...reading brings meaning to a text in order to get meaning from it" (p. 38).

Weaver (1988) outlined six approaches to reading instruction. The first four represent the commonsense view or part-to-whole model of language processing; the last two represent the socio-psycholinguistic model which focuses first on meaning. The reading instruction approaches are: 1) phonics approach;, 20 linguistic approach ("so-called", p. 40), 3) sight word approach, 4) basal reader approach, 50 language experience approach, and 6) whole-language approach.

Weaver's text (1988) placed the phonics, linguistic, sight word, and basal reader approaches all together in one

category, the phonics approach. The language experience and whole-language approaches were placed together in the whole-language approach category. Weaver's discussion, although detailed, complex, thoroughly documented, and therefore lengthy, was still straightforward: The major controversies regarding the teaching and learning of reading are between the philosophical and practical differences of the phonics and whole-language approaches.

The controversy is conceptualized as "contrasting paradigms in language and literacy learning" (Weaver, 1988, p. 180). These different paradigms represent different assumptions about the nature of human knowledge and the nature of human learning (Weaver, 1988). The paradigms are identified as the mechanistic paradigm, organic paradigm, and the transactional paradigm.

Weaver discussed the mechanistic paradigm first; this is the one upon which much school instruction is base, including the phonics approach to the teaching of reading and language arts. Weaver (1988) gave a historical interpretation to the mechanistic paradigm by saying that it has dominated Western world thought for the past 300-400 years. It is traceable to Descartes, French philosopher, who felt that the world was analogous to a clock which could be torn down and reassembled part-by-part. In the 17th

century, John Locke, English philosopher, carried forth the mechanistic paradigm. he called the human mind "tabula rosa--blank tablet" (p. 181); the philosophy's 20th century carrier, B. F. Skinner, called the human mind the "black box" (Warren, 1984).

The education of younger children has been profoundly and negatively affected by this paradigm (Weaver, 1988). Those assumptions regarding education which quite predictably flow from the mechanistic paradigm are (Weaver, 1988, p. 181):

1. The learner is a passive receptacle, and the teacher pours information into this receptacle.
2. If a child is not directly taught something, he or she will not learn it.
3. The building blocks of knowledge are first the smallest parts then increasingly large wholes. "The whole is merely the sum of the parts" (Weaver, 1988, p. 181).
4. Errors are reflections of failures in the learners.
5. It is to the measurable <u>product</u> that value is attributed; and the product is, therefore, the focus of instructional attention.

The mechanistic paradigm's assumptions run counter to the assumptions of the organic paradigm (Weaver, 1988) (and the transactional paradigm draws heavily from the organic paradigm, and the transactional paradigm holds the whole-language approach to reading instruction and the whole-

language approach to reading instruction holds the literature-based curriculum). Note: The writing style in parenthesis is modeled upon a classic poem from children's literature entitled, This is the house that Jack built. Therefore, for the purposes of this study, the organic paradigm requires some attention.

During the Renaissance and again during the Romantic period, an organic paradigm flourished. How fascinating that quantum physics--a "hard" science that is concerned with the nature of the atom's reality--is the discipline which has stimulated, in the 20th century, the revival of the organic paradigm. The revival receive "considerable impetus from cognitive psychologists like Lev Vygotsky and Jerome Bruner and transformational linguists like Noam Chomsky and his intellectual descendants" (Weaver, 1988, p. 181). In education, the organic paradigm has emphasized the learner's contribution to learning (Weaver, 1988). For example, in 1968 Chomsky hypothesized that humans have an innate language-learning capacity and that there are features of human language that are "'universal' because we all share the same language-learning and language-creating abilities" (Weaver, p. 181). The following assumptions reflect the organic paradigm:

1. Children are active while they learn language and literacy and they formulate increasingly sophisticated rules for and by themselves

...without needing to verbalize 'phonics' rules.

2. Children learn vastly more than what they are directly taught. Ironically, learning least well what they are directly taught.

3. Language and literacy learning take place by drawing upon one's entire lifetime of knowledge, experience, and cognitive strategies for making meaning.

4. Rather than indicating failure, errors usually reflect a learner's developmental stage.

5. The process is important; and a focus on the process yields the best products (Weaver, 1988, pp. 181-182).

The transactional paradigm goes beyond the organic one, and it is supported more strongly by quantum physics. The transactional paradigm also emphasizes the crucial role of the environment: Environment "can either enhance or impede learning" (Weaver, 1988, p. 182). Within the framework provided by the transactional paradigm, Weaver (1988, p. 194) quoted what Donald Graves had to say about children and writing:

> It is natural to want children to progress. But our anxieties about child growth lead us to take control of the writing away from children...When children feel in control of their writing their dedication is such that they violate the child labor laws. We could never assign what they choose to do.

Before proceeding to the whole-language approach to reading instruction through literature-based reading programs, the phonics approach to reading instruction deserves some more description. It has been the prevailing

approach since 1890, was founded by Leonard Bloomfield, the founder of structural linguistics, is characterized by almost total reliance upon a skill-based program, has as its objective helping beginners become independent readers as soon as possible by teaching letter/sound correspondences then letting meaning take care of itself. The prevailing popularity of the phonics approach is undoubtedly its concreteness, ease of assessment, and the fact that it became entrenched into the educational establishment through the multimillion dollar investments of textbook companies in the production of basal readers (Weaver, 1988). One may well wonder how many of these textbook companies remained in business when California did not adopt the basals.

Weaver (1988) used an analogy to describe the contrasts between the phonics approach to reading instruction and the whole-language approach to reading instruction. She spoke of dutifully painting by numbers (relationships are <u>not</u> considered) and artistically creating a painting--relationships <u>are</u> considered; "...proficient readers and writers us <u>all</u> the systems of language in order to create meaning; they are whole-language users" (Weaver, 1988, p. 234). Weaver then describe the behaviors of whole-language teachers and their use of literature in the classroom (1988, p. 235). They:

1. find out about students' interests, abilities,

needs and then use that information for planning curriculum.

2. read or tell them stories everyday

3. everyday give students opportunity to participate in authentic writing

4. everyday give students the opportunity to read real literature

5. lead discussion which requires consideration of the reading and writing processes

6. acknowledge the social nature of literacy by encouraging and 'setting up' kids to help other kids

Weaver describes the literacy cycle as strong, lauds the whole-language approach which, from the very first day of school, invites children to write something that has meaning to the;m, and describes the model classroom in Jerry Harste's words, "littered with literacy" (1988, p. 251).

Literature creates dynamics in a classroom: "Through the sharing of stories we celebrate and preserve our heritage...reading and telling children stories everyday, tells students that oral and written stories 'hold a place of respect and importance in the curriculum'" (Weaver, 1988, p. 241). The word stories is used to designate oral and written stories, poems, plays, books, articles from newspapers--language with meaning and intent (Weaver, 1988).

A teacher who powerfully uses literature can positively affect and touch the lives of children: "Daily listening to

stories read or told maya be the first opportunity some children (especially those who have spent time in low reading groups) have had to hear language presented lovingly and well. Reading to students or telling them stories can provide background information for projects, experiments, and work in social studies, science, math--in all content areas" (Weaver, 1988, p. 242-243). Another clear and present difference between phonics and whole-language approaches is that the phonics approach is almost synonymous with reading ability grouping (the low group, the medium group, and the high group); the whole-language approach involves whole group instruction and projects carried out in cooperative learning groups.

When teachers are discussing reading program, a little listening makes it readily evident that teachers who are accustomed to skill-based reading programs based upon the phonics approach, find it difficult to grasp in any concrete kind of way the expansive ideas of a literature-based program based upon the whole-language approach. Just exactly how is reading taught? How is it assessed? An article from the May 1984 Journal of Reading (Atwell & Rhodes) gives a very clear and understandable report of how a whole-language approach, teaching strategies, was quite naturally and efficiently implemented in a classroom

accustomed to teaching with skills lessons in reading. The described behavior of the whole-language teacher aligned with the approach to teaching put forth by the new California frameworks, which are not textbook driven and allow for pedagogical creativity (Brooks, 1990). Significant time was spent coaching students to engage in predicting the content of a story before they read it, this led to the students becoming engaged in debate with each other (a student-centered lesson as opposed to a teacher-dominated one). The students then were quite highly motivated to read--they had to find out who was right! The article ended with a very evident statement, "Teachers who teach strategy lessons learn to anticipate and enjoy the unexpected" (p. 705).

Reading Research. Although there is no definitive research which can be cited that directly compares a whole-language literature-based approach with a phonics skills or subskills approach to reading instruction, Weaver (1988) cited two studies 1) an informal study conducted by teacher Margaret Phinney in rural Nova Scotia, Canada, and 2) a study conducted by Warwick Elley in the Fiji Islands.

Phinney's own account of her project reports that she and her colleagues purposed to follow one class from kindergarten through grade 3 that had been started out in

kindergarten with a whole-language reading program. The students were tested annually with standardized, norm-referenced tests. The observations of Phinney and her colleagues were that at the end of kindergarten, 92% of the students' standardized reading test scores were at stanine 5 or above, and the majority (65%) were at the high end of the scale, stanines 8 and 9. At the end of grade 1, 65% of the scores were at or above stanine 5, but the distribution was almost perfectly bell-shaped, with some scores at stanines 1 and 2 (no scores had been at that low end of the scale the year before). The testing results at the end of grade 2 were about the same as the year before (still not reflective of the surprising results at the end of kindergarten). When the whole-language group reached grade 3, the Canadian Test of Basic Skills was administered (ad it traditionally was at the end of grade 3 throughout that region). That region reportedly had a distribution of scores at stanine 4, below average compared with the rest of the country. The grade 3 whole-language year, however, the peak of the curve was over stanine 5, and Philley's grade 3 students had the highest overall scores in the county. Phinney reported having had no research training and expressed a shope that her project would one day be replicated properly.

In 1983, Warwick Elley, in the Fiji Islands, conducted a study with 9-11-year-old students, grades 4 and 5, whose native language was not English--but they were required to learn it (Weaver, 1988). The study did not directly compare different methods of reading instruction, but it did compare different methods of English instruction. Elley randomly assigned students to 3 groups (two treatment groups and one control group), hypothesizing that teaching English through literature would be more effective than the standard English instruction curriculum (characteristic of the mechanistic paradigm). Elley, for the two treatment groups, furnished a literature-rich environment. One treatment group as the "Shared Book Experience Group" (Weaver, 1988, p. 215), characterized by the teacher and students reading together from Big Books, then doing reading and writing activities which included visual and performing arts activities. The other treatment group engaged in individual sustained silent reading, and the literature books available to them were the same ones as were used by the shared book experience group. The control group experienced the standard curriculum of drill and rote learning. At the end of eight months all three groups' English language skills were measured through standardized tests. The differences in student scores were statistically significant for the grade 4 students and

favored the treatment groups; the differences in student scores for the grade 5 students, although not statistically significant, also favored the treatment groups.

A 1965 study, conducted by a team of teachers in New Zealand and led by Don Holdaway (Weaver, 1988), investigated the family backgrounds of proficient readers. They reported finding that every successful reader came from homes where family members shared written stories with them. This team of teachers then designed a classroom reading plan to model the home reading experiences and called it the shared book experience (Weaver, 1988, p. 253). They made Big Books which enable every student to see and to learn that human beings read from the top of the page to the bottom and read English from left to right. (These are learned behaviors which all students deserve to experience.)

The essence of the whole-language approach to reading instruction is simply a recapitulation--in the classroom--of those experiences which are already taking place in literate families.

The Current Study

The purpose of this study is to compare a skill-based reading instruction program (based upon a phonics approach) and a literature-based reading instruction program (based upon a whole-language approach). Now maya be a particularly

fortuitous moment for a study such as this because many California school districts are in the process of changing from skill-based reading programs to literature-based reading programs, and comparisons of achievement test scores can be made on the basis of before literature-based implementation and after literature-based implementation.

This will be a direct comparison, through student standardized achievement test scores, of a skill-based reading instruction program (based upon the phonics approach) with a literature-based reading instruction program (based upon the whole language approach) at the end of the literature-based program's first year of implementation.

It is hypothesized that if the literature-based program is superior in its first year, greater individual student gains will be expected in reading and language scores from 1989 to 1990 than from 1988 to 1989. It is predicted that the scores will reflect a higher mean reading level at each grade level in 1990 than in 1988 and 1989.

It is also hypothesized that these results will be specific to reading tasks, i.e., no differences in math computation are expected, but there will perhaps be significant differences in math problem-solving scores because of the reading component. There may also be a

differential effect for boys and girls, and that possibility will be examined.

Method

Subjects

The student subjects were the fourth, fifth, and sixth grade students (specifically, their achievement test scores) from an elementary school district in a very rapidly growing Inland area of California. The district is well mixed in terms of socio-economic and ethnic variables. The student population is primarily made up of Afro-American, Asian, Latino, and white students. Achievement test data from three successive academic years were considered: 1987-1988, 1988-1989, and 1989-1990. The academic areas under consideration were reading and language arts. The teacher subjects for this study were the 1989-1990 fourth, fifth, and sixth grade teachers from this same elementary school district. They were asked to voluntarily respond to a survey designed to measure their attitudes toward literature-based reading programs in general and their district-adopted literature-based reading program in particular. Although the appropriate district administrative personnel gave written commitment at the beginning of the 1989-1990 academic year to make available the April 1988, April 1989, and April 1990 achievement test data necessary for this study (after it all became available), neither the students nor the teachers knew that

this study would be taking place.

The Students. The total number of students and the number of males and females for each grade level by year is shown in Table 1.

The Teachers. The elementary teaching experience of the district's 4th, 5th, and 6th grade teachers ranged from 1 to 39 years. Sixty-seven teachers (48 females and 19 males) were sent surveys.

Materials and Measures

The Student Achievement Tests. The testing instrument was the Metropolitan Achievement Tests (MAT 6 Survey), developed and distributed by The Psychological Corporation and published in 1985 by Harcourt Brace Jovanovich, Inc. This test was administered each academic year in the month of April.

The Teacher Attitude Surveys. The teacher attitude survey instrument was developed in collaboration with a mentor teacher from the district and with input from the publisher of the district-adopted literature-based reading program. It was sent to each fourth, fifth, and sixth grade teacher accompanied by a cover letter and a stamped return envelope. Copies of the teacher attitude survey and its covering letter are in Appendixes A and B. The cover letter gave teachers the opportunity to indicate their desire for a

copy of the completed study. If the teacher did want a

TABLE 1

NUMBER OF STUDENTS TESTED BY GRADE LEVEL AND YEAR

Year		Grade 4	Grade 5	Grade 6
1988	Total	366	324	---
	Females	164	172	---
	Males	202	152	---
1989	Total	557	500	493
	Females	291	227	231
	Males	266	273	262
1990	Total	634	609	616
	Females	326	329	323
	Males	308	280	293

copy of the study, the cover letter with the teacher's name and address was returned with his or her survey form.

The front side of the survey form asked for teacher Social Security number, number of years he or she had been an elementary teacher, whether or not the teacher had piloted the district-adopted literature-based reading program during the 1988-1989 academic year, and whether or not the teacher had attended the district's summer 1989 reading and language arts institute.

Fourteen statements were on the back of the survey form, and teachers were asked to indicate their levels of agreement or disagreement with each statement on a five-point Likert scale, with one indicating strong disagreement and five indicating strong agreement. The survey was designed to address teacher attitudes regarding literature-based reading programs in general (statement 1-5), and the district-adopted literature-based reading program in particular (statements 6-14). Four of the statements (8, 9, 10, 13) were designed to address teacher attitudes regarding the district-adopted literature-based reading program specifically in comparison to the skill-based reading program (which was used until it was replace by the district's literature adoption in the 1989-1990 academic

year).

Procedure

The Director of Pupil Personnel Services and the Special Projects Coordinator for the school district under study gave a commitment early in the 1989-1990 academic year to furnish the achievement test data. In regard to the teacher attitude surveys, the cover letter stated that the requested Social Security Number numbers would be kept confidential in accordance with the ethical guidelines of the American Psychological Association (see Appendix A). The focus of the study was on the student achievement test scores related to reading and language arts and the results of the teacher attitude surveys; it did not require any further direct subject involvement.

Results

Students

Metropolitan Achievement Test Scores. Data were analyzed with multiple analyses of variance. Separate by grade (fourth, fifth, and sixth) analyses of variance were performed with each of the following variables as the dependent measure: total reading, total language, total math, total basic batter, total comprehensive batter, vocabulary, reading comprehension, math problem solving, spelling, and word recognition (fourth grade only). Year of test and sex of student were the independent variable. Cell means for each test at each grade level are present in Tables 2 though eight. Because multiple tests were performed, a strict criterion was used to identify significant effects (all p's $<.01$).

When statistically significant effects were found for year of test, preplanned t tests were performed, comparing the mean of years 1988 and 1989 with the scores obtained in 1990. The rationale for this comparison was that if scores related to reading and language arts were significantly higher for 1990, then the hypothesis related to first year effectiveness of the literature-based reading program would be supported. Statistically significant main effects for

year of test were found for fourth graders in total math ($t(1551)=5.29$, $p<.005$), total language ($t(1551)=3.42$, $p<.005$), total basic battery ($t(1551)=3.55$, $p<.005$), total comprehensive batter ($t(1551)=3.23$, $p<.005$), and math problem solving ($t(1562)=3.02$, $p<.005$). Statistically significant mean effects were found for year of test for fifth graders in total language ($t(1439)=3.36$, $p<.005$) and for language ($t(1439)=4.19$, $p<.005$). In each of these cases, scores for 1990 exceeded the average of scores obtained in 1988-1989. No year effects were found for grade 6.

Sex Differences. In fourth grade every variable showed a significant main effect for sex, favoring females (Tables 9 and 10 list F values and respective significance levels). In fifth grade, the variables total language, total basic battery, total comprehensive batter, language, and spelling showed significant main effects for sex, favoring females (F values and respective significance levels are listed in Tables 11 and 12). In sixth grade, the variables total reading, total language, total basic battery, total comprehensive battery, language, vocabulary, reading comprehension, and spelling showed significant main effects for sex, favoring females (F values and respective significance levels are listed in Tables 13 and 14).

Table 15 outlines the statistically significant main effects for grade and sex for each of the following variables: reading, math, language, total basic battery, and total comprehensive battery. Every variable had statistically significant main effects for sex in favor of females except math in grade 5.

Teachers

Survey Data. Forty-eight our of 67 teachers responded to the survey. They reported a mean of 8.12 years of teaching, with a range of 1 to 39 years. Nine teachers reported that they had piloted the district-adopted literature-based reading program during the 1988-1989 academic year. Thirty teachers reported that they had attended the summer 1989 language arts institute which had been sponsored by their district in collaboration with the publisher of the district-adopted literature-based reading program.

Attitudes toward the district-adopted literature-based reading program were assessed by summing across the 14 individual items on the teacher attitude survey. All items were scored so that 1=unfavorable attitudes toward the literature-based program, 3=neutral attitudes, and 5=favorable attitudes toward the literature-based program. Thus scores could range form 14 (very unfavorable) to 70

(highly favorable) summed across all items. The mean total score was 51.85 (range = 34 to 68). This translated into a mean per item score of 3.70, which indicated overall a slightly favorable response toward the district-adopted literature-based reading program.

Pearson product moment correlation coefficient was obtained relating number of years teaching with total score on the attitude survey (r=.3237) indicating a negative relationship between number of years teaching and teacher attitudes toward the newly adopted reading program. The most negative attitudes were found among teachers who had been teaching the longest.

TABLE 2

FOURTH GRADE TOTAL TESTS

CELL MEANS BY YEAR OF TEST AND SEX

	Year		
Test and Sex	88	89	90
Total Reading	605.16	609.48	610.67
Females	610.90	615.42	617.71
Males	600.50	602.97	603.22
Total Math	596.08	596.13	606.74
Females	597.96	598.76	610.54
Males	594.54	593.25	602.72
Total Language	598.82	600.32	605.70
Females	606.10	606.63	613.53
Males	592.91	593.42	597.42
Total Basic Battery	598.21	600.43	605.92
Females	602.90	605.19	612.03
Males	594.40	595.23	599.46
Total Comprehensive Battery	595.19	597.46	602.03
Females	598.66	601.54	602.03
Males	5992.38	593.00	596.29

TABLE 3

FOURTH GRADE SPECIFIC TESTS

CELL MEANS BY YEAR OF TEST AND SEX

	Year		
Test and Sex	88	89	90
Word Recognition	607.37	610.74	612.09
Females	611.88	614.59	615.50
Males	603.68	606.58	608.46
Vocabulary	609.55	613.46	615.19
Females	615.73	620.32	622.40
Males	604.50	606.07	607.50
Reading Comprehension	604.89	609.47	610.49
Females	610.72	616.45	618.68
Males	600.12	601.96	601.57
Math Problem Solving	599.32	600.58	607.38
Females	599.44	603.80	612.19
Males	599.22	597.11	602.26
Spelling	600.78	598.96	602.89
Females	611.70	606.92	611.71
Males	591.86	590.38	593.50

TABLE 4

FIFTH GRADE TOTAL TESTS

CELL MEANS BY YEAR OF TEST AND SEX

	Year		
Test and Sex	88	89	90
Total Reading	626.91	630.06	630.75
Females	627.65	633.90	632.63
Males	6226.08	6626.87	628.56
Total Math	619.71	623.78	626.88
Females	619.95	627.23	627.07
Males	619.43	620.92	626.66
Total Language	613.18	617.74	620.81
Females	616.36	624.41	625.64
Males	609.63	612.21	615.20
Total Basic Battery	619.45	623.09	625.14
Females	620.57	627.68	627.52
Males	618.20	619.28	622.38
Total Comprehensive Battery	615.49	618.77	620.56
Females	616.00	622.63	622.20
Males	614.91	615.55	618.64

TABLE 5

FIFTH GRADE SPECIFIC TESTS

CELL MEANS BY YEAR OF TEST AND SEX

	Year		
Test and Sex	88	89	90
Language	612.88	616.90	621.05
Females	614.24	622.80	624.36
Males	611.35	630.98	617.20
Vocabulary	632.12	6334.01	638.20
Females	632.58	637.66	639.37
Males	631.61	630.98	636.82
Reading Comprehension	626.85	629.97	629.90
Females	627.63	634.08	631.60
Males	625.97	626.54	627.89
Math Problem Solving	619.31	620.70	623.76
Females	616.90	625.25	623.51
Males	622.04	616.93	624.06
Spelling	621.26	624.19	624.34
Females	626.22	633.07	633.32
Males	615.65	616.81	613.79

TABLE 6

SIXTH GRADE TOTAL TESTS

CELL MEANS BY YEAR OF TEST AND SEX

	Year	
Test and Sex	89	90
Total Reading	648.45	648.59
Females	653.59	653.07
Males	643.92	643.71
Total Math	647.55	651.33
Females	649.38	653.90
Males	645.93	648.52
Total Language	631.52	631.48
Females	637.77	637.35
Males	626.01	625.07
Total Basic Battery	640.53	641.81
Females	644.96	646.06
Males	636.62	637.17
Total Comprehensive Battery	634.71	636.32
Females	638.29	639.69
Males	631.55	632.61

TABLE 7

SIXTH GRADE SPECIFIC TESTS

CELL MEANS BY YEAR OF TEST AND SEX

	Year	
Test and Sex	89	90
Language	631.64	631.12
Females	636.89	635.84
Males	627.01	625.97
Vocabulary	648.77	649.91
Females	656.39	656.77
Males	642.05	642.34
Reading Comprehension	648.32	648.84
Females	653.90	652.96
Males	645.28	644.31
Math Problem Solving	648.38	648.77
Females	651.06	652.29
Males	646.03	644.88
Total Comprehensive Battery	636.04	637.29
Females	645.51	647.02
Males	627.70	626.57

TABLE 8

CELL MEANS BY GRADE LEVEL AND SEX

Test and Sex	Grade 4	Grade 5	Grade 6
Total Reading	610.67	630.52	648.48
Females	617.71	632.28	653.33
Males	603.22	628.43	643.08
Total Math	606.74	626.95	651.23
Females	610.54	626.69	653.92
Males	602.72	627.26	648.23
Total Language	605.70	620.98	631.56
Females	613.53	625.52	637.44
Males	597.42	615.62	625.01
Total Basic Battery	605.92	625.13	641.81
Females	612.03	627.23	646.17
Males	599.46	622.65	636.95
Total Comprehensive Battery	602.03	620.60	636.42
Females	607.45	622.19	639.78
Males	596.29	618.72	632.67

TABLE 9

FOURTH GRADE TOTAL TESTS

ANOVAS FOR YEAR OF TEST AND SEX

Test and ANOVA	DF	F Value	Sif. of F
Main Effects	3	12.317	.0001
Year of Test	2	1.32	.265
Sex	1	33.148	.0001
Total Math			
Main Effects	3	12.075	.0001
Year of Test	2	13.349	.0001*
Sex	1	8.890	.003
Total Language			
Main Effects	3	25.920	.0001
Year of Test	2	4.997	.007**
Sex	1	66.284	.0001
Total Basic Battery			
Main Effects	3	15.520	.0001
Year of Test	2	5.619	.004***
Sex	1	33.999	.0001
Total Comprehensive Battery			
Main Effects	3	12.578	.0001
Year of Test	2	4.673	.009****
Sex	1	27.225	.0001

Table 9--Continued.

Note: All statistically significant mean effects for sex favored females. All statistically significant mean effects for year of test favored 1990. DF = degrees of freedom. Sig. = significance.

*t(1551)=5.29, p<.005. **t(1551)=3.42, p<.005.

t(1551)=3.55, p<.005. *t(1551)=3.23, p<.005.

TABLE 10

FOURTH GRADE SPECIFIC TESTS

ANOVAS FOR YEAR OF TEST AND SEX

Test and ANOVA	DF	F Value	Sig. of F
Word Recognition			
Main Effects	3	3.806	.010
Year of Test	2	.838	.433
Sex	1	9.295	.002
Vocabulary			
Main Effects	3	10.350	.0001
Year of Test	2	.983	.374
Sex	1	28.231	.0001
Reading Comprehension			
Main Effects	3	14.550	.0001
Year of Test	2	1.183	.307
Sex	1	40.074	.0001
Math Problem Solving			
Main Effects	3	5.384	.001
Year of Test	2	4.231	.015*
Sex	1	7.217	.007

Table 10--Continued.

Test and ANOVA	DF	*F* Value	Sig. of *F*
Spelling			
Main Effects	3	19.361	.0001
Year of Test	2	1.104	.332
Sex	1	56.033	.0001

Note: All statistically significant mean effects for sex favored females. All statistically significant mean effects for year of test favored 1990. DF = degrees of freedom. Sig. = significance.

*$t(1562)=3.02$, $p<.005$.

TABLE 11

FIFTH GRADE TOTAL TESTS

ANOVAS FOR YEAR OF TEST AND SEX

Test and ANOVA	DF	F Value	Sig. of F
Total Reading			
Main Effects	3	2.265	.075
Year of Test	2	1.088	.337
Sex	1	4.697	.030
Total Math			
Main Effects	3	3.188	.023
Year of Test	2	3.935	.020
Sex	1	1.589	.208
Total Language			
Main Effects	3	18.315	.0001
Year of Test	2	6.705	.001*
Sex	1	41.168	.0001
Total Basic Battery			
Main Effects	3	6.343	.0001
Year of Test	2	3.546	.029
Sex	1	11.841	.001

Table 11--Continued.

Test and ANOVA	DF	*F* Value	Sig. of *F*
Total Comprehensive Battery			
Main Effects	3	4.636	.003
Year of Test	2	3.181	.042
Sex	1	7.484	.006

Note: All statistically significant mean effects for sex favored females. All statistically significant mean effects for year of test favored 1990. DF = degrees of freedom. Sig. = significance.

*$t(1439)=3.35$, $p<.005$.

TABLE 12

FIFTH GRADE SPECIFIC TESTS

ANOVAS FOR YEAR OF TEST AND SEX

Test and ANOVA	DF	F Value	Sig. of F
Language			
Main Effects	3	15.050	.0001
Year of Test	2	9.203	.0001*
Sex	1	25.886	.0001
Vocabulary			
Main Effects	3	1.854	.135
Year of Test	2	1.749	.174
Sex	1	1.876	.171
Reading Comprehension			
Main Effects	3	2.086	.100
Year of Test	2	.840	.432
Sex	1	4.748	.030
Math Problem Solving			
Main Effects	3	.919	.431
Year of Test	2	1.151	.317
Sex	1	.384	.536

Table 12--Continued.

Test and ANOVA	DF	*F* Value	Sig. of *F*
Spelling			
Main Effects	3	15.512	.0001
Year of Test	2	.835	.434
Sex	1	45.445	.0001

Note: All statistically significant mean effects for sex favored females. All statistically significant mean effects for year of test favored 1990. DF = degrees of freedom. Sig. = significance.

*$t(1429)=4.19$, $p<.005$.

TABLE 13

SIXTH GRADE TOTAL TESTS

ANOVAS FOR YEAR OF TEST AND SEX

Test and ANOVA	DF	*F* Value	Sig. of *F*
Total Reading			
Main Effects	2	6.505	.002
Year of Test	1	.019	.890
Sex	1	13.007	.0001
Total Math			
Main Effects	2	2.917	.055
Year of Test	1	2.917	.149
Sex	1	3.450	.064
Total Language			
Main Effects	2	23.677	.0001
Year of Test	1	1.52	.697
Sex	1	47.353	.0001
Total Basic Battery			
Main Effects	2	9.829	.0001
Year of Test	1	.170	.680
Sex	1	13.998	.0001

Table 13--Continued.

Test and ANOVA	DF	F Value	Sig. of F
Total Comprehensive Battery			
Main Effects	2	7.374	.001
Year of Test	1	.432	.511
Sex	1	13.998	.0001

Note: All statistically significant mean effects for sex favored females. DF = degrees of freedom. Sig. = significance.

TABLE 14

SIXTH GRADE SPECIFIC TESTS

ANOVAS FOR YEAR OF TEST AND SEX

Test and ANOVA	DF	F Value	Sig. of F
Language			
Main Effects	2	17.772	.0001
Year of Test	1	.391	.532
Sex	1	35.448	.0001
Vocabulary			
Main Effects	2	11.396	.0001
Year of Test	2	.012	.912
Sex	1	22.651	.0001
Reading Comprehension			
Main Effects	2	5.375	.005
Year of Test	2	.129	.719
Sex	1	10.719	.001
Math Problem Solving			
Main Effects	2	2.393	.092
Year of Test	1	.000	.992
Sex	1	4.768	.029

Table 14--Continued.

Test and ANOVA	DF	*F* Value	Sig. of *F*
Spelling			
Main Effects	2	23.766	.0001
Year of Test	1	.004	.951
Sex	1	47.336	.0001

Note: All statistically significant mean effects for sex favored females. DF = degrees of freedom. Sig. = significance.

**t*(1429)=4.19, *p*<.005.

TABLE 15

ANOVAS FOR GRADE LEVEL AND SEX

Test and ANOVA	DF	F Value	Sig. of F
Total Reading			
Main Effects	3	92.281	.0001
Grade	2	125.389	.0001
Sex	1	24.243	.0001
Total Math			
Main Effects	3	133.075	.0001
Grade	2	196.264	.0001
Sex	1	5.718	.017
Total Language			
Main Effects	3	99.768	.0001
Grade	2	108.293	.0001
Sex	1	79.311	.001
Total Basic Battery			
Main Effects	3	132.323	.0001
Year of Test	2	180.795	.0001
Sex	1	79.311	.0001
Total Comprehensive Battery			
Main Effects	3	134.894	.0001
Year of Test	1	188.471	.0001
Sex	1	25.376	.0001

Table 15--Continued.

Note: All statistically significant mean effects for sex favored females, except in total math - grade 5. DF = degrees of freedom. Sig. = significance.

Discussion

A significant feature of California school reform in the 1980's was the adoption of curriculum frameworks by the State Department of Education, which called for the implementation of literature-based reading programs. As local school districts have moved toward alignment with the curriculum frameworks they have replaced skills-based reading programs by making significant investments in literature-based reading programs and professional staff development. The intention of this study was to examine the effects of a literature-based reading program on fourth, fifth, and sixth grade student achievement test scores at the end of the first year of implementation, to survey teacher attitudes toward the literature-based adoption, and to examine the possibility of a differential effect for boys and girls. If the literature-based reading program was superior in its first year, greater individual student gains in achievement test scores were expected for 1990 than for 1988-1989. Student gains were expected in those tested areas related to reading and language tasks, including math problem solving ("story problems"). Gains in math computation and math concepts were not expected as a

function of the newly implemented literature-based reading program.

The Findings

Reading and Language. The Metropolitan Achievement Test Scores were significantly higher in 1990 for fourth graders in the tested areas of total language, total basic battery, total comprehensive battery, and math problem solving. The scores were significantly higher in 1990 for fifth graders in language and total language.

Math. Fourth grade test scores were significantly higher in 1990 in the tested areas of math problem solving and total math. A possible explanation for this is that the 1989-1990 academic year was the first year of implementation of a district-created Mathematics Curriculum Guide (Bunnell, et al., 1989). This curriculum guide was correlated to the district-adopted mathematics textbooks, was designed to prepare students for standardized achievement tests, and may be part of the reason why fourth graders achieved significant increases in their math problem solving and total math Metropolitan Achievement Tests (MAT-6) scores.

Sex Differences. The analyses of the test scores showed striking differences between females and males. A comparison of the cell means showed higher mean test scores for females at every grade level in every tested area except

fifth grade, total math. In this one case the cell mean for males (627.26) exceeded the cell mean for females (626.69) by fifty-seven hundredths of a point. In the data analysis, all statistically significant main effects for sex favored females.

Teacher Surveys. Forty-eight out of sixty-seven fourth, fifth, and sixth grade teachers responded to a survey designed to measure attitudes toward the district-adopted literature-based reading program. As a group, the teacher surveys showed a slightly favorable response toward the program. A correlational analysis if the teacher survey responses indicated a negative relationship between number of years teaching and teacher attitudes toward the program (the longer one had been geaching, the more negative his or her attitude toward the program was likely to be.

Implications for Further Research.

Overall, the anlaysis of student achievement test scores showe no losses in 1990, and statistically significant increases for 1990 were limited to fourth and fifth grade language and fourth grade math. While it can be said that the newly adopted and implemented literature-based reading program is not indicating a negatie impact, it can also be said that perhaps the first year of implementation was simply not enought time for the program to show how it

could contribute to a positive impact. If this study were to be replicated one year later, and the scores from all grade levels (kindergarten through sixth) were included in the study, perhaps it would show a pattern indicating that the higher the grade level of a student, the less significant the effects the new program (which could explain the absence of statistically significant main effects for year of test for grade six). The sixth grade students in this study had previously experienced six grades (kindergarten through fifth) of a skill-based program, and only one year of a literature-based reading program. It is possible that the effects of six years of prior learning in the skill-based program were simply too strong to be affected in one year of implementation of a literature-based program. Analysis of scores from all grade levels could address the issue of the strength of effects of prior student learning within a skill-based program.

The particular literature-based reading program which was adopted by the school district in this study has been adopted by the Springfield, Illinois Unified School District and is scheduled to be implemented in the fall of 1990. Kathryn Ransom, the Reading and Language Arts Coordinator for the Springfield district related some interesting information during a July 1990 telephone interview--

information which would be pertinent to a future study. Ransom stated that Jack Cooper, one of the literature-based reading program's authors had reportedly conducted his own investigation of the program's effectiveness in California. He had then given the Springfield, Illinois, district three important guidelines:

1. There was a correlation between staff development and teacher attitude toward the program.
2. Sufficient time before the story was critical; prior knowledge was of utmost importance. Most discussion time should occur before the story, less discussion time after.

This point aligns with Weaver's (1988, p. 23) statement about the importance of prediscussion: "Only when we have cognitive schemas adequate to what we are reading and only when these schemas are somehow activated will we have much understanding and recall of what we hear or read."

3. Daily writing was important; this was how students applied the phonics in a meaning-centered context.

If this study were to be replicated in Springfield, Illinois, with the strength of these three guidelines integrated into the literature-based implementation, perhaps stronger first year effects would be seen at all grade levels in reading and language arts standardized test

scores.

It is possible that the limited support by MAT-6 standardized test scores for literature-based program first-year effectiveness is really a function of the limits of standardized testing. Perhaps the MAT-6 did not test what was actually happening in the classrooms. many educators feel that standardized tests simply do not tell teachers, parents, and school administrators what they need to know (Weaver, 1988). Denise Edge, Special Projects Coordinator for the school district which furnished the data for this study, indicated during a July 1990 interview that this really is an exciting time in the field of testing because of the move toward authentic assessment. She described authentic assessment as assessment which mirrors instruction, and said that testing companies themselves are taking a leadership role and working with educators in the development of more authentic, performance-based tests.

Loren Barritt (1990) described authentic assessment as assessment which is part of the instructional program and which makes kids part of the process--it is connected to what happens in the classroom. According to Barritt, authentic assessment can only be developed with primary input from those who spend their lives in classrooms instead of with input primarily from "those who with the best of

intentions think they know better what those classrooms need" (p. 4). In Barritt's view, teachers and students are often cynical about standardized tests because encounters with them leave the students and the teachers feeling like something has been done to them, instead of feeling like they had collaborated in something meaningful. As testing procedures change, studies of student performance on tests may reveal some very interesting data.

In addressing the issue of a change in testing procedures, it is also appropriate to address the issue of changes in teaching procedures. Specifically, how much change (if any) in teaching procedures does the adoption and implementation of new reading curriculum programs bring? Research addressing this question would require concentrated, in-depth observational records of selected classrooms both before and after the implementation of a new program.

Inasmuch as the sex differences favoring females were the strongest and most significant finding of this study, certainly further research is indicated. Larry Gordon (1990), writing for the Los Angeles Times, noted that 1990 verbal SAT scores averaged 429 for male high school seniors and 419 for female high school seniors. The average SAT math score for high school males was 499, compared to 455

for high school females. In light of the results of this study (which showed strong sex differences favoring elementary school females) and the SAT results (which report sex differences favoring high school males), there are many questions, such as: How can this be? When did the sex differences shift? This question is especially pertinent since the data analysis for this study showed no significant sex of student by year of test interaction. The results of this study induce at least two more questions: Are the scores destined to shift, males' scores thus becoming higher while females' scores go lower? Why? Although the psychology of cognitive sex differences is "controversial and politically charged," (Halpern, 1986, p. viii) the issue calls for well designed and well documented studies.

Recently, Albert Shanker, President of the American Federation of Teachers, said, "Ninety-five percent of the kids who go to college in the U.S. would not be admitted to college anywhere else in the world." Shanker challenged teachers to ask their seventeen-year-old students to explain a newspaper editorial or to do a two-part math problem. He predicted that this exercise would give teachers a picture of the abysmal state of American public education.

In their book, Language stories & literacy lessons (1984), Harste, Woodward, and Burke advocate strong

collaboration between classroom teachers and researchers as essential to relevant educational research. in light of Shanker's comments, this may be a strategic time for teacher-conducted research which meaningfully speaks to pedagogical concerns.

This thesis on literacy, school reform, and literature-based reading programs began with a quote from a great American educator, and it seems fitting and appropriate to end it with a quote from him (p. 202).

> We try to keep constantly in mind the fact that the worth of the school is to be judged by its graduates.
>
> --Booker T. Washington

Appendix A

Teacher Survey Cover Letter

June 22, 1990

Dear _____,

PLEASE HELP! By the middle of July, I need to turn in a draft of my master's thesis (or my family will stop speaking to me entirely).

My topic deals with literature-based reading programs, and because I truly value your input, please take a few minutes to respond to this enclosed survey--it's just one page, two sides. My master's thesis depends upon this, and in the thesis itself I will gratefully acknowledge the input of_____Elementary School District 4th, 5th, and 6th grade teachers.

A stamped, self-addressed envelope is enclosed (just fold the survey in half, then into thirds, and it will fit perfectly). Please call me at home, 242-8205, if you have any questions or would just like to discuss the research. Thank you so much...

Sincerely,

Cheri Peil, Teacher
Fifth Grade, _____

Appendix A--Continued.

P.S. The projected thesis completion date is August, 1990. Please indicate _____Yes, or _____No, if you would like to receive a completed copy of this study.

If Yes: _____

Your Name

_____

_____

Your Address

Appendix B

Teacher Survey

SURVEY

Literature Based Reading-Language Arts Program

Please list your Social Security Number: _____

(Your Social Security Number will be kept confidential in accordance with the ethical standards of the American Psychological Association.)

A. How many years have you been an elementary teacher?____

B. Did you pilot the Houghton Mifflin Language Arts Program in your classroom last year (1988-1989)? ____Yes ____No

C. Did you attend the _____ School District Summer 1989 Institute? ____Yes ____No

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

THANK YOU, AND NOW IF YOU WILL JUST ANSWER THE 14 QUESTIONS ON THE REVERSE SIDE AND THEN MAIL THIS SURVEY TO ME, YOU WILL BE CONTRIBUTING TO RESEARCH, AND I WILL BE MOST GRATEFUL!

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

Appendix B--Continued.

THE FOLLOWING STATEMENTS ADDRESS YOUR ATTITUDES REGARDING LITERATURE BASED READING PROGRAMS IN GENERAL AND THE HOUGHTON MIFFLIN LITERATURE PROGRAM IN PARTICULAR. PLEASE CIRCLE EACH NUMBER WHICH BEST DESCRIBES YOUR ATTITUDE.

1. Literature is for all children, regardless of age or grade level, as it carries messages about life that are essential to complete a child's proper growth and development.

1	2	3	4	5
strongly disagree		neutral		strongly

2. Rather than being bits and pieces that lack k"story structure," literary works need to be complete stories.

1	2	3	4	5
strongly disagree		neutral		strongly

3. A primary goal of teaching literature is for children to learn to love to read.

1	2	3	4	5
strongly disagree		neutral		strongly

4. Through literature, pupils may experience the lives of others, different time periods and places, value systems, and the world's cultures.

1	2	3	4	5
strongly disagree		neutral		strongly

5. Literature is one of the basics, and is the key to a successful writing program that should be taught in all curricular areas.

1	2	3	4	5
strongly disagree		neutral		strongly

Appendix B--Continued.

6. American society is reflected in the Houghton Mifflin Literature Program through excellent writing by authors from ethnic minority groups.

1	2	3	4	5
strongly disagree		neutral		strongly

7. The selections provided by the Houghton Mifflin Literature Program have the power to raise questions, stimulate the imagination, provide a fresh point of view, and expand the student's knowledge of the world.

1	2	3	4	5
strongly disagree		neutral		strongly

8. The Ginn Reading Program used last year was a better program for reading instruction.

1	2	3	4	5
strongly disagree		neutral		strongly

9. The Houghton Mifflin literature based program does not provide enough drill on mechanics.

1	2	3	4	5
strongly disagree		neutral		strongly

10. For whole group grade level instruction, the Houghton Mifflin literature program is too advanced for some students.

1	2	3	4	5
strongly disagree		neutral		strongly

Appendix B--Continued.

11. I expect the Houghton Mifflin Literature based program to be successful.

1	2	3	4	5
strongly disagree		neutral		strongly

12. Students with low academic achievement will show little or no growth in standardized test scores.

1	2	3	4	5
strongly disagree		neutral		strongly

13. Students progress at a faster rate when grouped according to reading ability.

1	2	3	4	5
strongly disagree		neutral		strongly

14. The Houghton Mifflin Literature Based Program contains works that reflect meaning and values that are worth transmitting to the next generation.

1	2	3	4	5
strongly disagree		neutral		strongly

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