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Whole-school elementary literacy programs: variation in implementation and the relationship to student literacy achievement

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WHOLE-SCHOOL ELEMENTARY LITERACY PROGRAMS: VARIATION IN

IMPLEMENTATION AND THE RELATIONSHIP

TO STUDENT LITERACY ACHIEVEMENT

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A THESIS

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Education

(in Literacy Education)

The Graduate School

The University of Maine

December, 2000

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An Abstract of the Thesis Presented
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Research suggests that whole-school early literacy program reform should take precedence in our schools (Pikulski, **1994;** Snow, Burns, **&** Griffin, **1998).** Discovering how the components of a whole-school early literacy program interact to affect student achievement is the next step in planning for program development. Studies focusing on effective schools have not yet provided information about the impact of a whole-school program on student achievement or about the contribution of each the individual component to the whole program (Anderson **&** Pellicer, **1998;** Creemers, **1997;** Creemers **&** Reezigt, **1996;** Wong **&** Meyer, **1997).**

However, descriptive studies spanning several decades conducted in effective schools have identified ten essential components for the implementation of complete and effective programs (Creemers **&** Reezigt, **1996;** Levine **&** Lezotte, **1990;** Purkey **&** Smith, **1983;** Stringfield, Ross, **&** Smith, **1996;** Wong **&** Meyer, **1997).** For this study, a

survey designed to measure the degree to which schools implement each of the whole-school components was used with a sample of 39 elementary school teams in Maine.

This study examined the variation in implementation of the ten essential components of elementary literacy programs among schools in Maine using Analysis of Variance (**ANOVA**). Further, it measured the contribution of each of the ten components to the whole program using bivariate correlations and factor analysis, The effects of each of the components and socioeconomic status on student achievement were analyzed using multiple regression analysis. Finally, how schools varied was examined using content analysis of free-response answers, frequency distributions of checklist-type responses, and comparison **of** demographic information.

The results of the **ANOVA** indicated that there was great variation in the implementation of the components **of** the early literacy programs among schools. The greatest variation was in the component measuring school standards. The components **of** program administration, professional development, and beliefs contributed the most to the whole literacy program. The multiple regression analyses showed that socioeconomic status was the only consistent predictor of student achievement. The final analyses pinpointed 22 of the **69** measured characteristics that were found exclusively in high-achieving schools but not in any others.

DEDICATION

I dedicate this work to my mother, Charlotte E. Boucher and my father, Raymond R. Boucher. Your undying devotion to each other has shown me that life is about caring and loving and giving before all else. You've taught me that life's most tender moments are found in the twinkles shared between loving eyes and the chuckles shared without words. How lucky I am to be a part of your lives. How blessed I am to be loved by you.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

Background

For more than half a century, there has been great debate among literacy professionals supporting either traditional reading programs (phonics-based) or progressive programs (literature-based) (Chall, 1996; Stahl & Miller, 1997). This debate, while helping our field move toward a greater understanding of how children learn to read, has taken the focus away from the bigger whole-school problems we face in teaclzlng our children to read and write proficiently (Tierney, 1994). The argument of phonics versus whole language **is** about a very small part of a much bigger issue. Those who take a broader view of literacy education believe that what really ails our schools and programs **is** the fragmentation of program design (Slavin, Karweit, Wasik, Madden, & Nolan, 1994; Winfield, Hawkins, & Stringfield, 1992; Wong & Sunderman, 1997). The focus on elementary literacy programs is paramount in the field because literacy "is *so* fundamental to the successful education of all children" (Maine Department of Education, 2000, p. 51).

Focusing on and continuously changing instructional programs by adopting new and isolated programs only ensures continued disjointed instruction (Pikulski, 1994; Spiegel, 1995). Alternatively, coordinated efforts between programs and among staff produce the most effective programs and schools (Feeley, 1995; Winfield, 1995). Educators know that no one type of instruction works for all students (Maine Department of Education, 2000; Manzo & Manzo, 1993) and that multiple approaches to instruction need to be well coordinated in a whole-school design (George, Grissom, & Just, 1996;

Pikulski, 1994; Slavin, et al., 1994). Program reform "is not about incremental improvement of classroom, school, and school systems; it is about transforming the whole ecology of schooling to obtain the desired result" (Hill & Crevola, 1999, p. 122).

Research of effective schools' and effective literacy programs[2] shows ten characteristics[3] that are essential **to** school or **program** effectiveness. These models collectively point to the need for a whole-school design that includes all ten[4] of the following characteristics or components to ensure effective programming for all students:

- common beliefs and understandings;
- balanced teaching programs in the regular classroom;
- intervention and special assistance for students who are not accelerating commensurate with their peers;
- professional learning teams and coordinated plans for professional development;
- home/school/community partnership;
- school-site management with collaborative decision-making;
- building leadership and collaboration;
- ongoing monitoring **and** assessment of student performance;
- standards and targets with zero tolerance for failure; and
- literacy leadership and collaboration.

Systemic change can **take** many years (Balfanz & MacIver, 2000; Bean, 1995; Borman, 2000; Datnow & Stringfield, 2000). Whole-school literacy program reform that focuses on preventing problems and making recommendations for program improvement should take precedence, be comprehensive, and be given ample time for development and implementation (Pikulski, 1994; Snow, Burns, & Griffin, 1998). Because of the

disadvantages with which some schools struggle – such as a lack of materials and high-quality professional development, and an absence of technical assistance – it is, at times, next to impossible to gain lasting improvement without step-by-step direction and support (American Federation of Teachers, 1998; Winfield, 1995). Yet, it is because of this specific collection of difficulties that schoolwide reform exists in the first place (Bodilly, 1996; Slavin & Fashola, 1998). Most importantly, it is these exact same schools that need a comprehensive reform plan to affect just about every possible aspect of the organization at once, along with a commitment from all members **of** the school community to ensure sustainability (Datnow & Stringfield, 2000; McDonald, Hatch, Kirby, Ames, Haynes, & Joyner, 1999). However, Balfanz and MacIver (2000) express concern that most school districts are unable to "create the infrastructure needed to support such reforms" (p. 156).

The historical evidence of effective schools research supports a whole-school design (Committee for Excellence in Maine School, 1982; Edmonds, 1982; McNeely, 1981; Purkey & Smith, 1983). As early as 1983, Purkey and Smith reviewed research on effective schools dating back to 1965 that cited the necessary characteristics for effective program design. At the same time, the other studies cited above describe the same criteria for developing effective schools and programs. More recent reviews of effective schools research describe identical criteria for establishing continued success for students and comprehensive change in school programs (Cole-Henderson, 2000; Creemers & Reezigt, 1996; Levine & Lezotte, 1990; Stringfield, Ross, & Smith, 1996).

Over the last decade or *so,* many whole-school literacy programs have been designed based on effective schools research (Slavin & Madden, 2000). Two in

particular, Success For All (SFA) by Slavin, Madden, Karweit, Dolan, and Wasik (1994) and the Early Literacy Research Project (ELRP) by Crevola and Hill (1998) have provided detailed descriptions of their designs and research supporting the effectiveness of their programs.

In addition, to encourage whole-school literacy program reform, the 103rd Congress passed the Improving America's Schools Act of 1994 (IASA) which supports the implementation of Schoolwide Projects that encourage flexibility in approaches to improve the performance of all students (Snow, Burns, & Griffin, 1998; United States Department of Education, 1996; Winfield, 1995). Through the new Title 1A, the federal government encourages schools to combine federal monies to target the whole school's educational program instead of serving only identified children through isolated or fragmented programs (Borman, 2000). By using federal funds in innovative ways through the implementation of Title 1 Schoolwide Projects, many high-poverty schools have made drastic changes in their literacy programs to improve performance without increasing their working budgets (American Federation of Teachers, 1998; Winfield & Hawkins, 1993).

Research of effective schools and programs has provided detailed descriptions of the necessary components of a whole-school design (Cole-Henderson, 2000). Yet, these studies still do not provide information about the impact of the comprehensiveness of a whole-school literacy program on student achievement (Slavin, et al., 1994; Wong & Meyer, 1997) or of the individual effects **of** each component **of** a program on student performance (Anderson and Pellicer, 1998; **Wong** & Meyer, 1997). These questions remain unanswered (Creemers, 1997; Creemers & Reezigt, 1996). Anderson and Pellicer

4

(1998) further state that "the interrelations among the [program] factors and the relative importance of each to the overall success of the programs remain a mystery" (p. **238).** Creemers (1997) suggests that even though it may prove difficult to test the full model, researchers should nevertheless attempt to include more levels, more components, and more relationships between components in their studies.

<center>Problem Statement and Research Questions</center>

Research conducted in high performing schools has pointed to ten essential components that are necessary in the implementation of effective schools and literacy programs. While these studies attach different names to each of the components, all ten components are present. These research studies have also provided detailed descriptions of each of the components. Because the evaluation of whole-school literacy programs based on those definitions is in its infancy, there remain many questions that are still unanswered. This study will explore some of those questions as follows:

1. What is the variation in the implementation of the ten components of a whole-school literacy program within individual schools in Maine?

2. What is the variation in the implementation of each of the ten components of a whole-school literacy program among schools in Maine?

3. What are the interrelationships between the ten components **of** whole-school literacy programs across schools in Maine and how does each component contribute to the whole program?

4. What is the relationship between student achievement and the degree to which schools in Maine implement each component of a whole-school literacy program?

5. What is the relationship between student achievement and the degree to which schools implement the entire whole-school literacy program?

<center>Limitations of the Study</center>

1. The sample of schools that were selected for this study was chosen from those schools who were interested and willing to participate. Even though every elementary school in the state was invited to apply to participate in the study, only **54** out of 450 schools responded to the invitation and **39** were selected for this study. From those schools that did reply, the sample was found to be representative of geographic location and school size of schools in the state. Socioeconomic status and student achievement were not controlled for in the selection. **As** a result, generalizability may be limited to those schools that resemble the demographics of this particular sample whether within or outside the state of Maine.

2. Data were collected through self-disclosure using a survey on which participants responded **to** a **1** to **6** point Likert-scale. Therefore, responses were subjective. To control for individual differences in attitude and perception, each school team included representatives from four different **job** categories. These positions included the building principal, classroom teachers, a special education **or** Title 1 teacher, and the literacy specialist. However, how school team members were chosen is unknown. It can only be assumed that those chosen to complete the survey were representative of the staff and that the team-members participated in this study willingly.

3. The data collected and analyzed in this study were not cross-checked with any other form of inquiry such as interviews or observations. Therefore, the inherent flaws in

survey research such as bias in the development of the survey could affect the outcome **of** the participant's responses.

Definitions of Terms

Effective Schools: This term is used in this study to refer to school reform programs that beneficially affect the organization of the entire school structure and include all content areas. These programs have clearly defined program components that work in concert with each other to improve student achievement.

Title 1 Schoolwide Projects: These programs are federally subsidized under Title 1A regulations that allow schools to combine federal monies to improve the design and implementation of the whole school program. They are in contrast to Target Assistance Projects under Title 1A that allow monies to be used only for services provided for specifically identified students. Title 1 Schoolwide Projects reflect the research of effective schools and must include clearly defined program components. These programs are subject **to** federal regulations and evaluations.

Whole-School Literacy Programs: These programs are independently designed literacy programs that focus on the restructuring of the entire school organization based on effective schools research to improve student achievement in literacy. Whole-school programs have clearly defined program components that are essential in the success of the program. These programs are not subject to federal regulations.

Program Components: **As** mentioned above, research on effective schools has consistently identifies ten program components that are evident in high-performing schools. These essential components are consistent across research studies and provide the categories of program design for this research. The following ten components are

used in this study: beliefs, classroom instruction, supplementary instruction, professional development, home/school partnerships, program administration, building leadership, assessment, standards, and literacy leadership. The words components, characteristics, and factors are used interchangeably in the literature review.

Component Attributes: This term is used in this study to identify the descriptors within the definitions **of** each component. These attributes were used to construct the survey instrument that was used to measure each component.

Survey Item: This term refers to a specific item on the survey that measured one component attribute.

<center>Definitions of Program Components</center>

The following definitions are constructed from the research studies of effective schools and effective literacy programs that were mentioned above. These studies provide descriptions of each of the schoolwide components necessary for a comprehensive program. The component attributes within each of the definitions below are a synthesis of the research descriptions. These definitions are very detailed and presented early *so* as to establish a common understanding and to avoid any potential confusion based on differing understandings of each component.

Beliefs: Research tells us that it is essential to establish common beliefs about literacy acquisition within the school when designing or adopting an appropriate schoolwide approach to literacy programming. Literacy programs demand a concerted effort that involves all professionals in the school working toward a shared vision. Common beliefs, understandings, and purpose about the acquisition of literacy must be articulated and shared within the greater school community in order for all students to

<center>8</center>

become successful. All school staff must believe that each person can make a difference in the lives of students and must be committed to doing *so.* In addition, all staff must demonstrate the importance of that belief by modeling positive attitudes toward each other and students. Finally, beliefs and understandings about literacy teaching and learning must be the foundation for the development and implementation **of** the literacy program.

Classroom Literacy Program: The construction of meaning is the ultimate goal of reading and writing. These two processes (reading and writing) are similar and require careful instructional planning to ensure that all students receive the appropriate blend of direct instruction, guided learning, and independent practice. Therefore, it **is** critical that classroom instruction is individualized, specific and differentiated to meet individual student needs, consistent across classrooms, balanced, and aligned with state standards.

The daily classroom grouping structure must include time for whole-group, small group, and individualized teaching in which the individual needs of each student should be the focus of instruction. Finally, one of the most important factors in effective classroom literacy programs is the teachers' full understanding of theory.

Supplemental Instruction: Learning difficulties and differences can interfere with a student making acceptable progress commensurate with his or her peers. Therefore, the supplemental literacy program must be well coordinated with the classroom instructional program, individualized for the specific needs of each student, provided by certified professionals, and employed using multiple-methods. Intervention for students who are experiencing difficulty must be provided as early in their academic career as possible and for as long as necessary. In addition, services provided for students who need extra

support in literacy must be flexible in design to allow for necessary changes when needed.

Professional Development: Research indicates the following five elements as important to a professional development program. It must:

- require and foster the norm of continuous improvement;

- require strong leadership in order to obtain continuing support and to motivate all staff, school board members, parents, and the community to be advocates for continuous improvement;

- be aligned with the school's and the district's strategic plan and be funded by a line item in the budget;

- provide adequate time during the work day on a regular basis for staff members to learn and work together to accomplish the school's mission and goals; and,

- be an innovation in itself that requires study of the change process.

Most importantly, however, **is** that time is provided for teachers to meet regularly to study and share new ideas and progress. Time must also be provided for teachers to reflect on their **own** practice. Lastly, professional development for staff must be practical and directly apply to the needs of the teachers.

Home/School Partnership: The best approach to communication between home and school **is** a two-way conversation in which the differing cultures merge to positively influence student learning. It is best to provide a variety of options for parents to participate in their children's education where parents become partners with the school. In effective programs, regular meetings with parents are scheduled to review student's progress and support collaboration.

Effective schools have organized programs that develop and foster partnerships with families and communities to support student success in all areas of performance. Community members and parents should be encouraged to volunteer in the schools and classrooms.

Program Administration: Because effective change takes support and dedication, the organizational plan reflects many layers **of** governance. In effective programs, local governance takes the following form:

- school governance where school-level control over resources, budgeting, and staffing is encouraged and decisions are made by committees of teachers, administrators, students, parents, and other involved parties; and

- district governance where support is provided to assist **in** effective operation of programs.

Most of the effective programs list daily extended classroom time for uninterrupted teaching and focused instruction as the most important factors in successful reading program designs.

Building Leadership: Building leadership is an important component of a schoolwide literacy program. The most often mentioned characteristic of effective building leaders **is** strength, i.e. leaders must be firm, purposeful, and proactive in their direction while blending the right mix **of** support and pressure. Leadership must be site-based. Building leaders must **be** committed to instructional improvement, aware of adult learning tendencies, have an understanding **of** institutional change, and be knowledgeable of literacy research and practice.

It is critical that the building leader share decision-malung and responsibilities with others in the school. Among the prerequisite skills of a building leader is problem-solving and effective communication.

Assessment: In order for teachers to make informed instructional decisions to support student **growth,** assessment must take place using an ongoing format where teachers actively listen to students as they read and write. The assessment used to support ongoing student development parallels instruction. By using systematic ongoing observation, teachers obtain detailed and diagnostic information about individual students. This ongoing assessment provides teachers with immediate information that directs planning and instruction.

On a larger scale, assessment must be used to evaluate the effectiveness of the overall literacy program. The results of such an assessment is used to provide longitudinal data to track student and program progress over time, indicate strengths and trouble spots in the development of the program, and inform decisions about professional development direction.

Standards: Standards provide a common format to encourage communication among teachers, administrators, parents, students, and the community. These standards must reflect the school's beliefs **of** best practice and about learning. Because standards provide a clear and common set of expectations, it is most important that students be aware of the standards they are expected to meet.

It is important to have two types of standards included: content standards and performance standards. Content standards define the 'what' of the curriculum and performance standards state the level to which students are expected to perform by

certain grades. In effective programs, both types of standards include a minimum level at which all students are expected to achieve and a desired level that challenges students to exceed the minimum level.

Literacy Leadership: The school literacy leader assists in the development of classroom materials and provides direction, support, and assistance to classroom teachers. In consultation with the building leader, the literacy leader develops, implements, and coordinates the program elements. In addition, the literacy leader coordinates data collection, disseminates information to the school community, and provides on-site professional development for teachers. Last, a school literacy leader must effectively communicate with other members of the *staff* and possess a high level of knowledge of literacy education.

Organization of Study

Chapter one is comprised of the background of the study, the problem statement and research questions, the assumptions and limitations, and the definitions of the terms. Chapter two consists of a review of the literature on a) effective schools, b) Title 1 programs, c) whole-school literacy programs, and d) effects of socioeconomic factors **on** student achievement.

The pilot study and research study designs are included in Chapter three. This chapter describes procedures used for selecting the sample, collecting the data, and analyzing the results. In Chapter four the results and analysis of Questions 1 through 5 are presented and discussed. Chapter five presents the results and analysis of the case study. Finally, in Chapter six, a synthesis of the results focusing on three major finding of the study and implications for further research are suggested.

Chapter 2

REVIEW OF **THE** LITERATURE

This review of the literature examines four different, yet closely related, bodies of research that focus on high-quality education: namely, research on effective schools; evaluations of Title 1 programs; reviews of independent whole-school literacy programs; and the effects of socioeconomic status on student achievement. In reviewing this research, although slightly different language was used to describe the program components, it was apparent that they were referring to the same 10 components. In this review, specific examples will be used to illustrate connections between the studies.

Effective Schools Research

The purpose **of** effective schools research prior to 1983 was conducted to challenge the "assumption that differences among schools [had] little effect on student academic achievement" (Purkey & Smith, 1983, p. 441). These studies focused on all levels of the full organization of the school to describe the characteristics of effectiveness (Creemers & Reezigt, 1996). **As** a result of these characteristic descriptions, many school reform programs were developed and evaluated. The resulting body of research provides evidence of the impact of whole-school reform **on** student achievement and more detailed descriptions of high-quality schools.

Effective schools research is conducted mostly using a case-study format and through correlational studies. These studies use student achievement as the measure for effectiveness (Creemers, 1997). The focus **of** school effectiveness research is always on improving achievement for all students (Sammons, Hillman, & Mortimore, 1995). Many studies focus on the evaluation and progress of specifically designed programs such as: Frazee in 1996, the public school/university connection; Kushman and Yap in 1999, the

implementation of Onward To Excellence; and Haynes in **1998,** the Comer School

Development Program. Studies such as these are longitudinal over several years. They

often couple qualitative methods of data collection and analysis such as written surveys,

telephone and personal interviews, document analyses, and field visits with quantitative

analyses like simple correlation procedures or regressions to demonstrate and explain

characteristics **of** effectiveness.

Often studies use as student outcome measures norm-referenced, standardized

achievement tests that tend to assess skills rather than specific learning (Hill & Rowe,

1996). Hill and Rowe state that it would be more valid to use public examinations "since

public examinations are designed to assess learning outcomes as set out in some detail in

syllabi which it can be assumed that teachers and schools have followed closely" (p. **8).**

In addition, Sammons, et al. **(1995)** caution against using only one or two outcomes to

measure student achievement as this approach proves to be only **a** partial look at

effectiveness. Hill and Rowe criticize quantitative studies of school effectiveness to date

as having "paid scant attention to outcome measures [which have] … major implications

for the conclusions that one might draw" (p. 7).

Many of the recent studies do not employ the use of control schools. Haynes,

Emmons, and Woodruff **(1998)** explain that because *so* many schools now focus on

similar factors, it is no longer effective to use traditional evaluation procedures with

control school groups. **As** a result, Haynes, et al. state that they "are now interested in

learning more about the nature of the implementation of [their program] in schools and

how the quality of implementation is related to school and student outcomes" (p. 72).

The body of research studying the characteristics of effective schools has uncovered a multitude of factors (Creemers, **1997;** Creemers & Reezigt, **1996).** Even though it is commonly believed that no one program or method can produce effectiveness for all schools (Allington & Walmsley, **1995;** Frazee, **1996;** Kushman & Yap, **1999;** Slavin, et al., **1994),** a number of studies have identified certain characteristics present in effective schools. Table 1 illustrates these characteristics as they relate to the ten components used in this study. Note that leadership is represented by only one component rather than separated into the two separate components **of** building leadership and literacy leadership. This body of research examines effectiveness across content areas and therefore does not specify literacy leadership as a component. Other studies such as Purkey & Smith **(1983),** Levine and Lezotte **(1990),** Creemers and Reezigt **(1996),** Frazee **(1996),** Stringfield, et al. **(1996),** Haynes **(1998),** Kushman and Yap **(1999),** Cole-Henderson **(2000),** and Slavin and Madden (2000) mention many of the same main characteristics as listed in Table 1 supporting further agreement of these findings.

Many studies have shown a positive correlation between the implementation of whole school programs and student achievement. For example, by using a carefully designed survey that measures the extent to which schools implement the elements of the School Development Program (SDP), Haynes, et al. (1**998)** discovered a high correlation between SDP effectiveness and student achievement. **As** a result they conclude that "this finding suggests that training in, and faithful implementation of, the SDP process contributes to improved student outcomes" (Haynes, et al., **1998,** p. **84).** On the same line, Slavin and Madden (2000) report "strong impacts on state performance measure in

all subjects in Grades 3 and 5 as long as the program was being implemented" (p. 109).

In another study, Kushman and Yap (1999) found that with long-term commitment and

sustained support there is a positive correlation between student achievement and

program components when measured over time (Kushman & Yap, **1999).** Given that the

results of each of these studies point to long-term and focused implementation, Datnow

and Stringfield (2000) rightfully raise the question of "how to support and sustain

potentially effective reforms" (p. **184).**

Table 1

Similarities of the Characteristics Found in Some Effective Schools Research

Identified component	Bodily (1996)	Sammons, Hillman, & Mortimore (1995)
Beliefs	Commitment to design change	Shared vision and goals
Classroom instruction	Inter-disciplinary curriculum & project-based instruction	Purposeful teaching, academic emphasis
Supplementary instruction	Multiple approaches to inclusionary instruction	Adaptive practice
Professional development	Professional development process	School-based staff development
Home/school partnership	Community involvement	Home/school partnership
Program administration	Whole-school approach to change	Collaborative decision-making
Leadership	Coordinated governance committee	Professional leadership
Assessment	Performance-based assessment	Monitoring student performance, evaluating school performance
Standards	Local & state standards	High expectations

In spite of the apparent consensus about the essential characteristics of effective

schools, Creemers **(1997)** cautions that lists such as the one in Table 1 suggest equal

importance of all characteristics. **For** example, "they do not distinguish between

classroom and school factors and they do not pay attention to the mutual influence **of**

factors at both levels" (Creemers, 1997, p. 9). Other researchers also believe there to be

reciprocal relationships among the program components (Purkey & Smith, 1983;

Sammons, et al., 1995). For example, research has found that those school characteristics

that are more directly related to classroom practices have a much greater impact on

student achievement than those related to school effects (Creemers & Reezigt, 1996; Hill

& Crevola, 1999; Hill & Rowe, 1996; Kushman & Yap, 1999; Purkey & Smith, 1983).

Wang, Haertel, and Walberg (1993) refer to characteristics such as organization **of** the

school as distal factors and characteristics such as classroom practices as proximal

factors. And yet Creemers and Reezigt (1996) bring to our attention that we still do not

know the exact relationship between school factors and which school factors are most

important for student achievement. In addition, they express concern that "up till now

very few studies have collected data at both levels" (p. 205) and when it has been

collected, "school effects and classroom effects were often analyzed separately instead of

simultaneously" (p. 206).

<p align="center">Title 1 Schoolwide Projects Research</p>

The purpose of many research studies of Title 1 Schoolwide Projects is to

compare the effects of Schoolwide Projects on student achievement with the effects of

the Title 1 Target Assistance models. Specifically, the research compares the

organizational structure of Schoolwide Projects with Target Assistance models and

compares the different program effects on student achievment.

Bureaucratic factors such as the development of school, state, and national

policies can both support or interfere with the redesign of programs and ultimately

<p align="center">18</p>

student performance (Balfanz & MacIver, 2000; Wong, Sunderman, & Lee, **1997).** To encourage schoolwide reform, the 103rd Congress passed the Improving America's Schools Act (IASA) in **1994** that supports the implementation of whole-school efforts and flexibility in approaches to improve the performance of all students (Borman, 2000; Snow, Burns, & Griffin, **1998;** United Stated Department of Education, **1996;** Winfield, **1995;** Wong, et al., **1997).**

Under the guidelines to support comprehensive schoolwide reform, Title 1 requires a plan to include the following eight essential components:

- a comprehensive needs assessment of the entire school;

- schoolwide reform strategies to improve instruction for all students;

- highly qualified professional staff;

- parental involvement;

- professional development;

- early childhood programs;

- a planning and leadership team that includes teachers; and

- ongoing assessment and additional assistance for all students in need.

The federal government established the above components for whole-school program improvement based on the research conducted over the past 20 years that documented characteristics of effective schools (United States Department **of** Education, **1996).** As a result, a large percentage **of** Title 1 Schoolwide Projects "incorporate [the] components of effective schools programs as a main feature **of** their program" (Wong & Meyer, p. **12).** To that end, Wong, et al. **(1997)** explain that this result is because "school

and classroom practices are, to some extent, shaped by policies adopted at the districtwide level" (p. **71).**

Wong and Meyer **(1997)** state that "at the time of the passage of the Improving America's Schools Act, there were few empirical studies on the implementation of Title **1** Schoolwide Projects and only a handful of studies have been conducted during the years following the **1988** legislation" (p. **2).** According to Borman **(2000),** "primarily due to the legal requirements of the program, no randomized experiments of Title **1** programs have ever been conducted" (p. 42). The primary intent of Title 1 studies has been to show schools have been in compliance with regulations (Anderson **&** Pellicer, **1998;** Borman, 2000). However, recently the intent has changed from "compliance to understanding and from checking whether certain components **are** in place to determining which components contribute to or inhibit effectiveness" (Anderson **&** Pellicer, **1998,** p. 238**).**

As with the effective schools research, most studies focusing on Title **1** programs are descriptive in nature (Anderson **&** Pellicer, **1998) or** "quasi-experimental methods with differing control-group definitions and criteria" (Borman, **2000,** p. 32). But, different from effective schools research, "most of these studies are based on cross-sectional analysis and lack a longitudinal perspective" (Wong, et al., **1997,** p. **60).** For example, Winfield, Hawkins, and Stringfield (1**992)** examined the Philadelphia School District reading program between July **1989** and July **1990** to study the "variation in instructional framework, length of time as a Schoolwide Project site, the principal's background, and school size" **(p.** 2). Data were collected through semi-structured interviews, observations of meetings and classrooms, and content analyses of various

school documents. Similarly, Wong and Sunderman (1997) used similar data-collection methods to "examine the impact of local reform on the implementation of Title 1 Schoolwide Projects in the School District of Philadelphia" (p. **2).**

Research focusing on effective Title 1 programs has identified similar characteristics as found in the effective schools research (Anderson & Pellicer, 1998). Table 2 shows the critical factors **as** described in two different studies as they relate to the components used in this study. **A** difference between this body of research and the effective schools research is the addition of a person as literacy program coordinator. For example, George, et al. (1996) state specifics about the role **of** the Title 1 coordinator as literacy program implementer.

Similar to effective schools research, program factors are often categorized using a multiple level system. For example, Wong and Meyer (1997) present two general **types** of components, those related to: 1) "organization, management, and governance [and 2)] … curriculum and instruction" (p. **8).** These components parallel the factors of Wang, et al. (1993) explained above. Anderson and Pellicer **(**1998) developed an interesting conceptual framework that includes four levels, all of which are interrelated: 1) program effectiveness, 2) school culture, **3)** curriculum, and **4)** teaching. Building on the concept that instruction is the most important school factor affecting student achievement (Sammons, et al., 1995) Anderson and Pellicer state that "if issues related to the [first levels] remain unresolved, efforts to address the questions associated with the [latter levels] are likely to be futile" (p. **240).** This framework supports the theory that there is a reciprocal relationship between the program components presented above.

Table 2

Similarities of the Characteristics Found in Some Effective Title I Programs

Component	Anderson & Pellicer (1998)	George, Grissom, & Just (1996)
Beliefs	Clear & public commitment to student success	Common vision
Classroom instruction	Consistent, aligned, and individualized curriculum	Quality core curriculum, integreated literacy across curriculum
Supplementary instruction	Mulitple-delivery models by teachers & aides	Multiple methods for Title 1 services
Professional development	Professional development **for** teachers and aides	Staff development focus
Home/school partnership	Bi-directional community interaction	Community involvment
Program administration	Integrated conceptual framework	School autonomy with district **support**
Building leadership	Building-level leadership	Site-leadership team
Assessment	Ongoing feedback, individual students' records	Alternative means of assessment
Standards	Program goals & performance standards, zero tolerance for failure	High academic expectations for all students
Literacy leadership	Shared with staff who work with at-risk students	Title I coordinator implements school vision

In spite of the apparent consensus about the inclusion of all the necessary program components, results often show variation within some of the design elements. For example, Wong, et al. (1997) found that "variation in instruction practices exists between the Schoolwide Projects and regular Title 1 programs" (p. 71). Winfield, et al. (1992) found that within Schoolwide Projects in Philadelphia schools, the instructional framework and program design varied greatly. However, in terms of classroom instructional model versus the whole-school program model, Winfield, et al. state that "the particular instructional model selected is not as important as allowing principals and

teachers to select and adapt a [program] framework that meets their school's needs" (p. 8). Furthermore, coordinated and integrated programs are vastly preferable to fragmented designs (Winfield, et al., **1992;** Wong, et al., **1997).**

Wong and Meyer **(1997)** state that "research on the effectiveness of Title 1 Schoolwide Projects in terms of student performance has yielded mixed and inconclusive results" (p. **21).** In the past, studies were often conducted as a result of mandates to verify compliance rather than to measure effectiveness (Anderson & Pellicer, **1998;** Borman, **2000).** For example, a longitudinal study conducted by Winfield and Hawkins **(1993)** on the effects of Title 1 Schoolwide Projects compared the progress of two cohorts of students: one in the bottom quartile of students of Schoolwide Project and the other, the bottom quartile of students in a Target Assistance Program. Their results show that students in a Schoolwide Project made roughly comparable gains as students in the Target Assistance Program. However, there was no comparison with students who did not receive Title 1 support. Another more recent study by Wong, et al. **(1997)** comparing students from two separate districts who participated in Schoolwide Projects, Target Assistance Programs, and non-Title 1 programs also showed that students in all **groups** had similar gains.

Wong and Meyer **(1997)** offer that the difficulty of finding similar schools for comparison groups that are not implementing reform efforts and the complication of mortality due to student mobility in longitudinal studies contribute to the problem of inconsistent and mixed results. Borman **(2000)** concludes that since the passage of the new Title 1 provisions along with a change in assessment procedures, "consistent nationwide data on Title 1 students' achievements have been notably absent" (p. **41).**

Whole-School Literacy Programs Research

Independently designed whole-school literacy programs have used as their

foundation the research on effective schools (American Federation of Teachers, 1998;

Hill & Crevola, 1999; Slavin, et al., 1994). Research exploring elementary literacy

programs often reports descriptive findings such **as** Harste (1989), Pikulski (1994) and

the American Federation of Teachers (1998). Pikulski points out that the purpose of such

studies **is** to "identify common features that seem related to preventing reading problems"

(p. **32).** Other studies such as Slavin, et al. (1994) and Crevola and Hill (1998) use

quantitative methods to evaluate the effectiveness of their own programs using student

achievement as the measure of success. Third, large-scale government studies such as

that by the Maine Department of Education (2000) have been conducted to describe

elements of successful literacy programs for all students.

As with the effective schools research and the Title 1 research presented above,

whole-school literacy program research provides similar descriptions of effective

programs. **As** an example, Table **3** lists the program components for two programs

whose components are based on effective schools research as they relate to the

components used in this study.

Snow, et al. (1998) recommend that schools that have a high percentage of

students at risk for literacy failure more effectively approach student intervention through

whole-school efforts. Within that whole-school effort, classroom literacy programs

should be carefully planned to coordinate with supplemental intervention support

(Pikulski, 1994) in a collaborative model where everyone involved supports a common

vision of a successful school and program (Hiebert & Taylor, 1994; Hill & Crevola,

1999). But most important, "no single program can possibly work for all children" (Maine Department of Education, 2000, p. 47).

Table 3

Similarities of the Characteristics Found in Some Effective Literacy Programs

Component	Hill & Crevola (1999)	Slavin, Karweit, & Wasik (1994)
Beliefs	Common beliefs and understandings	Common beliefs that all children can learn to read
Classroom instruction	Balanced and focused teaching programs, elementary focus	90-minute reading blocks, early childhhod focus
Supplementary instruction	Interventions and special assistance	Special education services, certified teachers as tutors
Professional development	Professional learning teams	Teachers' training ongoing and embedded
Home/school partnership	Home/school partnership	Family support teams
Program administration	Tome organized to maximize learning	Advisory committee
Building leadership	Strong educational leadership	Shared leadership
Assessment	Ongoing monitoring and assessment	Assessment at 8-week intervals
Standards	Standards and targets, zero tolerance for failure	Relentlessness, zero tolerance for failure
Literacy leadership	Project coordinators	Full-time program facilitator

Harste (1989), in a study examining "school reading programs that exemplified dynamic, research-based instruction" (p. 41), identified the following key characteristics that distinguish the programs:

- teachers met regularly in groups to collaborate and support improved instruction;

- teachers possessed an attitude of excitement about teaching, children, and learning;

- reading instruction was theoretically-based and teachers had a firm understanding of theory;

- leadership was shared among knowledgeable staff and was seen as strong;

- change was initiated by teachers and was supported by the system;

- parent involvement was high and several options to participate were offered; and

- extended time was given to effect change in schools.

Both Success For All, designed by Slavin, et al. (1994), and the Early Literacy Research Project, designed by Crevola and Hill (1998), are elementary whole-school early intervention programs designed to boost the literacy achievement **of** all students in a school, but specifically those student who are considered at-risk. Two studies evaluating these programs and conducted by the designers described the components of the programs **as** preliminary background information to their research. The component labels are those listed in Table 3 as similarities of effective literacy programs. Both of the studies focused only on student performance to evaluate the effectiveness of the programs. The results of both studies show a positive effect of the program design on student achievement. For example, the study by Slavin, et al. **(1994)** reports that students who experience the Success For All program outperform students in the control schools, increasing in difference in grade equivalent scores from three months in grade 1 to seven months in grade 3. As this study produced longitudinal data along with cross-sectional data, Slavin et al. conclude that students who participate in a continuous Success For All program not only leave grade 1 doing well but continue to increase their advantage over time. In addition, the demographic information reported by Slavin et al. shows that students who participated in the program had substantially reduced retentions, fewer special education placements, and increased attendance.

In **1998,** Crevola and Hill evaluated the first year implementation of their whole-school approach in early literacy called the Early Literacy Research Project (ELRP) in Victoria, Australia. Firm conclusions, based on this first-year evaluation, about the success of the ELRP were felt to be premature by the authors at that time. However, in a later publication, Hill and Crevola **(1999)** state about the success of the ELRP that "not only have levels of student performance increased dramatically, but there has also been an equally dramatic improvement in the morale and feelings of efficacy and achievement among teachers and school administrators" **(p. 139).**

A study evaluating the Reading Improvement Program in the Chicago Public Schools conducted by Bakall, Kurlad, Ross, and Dones (1991), combining both qualitative methods to describe the program and quantitative methods of data collection, show similarly positive effects of program design on student achievement. The results **of** this study showed that, by grade level, between *52* and **74** percent of the students made gains of two or more normal-curve equivalencies (NCE) **on** the standardized measure. *An* NCE is a standardized score with a mean of 50 and a standard deviation of 2 **1.06,** allowing scores to range from 1 to **99** and creating a considerable spread at the extremes. The authors suggested that the reason for the positive improvement in student achievement could be attributed to the many instructional initiatives that were added which expanded the whole-school literacy program.

Socioeconomic Status and Student Achievement Research

Over time, researchers have "unanimously asserted that ethnic and family socieconomic background factors constituted the dominant determinants of students' educational achievement outcomes" (Rowe, **1995,** p. **63).** For example, Creemers and

Reezigt (1995) found that "student characteristics (such as abilities and social background) accounted for major proportions of variance in student outcomes" (p. 197). Reynolds, Hargreaves, and Blackstone (1980) report that student achievement is mostly accounted for by home factors rather than school factors. Snow, et al. (Eds.) (1998) state that "differences in literacy achievement among children as a result of socioeconomic status are pronounced" (p. 30).

Contrarily, Sammons, et al. (1995) state that "most studies of school effectiveness have not found the level of resources allocated to schools to be a major determinant of effectiveness" (p. 29). While they report that adequate levels of resources are necessary for improvement, "the aspects of school and classroom processes summarized [in their review] exert more powerful and direct influences" **(p.** 30). Placing responsibility both at home and at school, Balfanz and MacIver (2000), state that it is considerably true that the "root causes of low performance are found in economic, social, cultural, and bureaucratic factors" (p. 142). However, they state that it is also true that low performance is "actively manufactured [through] … inattention to the technical core **of** schooling (curriculum, instruction materials, academic learning time, professional development, etc.)" (p. 143).

In a review of the literature, Snow, et al. (Eds.) (1998) conclude that "the degree of risk associated with the socioeconomic status of the individual child's family differs considerably from the degree of risk associated with the socioeconomic level of the group of students attending a particular school" (p. 125). Studies, such as White (1982), for example, show a strong correlation between student achievement and socioeconomic status when the unit of analysis is the school and a much lower correlation when the unit

of analysis is the individual student. As an example, Cole-Henderson (2000) in a study examining characteristics of effective schools serving low-income African-American students, states that "low-income urban American children of color attending high-poverty schools presently rank at the bottom of almost every measure of academic achievement" (p. 77). Hill and Rowe **(1996)** explain that schools vary greatly on socio-demographic factors and that academic achievement is strongly influenced by these factors. **As** a result, studies often "use statistical controls in an attempt to partial out the effects of such variability" (Hill and Rowe, p. **9).**

<center>Discussion</center>

Descriptive studies have identified ten components in effective schools and programs and have provided detailed definitions of these components. In turn, these definitions have been used as the foundation for many school reform efforts, Title 1 Schoolwide Projects, and whole-school literacy programs. Research on effective schools provides evidence that a whole-school approach to program design is a positive way to ensure that all students succeed (Creemers **&** Reezigt, **1996;** Datnow **&** Stringfield, 2000; Levine **&** Lezotte, **1990;** Stingfield, et al., **1996).** Slavin et al. **(1994),** in reference to the elements of Success For All, state that "by combining many of the programs and practices identified as effective in the research, … substantial and lasting changes in students' school success can be brought about" (p. 203).

While there is no one program that fits all schools (Allington **&** Wallmsley, **1995;** Maine Department of Education, 2000; Slavin, et al., **1994)** research consistently describes characteristics common to effective schools and programs (Sammons, et al., **1995).** In all of the studies reviewed: the models collectively point to the need for a

<center>**29**</center>

comprehensive whole-school design that includes all ten of the following characteristics
or components:

- common beliefs and understandings;

- balanced and focused teaching programs in the regular classroom;

- intervention and special assistance for students who are not accelerating
commensurate with their peers;

- professional learning teams and coordinated plans for professional development;

- home/school/community partnership;

- school-site management with collaborative decision-malung;

- strong building leadership;

- ongoing monitoring and assessment of student performance;

- standards and targets with zero tolerance for failure; and

- literacy leadership and coordination **of** whole school programming.

The ultimate goal of any whole-school program **is** that all students will be
successful (Winfield, et al, 1992). In fact, Slavin (2000) pledges that the sole objective of
future studies conducted by Center for Research for Students Placed at Risk will be to
"identify educational strategies capable of ensuring that every child, regardless of family
background, culture, language, and ethnicity, will succeed in school" (p. 207).

Borman (2000) suggests that the two most important features **of programs** to be
evaluated are the degree of implementation and the impact of the program on those who
are served as measured by student success. While the use **of** student achievement gains **is**
a common measure of success, caution is advised when choosing **an** evaluation model
because of its influence on the results and interpretations (Borman & D'Agostino, 1996).

In addition, Millman and Schalock (1997) suggest that most teachers object to using student data as a measure of the worth of a program. Kingston and Reidy (1997) state that "a more accurate assessment of school effect could be made with a longitudinal design – looking at the improvement of the same students over time" (p. 196). Unfortunately, most schools do not invest in a program for a long enough time to gather the kind of information necessary to evaluate fundamental changes in program design (Kushman & Yap, 1999). Datnow and Stringfield (2000) concur that effective reform programs have been implemented in very few schools, much less sustained over time. They find that "sustainability of a reform relies on support from multiple levels. However, these levels are typically ill-coordinated, hence creating major obstacles to long-term improvement" (p. 185). As a result of these cautions, controversies, and obstacles, "few programs are subject to rigorous evaluations, particularly large-scale multiple-site programs" (Greenberg & Walberg, 1998) that can be readily generalized.

Wong and Meyer (1997) state that "evaluations need to pursue a better understanding of particular characteristics of Schoolwide Projects and the mechanisms through which they lead to changes in educational outcomes" (p. 19). Additionally, researchers suggest that program effectiveness should be measured on many levels, such as district-level, school-level, classroom-level, and student-level simultaneously (Cooper, Slavin, & Madden, 1997; Creemers & Reezigt, 1997; Crevola & Hill, 1998; Hill & Rowe, 1996).

Several studies such as Bakail, et al. (1991), Winfield and Hawkins (1993), Slavin, et al. (1994), Wong, et al. (1997), and Crevola and Hill (1998) analyzed how student performance in literacy is affected by the implementation of a whole-school

program. Interestingly, the studies reviewed here conducted in Title 1 Schoolwide Projects[6] yielded inconclusive results, and the studies of independently designed literacy programs[7] yielded positive results. Greenberg and Walberg (1998) suggest that differences in design, such as excluding students who have not participated in the whole program versus including all students in the cohort and program designers as investigators versus independent researchers as investigators, may account for the differences in results. Greenberg and Walberg caution that "strongly held beliefs affect the conduct and results of evaluation" (p. **168).** Additionally, they state that "humans are fallible and come with built-in prejudices; they are rarely able to make completely objective judgements" (p. 171). Another reason suggested by Slavin and Madden (2000) is that gains in student achievement are often found when replicable whole-school programs are deliberately planned and implemented in a school which includes in the process "a positive vote **of** a supermajority of school staff" (p. 110) before implementation begins.

In conclusion, Boykin (2000) presents **four** criteria that must be in place to support the lund of multidimensional reform effort discussed above. First, it must be comprehensive; "it must involve all the major facets of the schooling enterprise" (p. *5).* Second, it must be authentic; "it must result in changed activities, changed attitudes, and a changed atmosphere" (p. 5). Third, it must be sustained; "it must be able to persist over time, in the day-to-day operation of a school" (p. *5).* And fourth, it must be systemic; "it must be coordinated within a site and across other administrative units in the wider schooling system" (p. 5).

Chapter **3**

DESIGN **AND** PROCEDURES

This chapter first presents the methods used for the pilot study: sample selection procedures, instrumentation, data-collection, and results. Second, it presents the sample selection and data-collection methods employed by the Center for Inquiry at the Maine Department of Education, from which the original data come and the subsequent methods used to select the sample for the analysis of this study. Third, this chapter reviews this study's five research questions, the hypotheses, and the analysis methods. Finally, the methods employed for selecting **six** case study schools and conducting the analysis are explained.

Pilot Study

Introduction

The purpose of the pilot study was to test the reliability and validity of the survey developed to measure the ten components of the whole-school literacy program. Respondents were encouraged to comment about the structure of the items and to ask questions if they needed items to be clarified. This information was collected to ensure that respondents could easily and accurately complete the survey.

Pilot Sample

Two schools were selected to reflect differences in location and school size. School 1 was a large school located in southern Maine and School 2 was a medium-sized school located in central Maine. Both schools had a similar socioeconomic status of 17% and **28%** respectively (in terms of the percentage of students receiving free and reduced lunch). At each school, a team **of** teachers and administrators completed the survey to ensure a broad range of responses and perspectives. Each team included: the building

administrator, either the principal or the assistant principal; at least one teacher from each

of grades K, 1, 2, and 3; at least one supplementary service provider, special education

teacher or Title 1 teacher; and the literacy specialist, if the position existed in the school.

A total of **19** surveys were completed, 11 from School 1 and **8** from School **2.**

<div align="center">Pilot Instrumentation</div>

Data were collected using the survey, The Early Literacy Inventory (see Appendix

A), developed by **a** committee from the Center for Inquiry at the Maine Department of

Education (2000). The complete survey was developed **as** a follow-up to a study

conducted by the Maine Department of Education (2000) during the **1998/1999** academic

year. The survey was created to collect information about the design of whole-school

elementary literacy programs within the state (items 1 – 71) and to identify instructional

strengths and areas of professional development needs (items 72 – **94).**

For this pilot study, only items number I through **63** and **66** through 71 were

used. These items address the ten components of a whole-school literacy program.

Specifically, these items measure the attributes within each component based on the

component definitions. The responses were coded using Likert-type scale responses

allowing for statistical analyses of reliability and validity. The attributes from the

component definitions were used to construct each of the items. **As** shown in Table **4,**

each component construct is the aggregate **of** six to eight items.

<div align="center">Analysis of Pilot Study Inventory</div>

Validity

As previously discussed, the definition for each program component was

constructed from **40** years of research in whole-school program evaluation. This

<div align="center">34</div>

approach provided a theoretical and research-based foundation for the component

constructs; it is assumed that the items in each construct already belong together.

Therefore, an unrotated factor analysis using the principal component method was

performed to determine to what extent the items in each construct measure the same thing

(Kerlinger, **1985**) (see Appendix B for the item factor loadings within each component,

the eigenvalue of the primary factor within each component, and the percentage **of**

combined variance explained **by** the primary factor for each component).

Table **4**

Survey Items Representing Whole-School Component Constructs

Component	Survey Items	No. in Construct
Beliefs	**1 – 6**	**6**
Classroom Instruction	**7 – 14**	**8**
Supplemental Instruction	**15 – 21**	7
Professional Development	22 – **28**	7
Home/School Partnership	**29 – 35**	7
Program Administration	**36 – 42**	7
Building Leadership	**43 – 48**	6
Assessment	**49 – 56**	**8**
Standards	**57 – 63**	7
Literacy Leadership	**66 –** 71	**6**

The percentage **of** total variance explained by the primary factors of the

components ranged from **35.83** in the program administration component to **67.83** in the

standards component. In the standards component, only one factor with an eigenvalue

over 1 was found which would account for the high percentage of explained total variance. Six components – beliefs, supplemental instruction, professional development, building leadership, assessment, and literacy leadership – showed two factors with eigenvalues over 1 and three components – classroom instruction, home/school partnership, and program administration – showed three factors with eigenvalues over 1. With the exception of the program administration component, the eigenvalue of the primary factor was close to or more than twice as high as the eigenvalue of the second factor.

In the program administration component, the eigenvalues for factors 1, 2, and **3** were 2.50, **1.80,** and 1.40 respectively. There may be a couple of explanations for this occurrence. First, while completing the survey, some respondents said that they did not have the information to respond to some of the items within this component and so they were forced to guess. Second, because the pilot study only included two schools with a total of 19 respondents, it was difficult to judge the actual validity of the items in this construct with such a small sample. To help participants better respond to the program administration items in the actual study, they were rewritten to be more explicit.

Out of a total of **69** items analyzed, seven items loaded higher on the second component factor than on the first component factor. Table 5 shows each of these items with their factor loadings on both the first and second factors. These items were not removed from the survey at this point. First, the number of research studies used to justify the inclusion of these items in the constructs was quite large and this pilot study was very small. The removal of these items could not be justified based on such a small pilot study. Second, the change in the reliability scores for the components affected by

the items did not substantially change with the omission of the items. Table **6** shows the change in the component reliability score when the items were removed. If, however, these same items showed the same factor loading pattern in the preliminary factor analysis of the actual research study, then they would be removed at that point before the final analysis was conducted.

Table 5

Pilot Survey Items that Loaded Higher on the Second Factor

Component	Item number	Factor 1 loading	Factor 2 loading
beliefs	**2**	**.431**	**.631**
classroom instruction	**10**	.399	.477
classroom instruction	**14**	.426	.741
supplemental instruction	**17**	.582	.690
program administration	**36**	.492	.683
building leadership	**44**	.417	.870
literacy leadership	**70**	.426	.830

Reliability

A reliability analysis was performed on each of the ten components. The alpha reliability coefficients **for** nine **of** the components ranged from **.70** to .**91.** The alpha reliability coefficient for the program administration component was .**63**. It **was** possible that the lower coefficient in this component may be explained with the same reasoning provided above for the low percentage of total variance explained by this factor. Therefore, it is believed that the measure taken to address the validity issue of the component may also address the lower reliability score.

Table 6

Pilot Reliability Score Change with Removed Items

Component	Reliability score with item	Reliability score without item
beliefs	.77	.77
classroom instruction	.72	.73
supplemental instruction	*.79*	*.78*
program administration	**.63**	**.65**
building leadership	.74	**.80**
literacy leadership	.70	.75

While completing the survey, some respondents commented that it was difficult for them to think through some of the items because they were stated in the negative form. Because of the length of the survey, it was not reasonable to include a positive and a negative form of each item. The pilot survey was designed using positive and negative items within each component to encourage the respondents to think **through** each item carefully and intently. However, upon further consideration as a result of the respondents' comments, the survey **was** rewritten to include **only** positive items. This decision was made with confidence, given that the respondents were serious educators, that it was not necessary to force their thinking in this way. As a result of this revision, the survey proved to be easier for the respondents to complete and, therefore, produced more reliable results (see Appendix C for the revised teacher survey' that was used for the study).

Research Study

Introduction

This study analyzed data collected by the Center for Inquiry at the Maine Department of Education during the Spring of 2000. The revised survey described above was used to collect the data. The following section explains how the Maine Department of Education selected the sample and collected the data for the study. Additionally, it reviews the methods used to select the sample for the analysis and analyze the data.

Sample Selection and Data Collection

Sample Selection for the State Study

There were two demographic factors controlled for in the selection of participating schools: location and school size. Because this was a survey administered by the Maine Department of Education and because participating schools would be gaining important school and program information, the Maine Department of Education felt they could not exclude any schools from the opportunity to participate. Therefore, all elementary schools in Maine received an introductory letter from the Maine Commissioner of Education inviting them to apply to participate *(see* Appendix D for a copy of the letter).

As mentioned above, two levels of stratification were used to select the sample from those schools that applied to participate in the study. Geographic location of the schools was the first level of stratification. The state was divided into three regions by counties: northern, central, and southern'. The southern and northern regions each included 156 elementary schools and the central region included **140** elementary schools. The second level of stratification was by school size within each state region: small,

medium, and large''. Table 7 shows the number of schools that participated in each region and specifically reflects the makeup of each region by school size. For example, the northern region of the state has three times as many small schools as large schools and. Therefore, three times as many small schools than large schools were selected from the northern region for the sample. A total of 54 schools participated. While not being a factor for selection, the range of socioeconomic status was noted as important. Table 8 shows the range of socioeconomic status, measured by the percentage of students receiving free and reduced lunch, by school size within each region.

Table 7

Number of Schools from Each Region by School Size

Region	Small	Medium	Large
Northern	9	6	3
Central	7	8	3
Southern	4	7	7

Data Collection

By region, school teams were brought to a common location to complete the survey. After participants completed the survey, the Maine Department of Education provided dinner, entertainment, and a small gift for the participants. Each school was asked to include in their team the building administrator, one teacher from each of grades K, 1, 2, and 3, a supplemental services provider, i.e., either a special education or Title 1 teacher, and the school literacy specialist, if one was employed.

To complete the survey, participants were divided by position rather than by school teams. For example, all participating principals completed the surveys at a

designated location, participating classroom teachers at a different designated location, etc. This procedure was done to reduce team pressure and increase honest answers and confidentiality.

Table **8**

Socioeconomic Status Range by School Size Within Each Region

Region	Small	Medium	Large
Northern	**0 – 90**	**5 – 85**	**14 – 85**
Central	**11 – 83**	**13 – 65**	**19 – 66**
Southern	**6 – 74**	**5 – 96**	**3 – 76**

To respond to the survey, participants filled in their selected responses on a scan sheet (see Appendix C). Identifying participant information was coded on the scan sheets as a school number, position number, and grade level(s) taught. The resulting database included, in addition to respondent answers, the participant's code, the school's code, school socioeconomic status measure, and the school's Maine Educational Assessment (MEA) scores for both reading and writing from the **1999/2000** academic year. School names and participant names that were submitted as part of the application to participate in the study were not included in the database. This information was housed separately at the Maine Department of Education.

Sample Selection for Final Analysis

As noted above, **15** schools were excluded from the final analysis from the total sample of **54** schools because they did not include at least one person from each of the four categories. In the initial study conducted by the Maine Department of Education (2000), researchers were criticized for surveying only building principals in the first

41

phase of the study. The criticism grew out of the opinion that building principals by themselves, or any other single position for that matter, could not reflect the true opinions of the entire school. Therefore, for this analysis, any school that did not include representatives from each of the four position categories was eliminated. The only exception from the exclusion criteria was the position of literacy specialist because not all schools in Maine have such a position on their faculty.

Research Questions, Hypotheses, and Analysis Methods

The following terms and definitions are used in this section:

- factor score – the factor loading for each item based on the factor analysis;

- aggregate component score – a scaled score for each whole-school component created by weighting each item using the factor **score** according to its relative contribution to the component;

- school total score – the average **of** the school's aggregate component scores;

- socioeconomic status measure – this measure was based on the percentage of students receiving free and reduced lunch. Note that for this analysis, the percentage of students receiving free and reduced lunch was reversed to reflect the socioeconomic status of the school. For example, a school that has a high percentage of students receiving free and reduced lunch, say 85 percent, would be considered to have a low socioeconomic status or, as calculated for this study, **15** percent; and

- reading and writing scores – the percentage of students who met or exceeded the standards for reading and for writing on the 1999/2000 Maine Education Assessment.

<u>Preliminary Analysis</u>

An unrotated factor analysis was performed using the principal component method. As with the pilot study, it was assumed in this study that the attributes used to define each component belonged together based on the research literature. However, it was not assumed that the attributes would contribute, as measured by the survey items, equally to the overall component concept, therefore a factor analysis was first used to determine the relative contribution **of** each item within each component. Second, the factor analysis was used as a measure to verify that the definitions constructed from forty years of research were, indeed, valid for the schools in Maine. And last, the primary factor loadings were used to weight the items when constructing the component scores.

<u>Research Question 1</u>

What is the variation in the implementation of the ten components of a whole-school literacy program among school team members within individual schools in Maine?

<u>Research Hypothesis.</u> Individual staff members within Maine schools will not vary among themselves in their item responses about the implementation of each of the ten components of their whole-school literacy program. Because all participants in each group are from the same school, their responses to survey items should reflect similar perceptions of the program that they implement.

<u>Analysis.</u> The confidence range of each team member's aggregate component score for each component, was compared with the confidence range of the other team members' aggregate component scores in the same school. Overlap of the confidence ranges of the team members' aggregate component scores was used to indicate no

43

significant difference. Two-thirds agreement among team-member responses was accepted as a indication of no significant difference. The standard error of the measure was taken into account in this analysis. This hypothesis was tested at the .05 significance level.

Research Question 2

What is the variation in the implementation of each of the ten components of whole-school literacy programs among schools in Maine?

Research Hypothesis. Maine schools will vary in their implementation of the ten components of a whole-school literacy program, measured by the aggregate component score of each component, and depending upon the socioeconomic status of the school using the socioeconomic status measure.

Analysis. An **ANOVA** (Analysis of Variance), a technique used to compare the means of two or more groups (Fraenkel & Wallen, 1996), was used to analyze the variance in implementation of each of the ten components among schools in Maine. The independent variable for each **ANOVA** was the schools. The dependent variable was each of the components. This hypothesis was tested at the .05 significance level.

Research Question 3

What are the interrelationships between the ten components **of** whole-school literacy programs across schools in Maine and how does each component contribute to the whole program?

Research Hypothesis. There will be interrelationships between the ten components of a whole-school design as measured **by** the aggregate component scores from the survey. In whole-school programs, the implementation of each component will

be related to the implementation of the other components. In addition, each component will contribute to the whole model.

Analysis. Because the interest here was in the relationship between the variables, a bivariate correlation model **was** used. This procedure measures the degree **of** association between two variables (Minium & Clark, 1982). Pearson's r **was** used to examine the direction and the magnitude of the relationship between each component. To confirm the accuracy of the relationship expressed by the correlation coefficient, a scatterplot matrix of the ten components was visually examined to determine the degree of association and the possibility of curvilinearity. Additionally, a factor analysis using the aggregate component scores of the ten components was performed to determine to what degree each component contributes to the whole program.

Research Question 4

What is the relationship between student achievement and the degree to which schools in Maine implement each component of a whole-school literacy program?

Research Hypothesis. The relationship between student test scores, as measured by the 1999/2000 academic year MEA reading and writing scores, and the implementation of each of the components, **as** measured by the aggregate component score, will vary according to the degree **of** implementation of each of the components.

Analysis. This hypothesis was tested using multiple regression, a technique used when attempting to explain changes in a dependent variable as they are associated with changes in predictor variables (Pedhazur & Schmelkin, 1991). For these analyses, student achievement was the dependent variable. The predictor variables were the

aggregate component scores of each of the ten components and the socioeconomic status measure. This hypothesis was tested at the .05 significance level.

Research Question 5

What is the relationship between student achievement and the degree to which schools implement the entire whole-school literacy program?

Research Hypothesis. Student test scores, as measured by the **1999/2000** academic year **MEA** reading and writing scores, will be higher in schools that have a high school total score.

Analysis. This hypothesis was tested using a multiple regression with student achievement, **MEA** scores, being the dependent variable. The predictor variables were the school total score and the socioeconomic status measure. This hypothesis was tested at the .05 significance level.

Follow-up Analysis of Selected Cases

Even with the use of research-based constructs to measure each component of whole-school literacy programs, it was expected that more detailed information would be needed to explain the variation in program implementation. Therefore, to further our understanding, survey items 1 through **71** were examined for substantial differences in team responses for each item within each component. Additionally, items **72** through **92** and the demographic information were examined.

Six schools were selected for the follow-up analysis based on two bivariate correlations between the school total score calculated for Research Question 5 and the 4th grade MEA scores in both reading and writing. Specifically, these were the three highest scoring schools in school total score and 4th grade **MEA** scores for both reading and

writing, and the three lowest scoring in school total score and 4th grade **MEA** scores for both reading and writing. There were three reasons why the schools with the most extreme scores were chosen for this case study. First, there was not a linear relationship between total school score and **MEA** reading and writing scores. This made it difficult to determine which schools were consistently high-performing and low performing. However, there were a few schools, in spite of the non-linearity of the whole sample, that were consistently high or low. Second, much of the research upon which this study's survey was constructed used as the sample those schools with exemplary performance, therefore constructing definitions of model schools. Third, the results of this study were compared with the results found in the study previously conducted by the Center for Inquiry at the Maine Department of Education (2000) in which were selected only schools with effective literacy programs for its sample.

Qualitative procedures were used to analyze the survey item responses and each school's demographic information (see Appendix E for the demographic information sheet) for substantial differences between high-performing schools and low-performing schools. Specifically, the following procedures were used:

- the mean of individual item responses (items 1 – **63** and **66** – 71) within components for each team were examined;

- frequency distributions were analyzed for questions 72 through 84 within each school;

- a content analysis was performed on questions 85 through 92 within each school; and,

- item responses were compared for questions 64, 65, and the demographic information.

The focus of this analysis was to first identify specific consistencies and inconsistencies within similar schools and between dissimilar schools. *An* additional focus was to describe the specific details that define more clearly the attributes of the components **of** effective schools in contrast to schools that are not effective.

Chapter **4**

RESULTS AND ANALYSIS OF QUESTIONS 1 THROUGH 5

Introduction

This chapter first presents the results of the preliminary factor analysis and reliability test. Next, the results of the analysis for each question are reported in order from Question 1 to Question 5.

Preliminary Analyses

Factor Analysis

The principal component method was used for this procedure. The unrotated factor analysis results showed that of the ten components, six were found to be factorially pure, meaning only one factor emerged: beliefs; supplemental instruction; program administration; building leadership; standards; and literacy leadership. The percentage of variance explained for these six components ranged from **41.80** for program administration to **73.35** for standards. The remaining four components – classroom instruction; professional development; home/school partnership; and assessment – were found to have two factors each. With the exception of the assessment component, the first factor for each or the remaining components had an eigenvalue three times higher than the eigenvalue of the second factor. The primary factor for the four Components had **an** explained variance ranging from **41.3**1 for classroom instruction to **48.73** for professional development. For the assessment component, the eigenvalues for the first and second factors were **3.5** and 2.0 respectively. However, given that four of the factor loadings for the second factor were negative numbers, it was assumed that the second factor was measuring something completely different than assessment. Coupled with the

first factor being close to twice as much as the second factor, the construct was believed to be a valid measure of the component.

An examination of the item factor loadings in the four components that had two factors showed that five items loaded higher on the second factor than on the first factor. Table 9 shows the five items and their loadings on the first and second factors. These items were not the same items that showed a similar pattern in the factor analysis of the pilot sample.

Table 9

Research Survey Items that Loaded Higher on the Second Factor

Component	Item number	Factor 1 loading	Factor 2 loading
classroom instruction	8	.535	.667
classroom instruction	9	.548	.595
professional development	28	.560	.660
home/school partnership	31	.483	.613
assessment	50	.603	.605

The five items found in the study factor analysis were not excluded from the final analysis because the differences between the item loadings on the first factor and the second factor were somewhat small. Additionally, Table 10 shows that the changes in the reliability scores for the components with the removal of the items were not substantial.

Further examination of the item factor loadings on each component showed varying degrees **of** contribution of the items to the component. These different contributions substantiate the importance of weighting each item to determine each

school's component scores. **As** a result of using the principal component method of factor analysis, each school in the sample obtained a standardized factor score for each component. This was achieved by first weighting each item of each component using the item factor loadings on the component. This resulted in a weighted component score for each participant for each component. Then, each school's team-members' component scores for each component were aggregated into a standardized score. Therefore, the resulting component scores have a mean of zero and a standard deviation **of** one (see Appendix F for the factor loadings used to weight the items in each component).

Table 10

Research Reliability Score Change with Removed Items

Component	Reliability score with item	Reliability score without item
classroom instruction	**.79**	**.79**
professional development	**.82**	.80
home/school partnership	**.77**	.77
assessment	**.81**	.78

Reliability

The reliability coefficients for the ten components ranged from the lowest **of .75** for the program administration component to the highest of **.94** for the standards component (see Appendix F for the alpha coefficient **of** reliability for each component).

Question 1

What is the variation in the implementation of the ten components of a whole-school literacy program within individual schools in Maine? The purpose for this question was to explore to what degree the individual team members' composite scores varied within their schools. If individual team members' scores vary significantly within schools, reliability of the school composite scores used in the succeeding questions could be questioned. Because the same aggregate score could be attained from a school whose individual scores vary only slightly and a school whose individual scores vary greatly, it was important to test that the composite scores used for this study were derived from school teams whose individual responses did not vary significantly.

In this procedure, the standard error of measure (SEM) was used to calculate the confidence range of each respondent's score for each component. For this analysis, a 95% confidence range was used – the measure plus or minus two SEMs. *An* overlap in the confidence ranges of two-thirds of the individual team members' scores within a school indicated no significant difference. Each school's individual team members' scores, including the SEM range, were plotted on a chart so as to be visually compared. Fiqure 1 illustrates a component chart of a school with seven respondents in which there was no statistical significance. Notice that the dotted line intersects six out of the seven response ranges at some point. This graph indicates that the minimum of two-thirds agreement was reached for this component and is, therefore, not statistically significant. Alternatively, Figure 2 illustrates a different component chart of the Same school with seven respondents in which there was statistical significance. Notice that the dotted line

does not intersect with the minimum two-thirds agreement criteria, thus showing

statistical significance.

Figure **1**

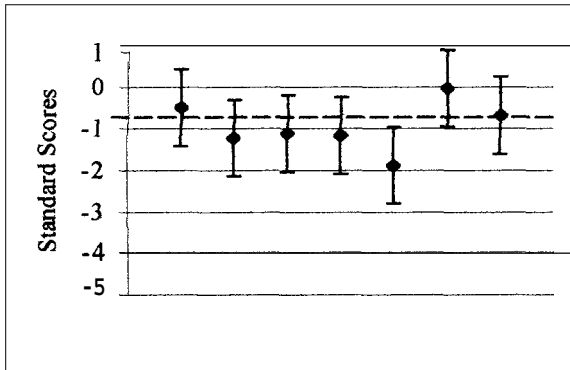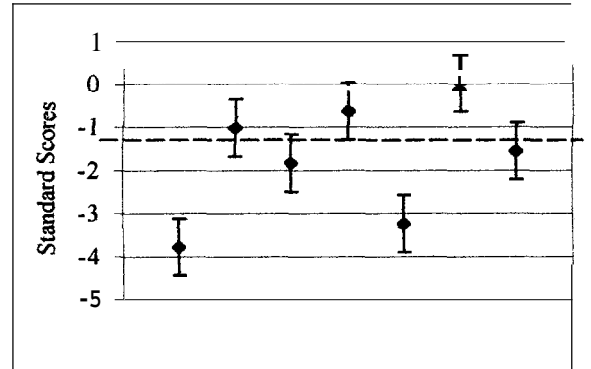Chart of team member scores that are

not statistically significant

Figure **2**

Chart of team member scores that are

statistically Significant

Given the above criteria to determine significance:

- **23** schools showed no statistical significance in any of the ten components;

- 13 schools showed no statistical significance in nine of the ten components;

- **2** schools showed no statistical significance in eight of the ten components: and,

- 1 school showed no statistical significance in Seven of the ten components.

The total number of components examined for this question was 390 (39 schools

with 10 components each). There were a total of 370 components that were not

statistically significant; only *20* components were statistically significant (see Appendix

G for a breakdown showing the components for individual schools that were found to be

statistically significant).

The number of components having statistically significant variation was low enough to consider it inconsequential to the results of the subsequent research questions. Specifically, all **39** schools were retained for the study because the components of

- beliefs and building leadership were found to be statistically significant in four schools;

- standards and literacy leadership were found to be statistically significant in three schools;

- classroom instruction and professional development components were found to be statistically significant in two schools;

- supplemental instruction and home/school partnership were found to be statistically significant in one school; and

- program administration and assessment were not found to be statistically significant in **any** schools.

Question **2**

What is the variation in the implementation of each **of** the ten components of a whole-school literacy program among schools in Maine? The question was explored by conducting a separate analysis **of** variance (ANOVA) for each component. The independent variable **for** each procedure was the schools and the dependent variable was each of the ten components (see Table 11 for the mean and standard deviation for each component). The hypothesis was tested at the .05 significance level.

The results showed that **all** components were statistically significant at the .01 level of confidence with a substantially high F-ratio (see Appendix H for the component ANOVA tables). These results demonstrate that there was great variation in the

implementation of each program component among schools in Maine. Specifics pertaining to the variation **of** program components among schools will be discussed in detail in Chapters **5** and 6.

Question **3**

What are the interrelationships between the ten components of whole-school literacy programs across schools in Maine and how does each component contribute to the whole program? The bivariate correlation matrix used to address this question (see shows that of the 45 correlations, 34 were significant at the .01 level, **6** were significant at the .05 level, and 5 were not statistically significant. All correlations between the components were positive. The program administration component and the beliefs component alone were statistically significant with every other component in the matrix at the .01 level. Of these two components, program administration had the greatest number of high correlation coefficients. Specifically, the coefficients for the following correlations with program administration as one of the correlates were very strong: beliefs at .71, supplemental instruction at .76, professional development at .78, assessment at .71, and standards at .70.

Other notably strong correlations were classroom instruction with professional development at .71, classroom instruction with standards at .71, beliefs with home/school partnership at .71, professional development with assessment at .81, professional development with standards at .80, and assessment with standards at .80. Conversely, the weakest correlations were literacy leadership with supplemental instruction at .21, literacy leadership with home/school partnership at .11, and building leadership with standards at .28.

Table 11

Means and Standard Deviations for the Ten Components

Variable	M	SD
Beliefs	.02	**.70**
Classroom instruction	-.02	**.64**
Supplemental instruction	.01	.60
Professional development	.08	**.65**
Home/school partnership	.02	.69
Program administration	.04	**.71**
Building leadership	.13	**.68**
Assessment	**.04**	**.74**
Standards	-.02	**.76**
Literacy leadership	-.04	**.80**

The second part of Question **3** asked how each component contributed to the whole program. This question was explored using an unrotated factor analysis of the principal component method of factor anlaysis. Two factors with an eigenvalue over one were found in this analysis; the first had an eigenvalue of **6.07** and the second had an eigenvalue of 1.01. The percentage of variance explained by the factors were **60.65** and **10.14** respectively. In Table **13,** showing the factor loadings for both factors, note that of the three components with the highest factor loadings, two were program administration and beliefs. These were the same two components that had the highest number of strong correlations with other components. Also, the two components that had the lowest factor loadings are those for the building leadership and literacy leadership components – the

same two components that had correlation coefficients with the highest number of weak correlations with other components. Interestingly, the component of literacy leadership loads higher on the second factor than on the first factor. While it does contribute to the first factor, it appears to also contribute its own factor.

Table **12**

Intercorrelations for the Ten Whole-School Components

Measure	1	2	3	4	5	6	7	**8**	9	**10**
1. Beliefs		.69**	.62**	.58**	.71**	.71**	.48**	.60**	.63**	.54**
2. Classroom instruction			.52**	.71**	.47**	.67**	.35*	**.68****	.71**	**.31**
3. Supplemental instruction				.66**	**.65***	.76**	.41**	.59**	.52**	.21
4. Professional development					.54**	.78**	.40*	.81**	.80**	.47**
5. Home/school partnership						.61**	.38*	.47**	.46**	**.11**
6. Program administration							.58**	.71**	.70**	.53**
7. Building leadership								.34*	.28	.32
8. Assessment									.80**	.35*
9. Standards										.42*
10. Literacy leadership										

**Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

In examining the factor loadings in Table 13 in terms of contribution to the first factor, note that they decrease in small increments from the highest, program administration, to the eighth component, home/school partnership. In other words, the eight components form a cluster of importance. After the eighth component, however, there was a gap in the factor loadings of .14 between the home/school partnership

component and the building leadership component, with only the minimal drop from building leadership to literacy leadership of .04.

Table **13**

Factor Loadings from Principal Component Analysis of the Whole-School Components: Communalities, Eigenvalues, and Percentages **of** Variance

Item	Factor Loadings		Communality
	1	2	
Program administration	.91	-.01	.84
Professional development	.89	.14	.80
Beliefs	.85	-.06	.71
Assessment	.84	.13	.72
Standards	.83	.24	.75
Classroom instruction	.81	.08	.65
Supplemental instruction	.78	-.38	.75
Home/school partnership	.70	-.56	.81
Building leadership	.56	-.16	.34
Literacy leadership	.53	.65	.70
Eigenvalues	6.07	1.01	
% of variance	60.65	10.13	

This finding suggests that of all the components that contributed to the whole-school literacy program design, both kinds **of** leadership contributed the least. In addition, the communality scores showed that the percentage **of** variation that was explained by both factors for all the components was somewhat high with the exception

of the building leadership component. The common factor variance for this component was only **.34** compared to the **range** of from .65 to **.84** for the others. Another important point in Table **13** is that the component of literacy leadership loads higher on the second factor than on the first factor. Additionally, it is the only factor that loads high on the second factor implying it is a factor of its **own.**

Question **4**

What is the relationship between student achievement and the degree to which schools in Maine implement each component **of** a whole-school literacy program? A multiple regression analysis was used to estimate the effects of the whole-school components and socioeconomic status on student achievement in both reading and writing. The student achievement measures, the 1999/2000 MEA reading and writing scores, were used as the dependent variable with the aggregate component scores of each of the ten components and the socioeconomic status measure **as** the predictor variables. The variables were entered stepwise **so** only the statistically significant variables are shown. Missing variables were excluded pairwise. Two separate regression analyses were performed; the first analysis used **MEA** reading scores **as** the dependent variable and the second used MEA writing scores as the dependent variable.

Table **14** shows the correlation coefficients between the predictor variables and the dependent variables. Note that only socioeconomic status correlates moderately high with both dependent variables. All other predictor variables have a low correlation with the dependent variables.

Table 14

Correlations Between Independent and Dependent Variables

Predictor Variables	Reading Score	Writing Score
Beliefs	.21	.07
Classroom instruction	.01	.01
Supplemental instruction	.15	.10
Professional development	-.15	-.03
Home/school partnership	.21	-.01
Program administration	.08	.04
Building leadership	-.03	-.24
Assessment	-.25	.00
Standards	-.04	.11
Literacy leadership	.06	.11
Socioeconomic status measure	.47**	.46**

**Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Multiple Regression with Reading Scores as the Dependent Variable

The results of the regression analysis using the reading scores as the dependent variable shown in Table 15, show that 43 percent of the variability in school reading scores can be attributed to socioeconomic status, assessment, and beliefs. A puzzling outcome was that the standardized coefficient for the assessment component was negatively related to the dependent variable. This finding means that as the score of the assessment component went up, the reading scores went down. In going back to the survey items in the assessment section, it was found that three of the items asked

respondents to rate to what extent classroom assessment approaches matched and informed classroom instruction. Two additional survey items in the assessment section asked respondents to rate to what extent whole-school assessment data informed professional development and matched school literacy standards.

Given this information, one might logically assume that a high score in the assessment component suggests that classroom instruction, school standards, professional development, and assessment practices are aligned. If *so,* **it** might also be logical to surmise that, **as** a result of this alignment, student achievement would increase. This explanation, however, does not match the results found here. Two questions arise then, does the survey used for this study accurately measure what is actually practiced in schools? And second, does the student achievement measure used in the study accurately measure student performance. Possible explanations addressing those questions are discussed in Chapter 6.

Table 15

Regression Analysis Predicting Student Reading Achievement with the Ten Component Variables and Socioeconomic Status

Predictor variable	Unstandardized coefficient	Standard error	Standardized coefficient	Adjusted R^2
Socioeconomic status	**.37**	.11	.49**	**.43**
Assessment	-12.61	**3.42**	-.62**	
Beliefs	**10.3**1	**3.67**	.47**	

*$p < .05$. **$p < .01$.

<u>Multiple Remession with Writing Scores as the Dependent Variable</u>

The results of the regression analysis using the school writing score as the dependent variable (see Table **16**) showed that socioeconomic status is the only significant predictor of student achievement. The model showed that only 18 percent of the variability in student writing achievement can be predicted by socioeconomic status. Interestingly, the results from the regression analysis with reading scores as the dependent variable showed a similar percentage of variability accounted for by socioeconomic status: **20** percent. While it is the only significant predictor in this analysis, it is important to note that it accounts for a relatively small percentage of variance and leaves **82** percent of the variance in student achievement unexplained.

Table **16**

<u>Regression Analysis Predicting Student Writing Achievement with the Ten Components and Socioeconomic Status Variables</u>

Predictor variable	Unstandardized coefficient	Standard error	Standardized coefficient	Adjusted R^2
Socioeconomic status	**.28**	.09	.46**	**.18**

*$p < .05$. **$p < .01$.

These results are not surprising given that socioeconomic status was the only variable that was highly correlated with writing achievement. **All** the other predictor variables had very low correlations with writing achievement. Snow, et al., **(1998)** found in their review of the literature that the differences between student literacy achievement **as** a result of socioeconomic status was pronounced especially when the schools' socioeconomic status was used instead of the individual student's socioeconomic status.

The measure used in this study was the school's socioeconomic status and could possibly be contributing to the high correlation.

Question 5

What is the relationship between student achievement and the degree to which schools implement the entire whole-school literacy program? **A** multiple regression analysis for both reading and writing was used with student achievement – **MEA** scores – serving as the dependent variables. The school total score (the mean of the component scores) and the socioeconomic status measure were the predictor variables. The correlation between the school total score and the reading score, and the school total score and the writing score were both .03. It was hypothesized that student achievement would be higher in schools that had a **high** school total score. Given the low correlation between the total school score and both student achievement scores, it is not surprising that the results of both analyses shown in Table **17** show that only socioeconomic status predicts student achievement.

Slavin and Madden (2000), in an evaluation of two whole-school programs, found that when the implementation of the programs were intentional and focused, there were marked improvements in student achievement. When the implementation of the programs were diminished, there were substantial drops in student achievement. Specifically, Kushman and Yap (1999) found that when measured over time, programs that have had long-term commitments and focused support show positive correlations between student achievement and program implementation. The schools in this **study** were not implementing any specific program and the data were collected using cross-

63

sectional rather than longitudinal methods. This might point to why the program was not

a predictor of student achievement.

Table 17

Regression Analysis Predicting Student Reading and Writing Achievement with School

Total Score and Socioeconomic Status as Variables

Predictor variable	Unstandardized coefficient	Standard error	Standardized coefficient	Adjusted R^2
Reading score as dependent variable				
Socioeconomic status	**.36**	.11	.47**	.20
Writing scores as dependent variable				
Socioeconomic status	*.28*	.09	.47**	.18

*p < .05. **p < .01.

In a study examining the variation in student performance between schools on the

MEA, Lee (1998a) states that "school poverty (as measured by the percent of student

with free/reduced lunch) is the most powerful factor in explaining school performance

variation across grades and subjects" (p. 2). While the results for Question 5 **show** that

socioeconomic status is the only statistically significant predictor of student reading and

writing achievement, it accounts for only 20 and 18 percent respectively. Balfanz and

MacIver (2000) acknowledge that socioeconomic status is a primary predictor of student

achievement, however, they also include as another primary predictor, a variety **of** school

factors. Along this line, the results found in this study substantiate that socioeconomic

status is a significant predictor of reading and writing achievement. However, with only

20 percent of the variation explained by socioeconomic status, the major percentage of student literacy achievement is left unexplained.

As suggested before, there is always the possibility that the survey used in this study did not accurately measure what is actually being done in schools or that the student achievement measure did not accurately measure student performance. Because this study did not include other measures such as site-observations, participant interviews, or content analysis **of** school documents, there is no way to confirm that the survey accurately reflected the practices and policies in the school. Additionally, **this** study did not include other student performance measures to verify the accuracy of the **MEA** scores.

Chapter 5

RESULTS AND ANALYSIS OF THE CASE STUDY

The purpose of the case study analysis was to describe in detail the variation in
implementation of the ten components of whole-school elementary literacy programs.
The case-study schools were selected because they represented model schools rather than
average schools. These specific schools were selected so that comparisons could be
made between the results **of** the first study conducted by the Center for Inquiry at the
Maine Department of Education (2000) and the findings of this study. The schools
selected for the first study were those in which student achievement scores exceeded the
standards; they could be considered highly effective or model schools. The study yielded
descriptive characteristics common in model schools. The discussion below will include
a comparison of the characteristics found for model schools in both studies and those that
are present in both the model schools and schools that scored the lowest in both the total
school score and the achievement measures in this study.

The ANOVA results in question 2 showed sizable variation in the implementation
of the components among schools. To describe some of these differences, six case study
schools were selected for closer examination. Specifically, schools were chosen based on
their total school scores and a literacy achievement score. The literacy achievement score
was calculated for those schools that scored high in total school score and high in both
reading and writing scores on the 1999/2000 MEA, and those schools that scored low in
total school score and low in both reading and writing scores on the MEA. This goal was
accomplished by visually examining the scatter plots shown in Figures A.1 and A.2 (see
Appendix I). For example, each graph is divided into four quadrants. The upper right

quadrant shows schools that scored high in both the school total score and the reading score or writing score. The lower left quadrant shows schools that scored low in both the school total score and the reading score or writing score. The schools that are labeled in each figure are those that have markers in the same quadrant of both graphs.

The scatter plot in each figure illustrates the very small correlation of .03 between the total school score and the reading score in figure **A.** 1 and between the total school score and the writing score in figure **A.2.** However, **in** spite of the **low** correlation, some schools did have a strong relationship, either positive or negative, between the school total score and both the reading and writing scores. These strong positive and negative correlations found in individual schools created an overall correlation of near zero because they cancelled out each other.

A literacy achievement score was calculated to assist in selecting the six case-study schools. Because there was a moderately strong correlation of .52 between the **MEA** reading and **MEA** writing scores, the mean of these two scores was used **as** the literacy achievement score. Figure **3** shows the scatter plot of the literacy achievement scores and total school scores. The schools selected as case study schools are labeled **A** through F[11] on the scatterplot. These specific schools were chosen to represent the extreme cases in each of the two quadrants. Specifically, those schools that are the extreme cases in the upper right quadrant might be considered effective or model schools. Those that are the extreme cases in the lower left quadrant might be considered ineffective schools that most need improvement – henceforth referred to as improvement schools. Table **18** shows the demographic characteristics of the six case-study schools.

Figure 3

Scatter plot of literacy achievement scores and school total scores
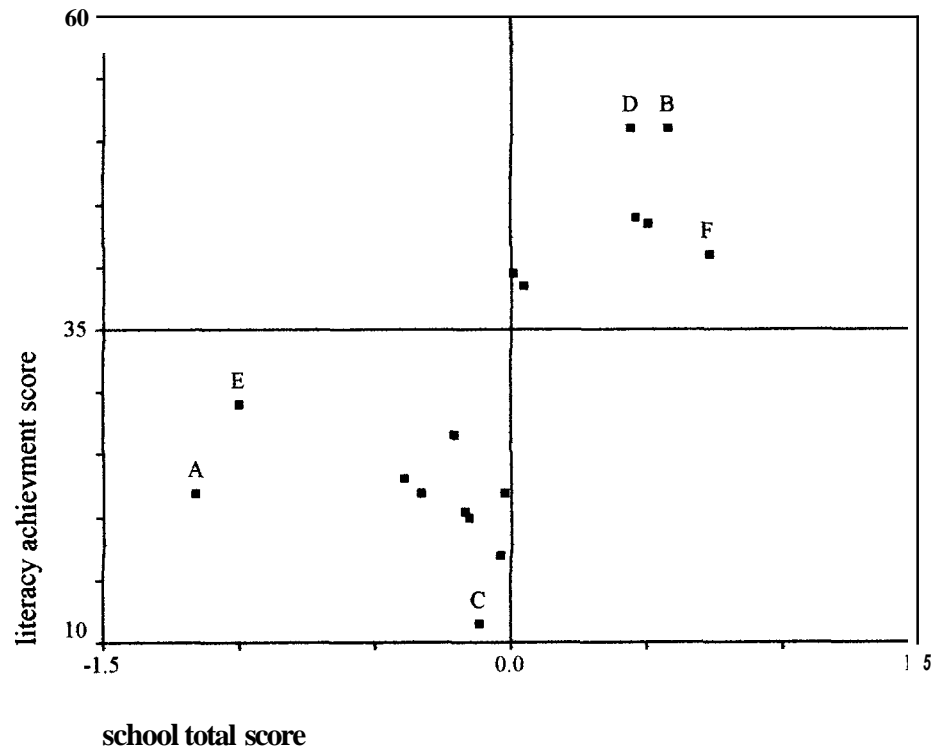
The results of Question 2 showed that there was great variation in the implementation of the components among schools. The component definitions, as a result the survey items, were constructed from research describing the characteristics of schools deemed to be effective. As a result, it is important to determine if those characteristics are exclusive to model schools or if they are also found in schools needing improvement. Therefore, the following methods were used to uncover which items, or component attributes of effective schools, were present exclusively in the model schools, were similarly high or similarly low in both the model and improvement schools, or showed no trend at all.

Table 18

Demographic Characteristics of the Six Case Study Schools

	Model Schools			Improvement Schools		
	B	D	F	A	C	E
Location*	S	S	N	S	*C*	S
Grade levels	K-6	K-6	K-2	K-6	K-5	K-5
Total number of students	**427**	153	310	**825**	122	480
Average number in K − 3 class	15	22	18	18	**19**	22
Socioeconomic status score**	93%	82%	**72%**	38%	**44%**	**68%**
Reading score	68%	60%	60%	35%	23%	**45%**
Writing score	34%	**42%**	**22%**	9%	0%	13%
School total score	.58	**.44**	**.73**	-1.16	-.11	-1.00

*S = southern Maine school, C = central Maine school, N = northern Maine school
**Note: the socioeconomic status score is the reverse of the percentage of students receiving free and reduced lunch in each school.

To detect differences, the mean scores of each school's item responses within each component (items 1 through 63 and **66** through 71) were first examined to uncover any extreme differences or similarities between the model schools and the improvement schools. Scores for these items ranged from one, the lowest possible score when all team members answered that they strongly disagreed with the statement, to **six,** the highest possible score when all team members answered that they strongly agreed with the statement. For this analysis, the definition of an extreme difference was when the mean of at least two of the three improvement school scores was approximately **2.5** or below while the mean of at least two of the three model school scores was approximately **4.5** or above.

Similarities between schools are reported when at least five of the six schools in the case study all had similar mean scores, i.e. all agree or all disagree. Table **19** shows the number of items in each component that had an extreme difference, either high or low similarities, or no trend at all. The standards component showed the greatest number of extreme differences and both building leadership and literacy leadership components show the greatest number of high similarities. Note that 22 of the items that are identified as characteristics found in model schools, were also found in improvement schools. Additionally, five items that are identified as characteristics of model schools were not present in either model or improvement schools. Most important, however, are the 22 items that were found exclusively in model schools and not in improvement schools.

Further exploration included examining the frequency of responses of the check-list type survey items (items 73 through **84).** Responses that were selected by more than half of the respondents from all three schools in each group were considered notable and are reported below. Responses to the free-response items (items **85** through **91)** were analyzed using a content analysis checklist. This checklist was developed using a random sample selected from the state sample (see Appendix J). It was then used to analyze the case study responses. Any item on the checklist that was mentioned by at least one-third of the respondents from all three schools in each group is noted below.

The following results are organized under the component headings that have been used throughout this study. The results presented under each component represent an overview of the findings. Details about the specific items that were present only in model schools are presented separately in Chapter *6.*

Table 19

The Number of Items in Each Component Having an Extreme Difference, Similarly

High, and Similarly Low Between Model Schools and Improvement Schools

Component	Total items	Extreme difference	Similarly high	Similarly low	No trend
Beliefs	6	3	3	0	0
Classroom instruction	8	1	3	2	2
Supplemental instruction	7	2	0	0	5
Professional development	7	3	0	2	2
Home/school partnership	7	0	1	1	5
Program administration	7	4	0	0	4
Building leadership	6	0	6	0	0
Assessment	8	3	3	0	2
Standards	7	6	0	0	1
Literacy leadership	6	0	6	0	0
Total	69	22	22	5	20

Beliefs

The items that exhibited extreme differences between model and improvement

schools showed that model schools shared common beliefs about how students learn to

read and write, used those beliefs and understandings as the foundation of their school's

literacy program, and collectively worked toward their shared vision. Three items were

similar in five of the six schools. These stated that the staff of each school had a common

vision about what students should achieve in literacy, believed that each member could

make a difference in the lives and education of the students, and believed that modeling a positive attitude was important.

<div align="center">Classroom Instruction</div>

There was only one item in classroom instruction that had an extreme difference between model schools and improvement schools – consistency of instruction across same-grade classrooms. However, there were many similarities. All schools had a high mean **for** the item showing that teachers combined daily direct teacher instruction, teacher-guided learning, and independent time for student practice. Five of the six schools stated that every student received daily whole-group instruction and that teachers could **support** their literacy practices with theory and research. Alternatively, five of the six schools scored low in two items indicating that classroom literacy instruction was not consistent throughout the K-3 classrooms and that every student did not receive daily individual instruction in reading and writing.

To plan classroom instruction, all schools used professional resources, colleague input, and assessment information as resources. All three model schools and two improvement schools used Maine's Learning Results as a resource. However, only model schools used a district curriculum. There were no differences between specific teaching strategies. For example, all schools listed guided reading and literacy skills mini-lessons as the most important parts of their classroom literacy program. Interestingly, only the improvement schools indicated that writing workshops were an important component of classroom instruction.

Both groups indicated that they most often taught word recognition strategies through semantic and graphophonic cueing and through the use of picture clues. In

addition, the improvement schools stressed sight vocabulary **as** a strategy most often taught. Both groups used the following comprehension strategies most often: making predictions; activating prior knowledge; and summarizing main ideas.

Both groups felt that the strength of their classroom literacy program was their reading instruction practices. In addition, improvement schools felt that reading assessment practices, writing instruction practices, and writing assessment practices were program strengths. In the model schools, classroom management strategies were indicted as additional strengths.

<p align="center">Supplemental Instruction</p>

The differences between groups in terms of supplemental instruction showed that in model schools, support staff were included in discussions about literacy programming. Additionally in model schools, supplemental services were flexibly provided based on student performance during instruction. When working with a struggling student, the specific resources available to **staff** in both groups included special education teachers, other classroom teachers, and professional materials. The improvement schools also included alternative programs.

Both groups listed Title 1 services and volunteer tutors as intervention strategies used in their schools. Two improvement schools and one model school listed an English as a Second Language program **as** an additional intervention program. Additionally, two schooh from each group said they had a Reading Recovery program.

Professional Development

Three items in professional development were different between groups. Model schools provided ongoing support for new curriculum initiatives beyond an introductory session. Additionally, professional development opportunities are planned to align with the school's standards. Finally, in model schools, an environment of continuous improvement is fostered through professional development. All schools scored very low on the items that stated that teachers were provided time during the work day to reflect on their practice and that time was regularly scheduled to collaborate on meeting the school's goals.

In both groups, personal interest and schoolwide initiatives were the indicators which most guided staff choices in professional development. In the model schools, availability of opportunity was also noted. Both groups showed that the format most attended for professional development were conferences and workshops. The topics of professional development most offered and attended by both groups focused on literacy instruction, literacy assessment, and collecting data to inform instruction. There were additional foci in model schools on aligning Maine's Learning Results and peer coaching. In model schools, the most helpful and influential professional development opportunities related to literacy instruction and assessment were university-offered literacy courses, specifically noted were participation in the Literacy Collaborative and Reading Recovery training. Additionally noted in model schools was ongoing reflective practice groups. In improvement schools, the most helpful opportunities were workshops and conferences. Two of the three improvement schools indicated that there were limited opportunities for professional development.

When asked what ongoing school supports were most helpful in guiding instruction and assessment practices, the model schools noted literacy leadership as the most important support with teacher study groups second. Improvement schools indicated literacy intervention services as most helpful, with colleague collaboration time second.

Home/School Partnership

There were no extreme differences in the implementation of the home/school partnership component between schools. However, common to all schools **was** that parents and community members often volunteered. None of the schools had a program that fostered family and community partnerships. Both groups listed the **local** library, school library, and Head Start programs as local resources, Only one improvement school had a literacy program for families with children aged birth to five. Additionally, both groups indicated that they communicated regularly with parents through phone calls, parent/teacher conferences, and take-home book activities. The improvement schools also specified the use of newsletters and homework activities.

Program Administration

Out of seven attributes defining this component, there was a substantial difference between groups in four items. The following specific literacy program administration items were present in model schools and not in improvement schools:

- decisions about the development and coordination **of** the literacy program were made at the school level;

- the program was organized to foster focused and purposeful instruction;

- final decisions about hiring teachers and support staff were made at the school level; and

- all literacy program decisions were made by school-based committees.

When asked to describe the strongest aspects of the school's literacy program, all model schools noted interventions for struggling readers. Specifically mentioned in one model school was that all K – 2 staff were trained in the Literacy Collaborative. There were no aspects noted as strengths that were consistent in improvement schools. However, two improvement schools noted the dedication of the staff was a strength. Alternatively, two model schools indicated a need for more opportunities to collaborate. In two improvement schools, two areas that needed improvement were noted: consistency of instruction across classes and improved assessment strategies.

Building Leadership

There were no attributes in this component that differed between the two groups, yet many were similar. All schools indicated that their building leaders were knowledgeable about literacy research and practice, committed to instructional improvement in literacy, and respectful of each teacher's individual learning style, With the exception of one of the improvement schools, every school also indicated that their building leaders were strong, understood the institutional change process, and effectively communicated with staff.

Assessment

Model schools in this component used student data to evaluate the schools' literacy program, Additionally in model schools, assessment approaches were used to measure student performance of the school's standards. Lastly, student performance was

monitored over many years in model schools. Both groups indicated that classroom assessment matched classroom instruction strategies, was ongoing, and provided diagnostic information about student performance.

Assessment tools used consistently in the improvement schools were running records to determine text level accuracy and the Developmental Reading Assessment. Two of the improvement schools used writing prompts and one used informal observations with anecdotal notes. In all of the model schools, the Observation Survey, running records for text level accuracy, and writing prompts were listed as assessment tools used most. In addition, one of the model schools used student portfolios and informal reading inventories as assessment tools.

<div align="center">Standards</div>

There was a substantial difference in implementation in six of the seven items between the model schools and the improvement schools. Specifically, while both groups had content standards, only the model schools had performance standards. Those standards indicated both a minimum level and a level that challenged students to exceed the minimum. Also in model schools, the standards reflected the schools' beliefs about best practice and about how students learn. Finally, students in model schools were aware **of** the standards they were expected to meet.

<div align="center">Literacy Leadership</div>

The responses for item **64,** whether there is a literacy specialist on staff, and item 65, whether there is someone on staff who provides literacy leadership if there **is** not a literacy specialist on staff showed that:

- in the model schools, two had a full-time literacy specialist and one had a person on staff who was in a position to provide literacy leadership but was not a certified literacy specialist; and

- in the improvement **schools,** none had a literacy specialist on staff. However, **four** members from one school staff (out of seven members) and two members from another school staff (out of six members) stated they had a person who provided literacy leadership who was not a certified literacy specialist. All members from the last improvement school stated there was no one who provided literacy leadership.

The item comparison for this component was done using the scores from all three model schools and two improvement schools. With the exception of one of the improvement schools, all means of all items were high. That is, the literacy leader in all schools provided in-school professional development and ongoing support through modeling and professional resources. Additionally, the literacy leader collected, monitored, and disseminated student achievement information and facilitated staff discussions focusing on that data. In the model schools, literacy leadership was noted as the most helpful support in guiding instruction and assessment practices.

An important finding in this component is that in all the model schools there was the position of literacy specialist and in the improvement schools there was no such position. *An* interesting point in the improvement schools is that in two of the three schools, there was not a consensus from the team-members about whether they had anyone on staff that provided literacy leadership. Bean, Knaub, and Swan (2000), in a national study examining the leadership role of the literacy specialist found that **97.4**

percent **of** the principals "stated unequivocally that reading specialists were critical **to** the

success of the reading program" (**p.** 7).

Chapter *6*

DISCUSSION AND IMPLICATIONS FOR FURTHER RESEARCH

The primary purposes of this study were to explore how elementary literacy programs in Maine vary from school to school, determine the extent to which each component contributed to the whole program, and examine the effects of the variation in implementation of the program components on student achievement. The discussion presented in this chapter will address each purpose through a synthesis of the results reported the Chapters **4** and 5. Following this discussion are suggestions for further research. Finally, the major findings of this study are briefly reviewed.

Introduction

Interest in whole-school education reform is presently very high (Taylor, Anderson, Au, & Raphael, 2000) and research findings are being published by the volume (Stringfield, 2000). Yet the war about reading approaches and programs rages on, with the added complication of criticism about how research **is** interpreted and used by policy makers, legislators, and educational leaders (e.g., Foorman, Fletcher, Francis, & Schatschneider, 2000; Goodman, **1998;** Mathes & Torgessen, 2000; Taylor, B., et al., 2000; Taylor, D., 2000). Taylor, et al. (2000) argue that the standards for reporting educational research findings should be raised because of the intense public interest in the topic, specifically the standards regarding research in beginning reading. They further state that "researchers investigating beginning reading should exercise extra caution to delimit findings from their **own** studies" (p. **16).**

The results of the particular study reported here were both expected and unexpected, both logical and puzzling. In light of these tenuous findings and the caution

advised above, a brief reminder of the purpose and the limitations of this study is presented before the discussion interpreting the findings and suggesting future research **is** launched. For consistency, the limitations offered in Chapter **1** are reiterated here with additional cautions specific to some of the findings.

<center>Limitations and Cautions</center>

The first limitation of this study was the sample selection process. **As** explained in Chapter I **,** schools were not selected randomly by the Center for Inquiry at the Maine Department of Education. The schools were representative of only the location and size of schools in Maine. They were in no way randomly selected or stratified to represent socioeconomic status or student performance on the Maine Education Assessment. Second, there was no control of member selection within teams, with the exception of requesting that the different required positions for the study were represented. **As** a result, the data gathered through the survey could very well present biased or uninformed opinions. While members from the teams were separated by position to complete the survey, there was still no way to ensure that participants responded to items with complete understanding of what was being asked or with complete assurance that their aggregated response scores, that were reported back to their schools, would hold no repercussions. Third, are the problems with survey research itself, such as potential biases in the development **of** the survey and possible inflated or misguided respondents' responses. Last, the results from the survey were not cross-checked using other methods such as observations, interviews, or site visits. The timeline **of** the study prohibited this type of confirmation. As a result of the above selection issues, interpretation of the results and generalization to other contexts are limited.

<center>81</center>

Discussion

Creemers **(1997)** states that testing the entire model of a whole-school program will be very difficult. This study proved that to be true. However, in spite of some of the statistical findings that might be considered tenuous, there were findings that advance our understanding of whole-school elementary literacy programs and findings that warrant further inquiry. In analyzing the data the following points emerged:

- there was great variation in the implementation of all ten components of early literacy programs among Maine schools and specific differences between model schools and improvement schools were identified;

- the program administration, professional development, and beliefs components contributed the most to the whole literacy program while leadership, both building and literacy, contributed the least; and

- socioeconomic status was the only consistent predictor **of** student achievement.

Early Literacy Program Variation

The results of Question 2, the ANOVA tests, showed that there was great variation in the implementation of the components among schools. These results raise questions about how they vary and why they vary *so* greatly? While the data collected for this study were not intended to explain why schools vary in their implementation of literacy program components, the descriptive information analyzed for the case study schools provided a starting point to explore how they vary. Most of the characteristics of effective literacy programs that were described in the first study conducted by the Center for Inquiry at the Maine Department of Education *(2000)* were also found in this study. Very important, however, is that many of those same characteristics were also found in

82

this study in the schools most needing improvement. It becomes important then, to identify which characteristics of the definitions were found exclusively in the model schools and not in the improvement schools. Following are the items of each component that were present exclusively in model schools. There were no items in the home/school partnership, building leadership, and literacy leadership components that were found exclusively in model schools.

- In the beliefs component, only model schools:
  - have staff that shares a common belief about how students learn to read and write;
  - use collective beliefs and understandings about teaching and learning to form the foundation for the literacy program; and
  - work collectively toward the shared vision.

- In the classroom instruction component, only in model schools **is** the:
  - classroom literacy instruction for each grade level consistent across classrooms.

- In the supplemental instruction component, only in model schools **is:**
  - the support staff included in discussions and meetings about literacy programming; and
  - supplemental instruction provided flexibly based on student performance during instruction.

- In the professional development component, only in model schools is:
  - professional development supported by the district through a fostered environment of continuous improvement;
  - professional development in literacy offered by the district and aligned with the school's standards; and

- staff provided with ongoing support for new initiative beyond the initial introductory session.

- In the program administration component, only in model schools:
  - are literacy program decisions made by school-based committees;
  - are final decisions about hiring new teachers and support staff made at the school level;
  - is the literacy program organized to foster focused and purposeful instruction; and
  - is district support provided to ensure the effective operation of the literacy program.

- In the assessment component, only model schools:
  - use whole-school student assessment data in reading and writing to evaluate the school's literacy program;
  - use assessment approaches that measure student performance of the school's standards; and
  - track student literacy performance over many years.

- In the standards component, only model schools:
  - have current literacy performance standards stating how well students should perform;
  - include a minimum level of literacy standards at which **all** students must achieve;
  - include a desired level **of** literacy standards that challenges students to exceed the minimum standard;
  - make students aware of the standards they are expected to meet;
  - have standards that reflect their beliefs of best practice; and

- have standards that reflect what they believe about student learning.

As shown above, the standards component had the greatest number of extreme differences between model schools and improvement schools. Interestingly, recall that the results of the factor analysis for the standards component was factorially pure with a substantially high explained variance of **73.35** percent. This suggests that even though there were great differences between the model schools and the improvement schools, the items in the definition accounted for **73.35** percent of those differences – leaving only 22.65 percent of the Qfferences unexplained. The question then becomes: why are there such extreme differences and what has caused the differences?

In May of 1997, the **118**th Legislature approved the State **of** Maine Learning Results by the Maine Department **of** Education **(1997).** These Learning Results explicitly state the standards that all students must meet. Since that time, a state-wide effort has been in place to begin the implementation of these new standards across content areas and within all school districts. It could be possible that the State's impetus for the implementation of standards-based teaching has fueled the differences found in the standards component between model and improvement schools. Supporting this premise, the case study showed that only model schools identified the Learning Results as a topic focus of district staff development initiatives while improvement schools did not. It might be interesting to explore this further with a larger sample. For example, in a larger sample, would there be a difference between model and improvement schools in the standards component? What would the foci of district-wide professional development be? And, would there be a connection between these foci and the adoption **of** the Learning Results?

Exploring this connection further, we might look to professional development to find answers to why there is such overall variation among schools in all of the components. For example, examining items **78,** 82, and **83** for all participants in the whole sample, of which the focus was professional development, might begin to explain why they vary. Responses to survey item **78** indicated that the factor that most influenced choice of professional development activity was personal interest, with availability of opportunity as the second choice. In addition, responses to survey item 82 showed that the formats of professional development most attended were conferences and workshops. Individuals' interests vary considerably, as well as topics of conferences and workshops. If these drive the choice and delivery models of professional development, this might suggest that there were no consolidated professional development foci or initiative efforts in schools or in the state. This supposition might contribute to the extreme variation in the professional development component found in this study, and as a result, the variation in the implementation of the other components. Allington and Cunningham **(1996)** state that professional development is the "key to the change process" (p. **148).** They also suggest that school districts are partially responsible for providing professional development for teachers in order to have a consolidated direction.

<u>Components That Contributed the Most to the Program</u>

The results of question **3** for both the intercorrelations of components and the factor analysis showed that program administration, professional development, and beliefs seemed to contribute the most to a whole-school program. This finding runs parallel with Anderson and Pellicers's **(1998)** conceptual framework which explains that the degree **of** effectiveness with which a program is implemented at the organizational

86

level has a direct impact on the degree of effectiveness at the levels closer to the students. Their premise is that issues at the organizational level must be addressed first because of their impact on all other aspects of the organization. Figure **4** shows the conceptual framework presented by Anderson and Pellicer exhibiting the relationship among the organizational levels.

Figure **4**

Anderson and Pellicer's (1998) conceptual framework
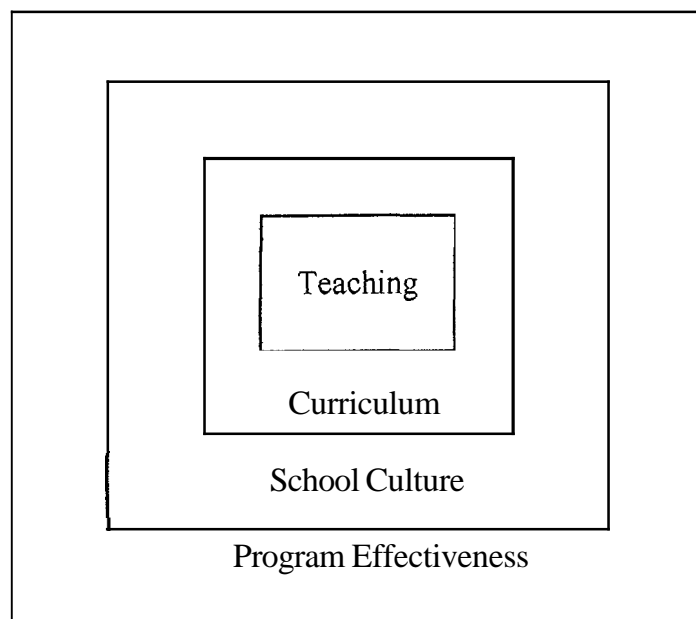
Note. From "Toward an Understanding **of** Unusually Successful Programs for Economically Disadvantaged Students" by L. **W.** Anderson and L. O. Pellicer, 1998, Journal of Educational for Students Placed at Risk, 3(3), p. **240.** Copyright 1998 by Lawrance Erlbaum Associates, Inc. Reprinted with permission.

Anderson and Pellicer (1998) state that "if the issues related to the larger rectangles remain unresolved, efforts to address the questions associated with the smaller rectangles are likely to be futile" **(p. 240).** Specifically, they further explain that if

"program goals are not clear or the standards for judging program effectiveness are weak or nonexistent, there will be no evidence to support attempts to improve the school culture, the curriculum, or teaching" (p. 240).

The results of the intercorrelation for question **3** showed that program administration, professional development, and beliefs had very high positive correlations with all other components. Additionally, these same three components had the highest factor loadings in the factor analysis that measured their contribution to the factor. In support of Anderson and Pellicer's **(1998)** framework, these findings show that the broader-concept components – program administration, professional development, and beliefs – more strongly impact the other components and contribute the most to the overall program.

Additionally, this finding is supported by Hill and Crevola's **(1999)** model which places beliefs at the center of the program structure from which all else evolves. They state that the "general design is based on the belief in the capacity of the overwhelming majority of students to make progress, given sufficient time and support" (p. 124). Figure 5 presents Hill and Crevola's design for improving learning outcomes. Notice that beliefs and understandings are placed at the core of the design.

Anderson and Pellicer's **(1998)** model in which organizational issues must come first along with Hill and Crevola's **(1999)** model in which beliefs and understandings must come first provide support for the findings in this study. Given these results, we might conclude that there is more than simply one component that contributes the most to the whole-school program. This conclusion suggests that, while research states that those components that are closest to the student result in the greatest change in individual

student achievement (Sammons, et al, 1995; Creemers, 1997; Hill & Crevola, 1999), those components would not be possible if the overall foundation were not stable (Anderson & Pellicer, 1998).

Figure 5

Hill and Crevola's (1999) general design for improving student learning outcomes
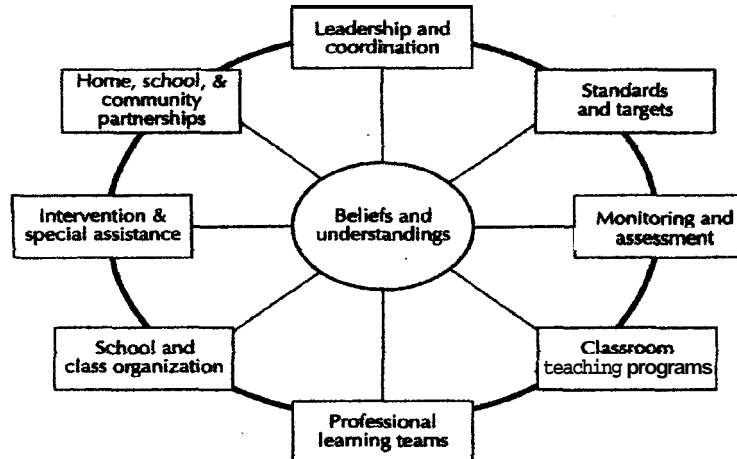
Note. From "The Role of Standards in Educational Reform for the 21st Century" by P. W. Hill and C. A. Crevola in ASCD Yearbook: 1999 (p. 123), by D. D. Marsh (Ed.), 1999, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 1999 by the Association for Supervision and Curriculum Development. Reprinted with permission.

Figure *6* represents a revised whole-school literacy model that has **as** its foundation all three of the components found to contribute the most **to** the program. These components are represented in this model **as** three interwoven circles. These circles are drawn in solid lines because this is the part of the model that **was** constructed as a result of this study. Where the three circles overlap, at the heart of the design, so to speak, are those components that are most closely connected to the students. Those are

the components that research tells us most affect student achievement (Sammons, et al., **1995).** The sections of the circles that are intersecting are drawn with broken lines because it is the results from other studies that suggested the placement of these components. Finally, the two leadership components are found throughout the model. The circle representing these components is also drawn with a broken line to show that the placement of these components has been based on the results of other research studies.

Specifically, it was found in the study of effective literacy programs conducted by the Center for Inquiry of the Maine Department of Education **(2000)** that building and literacy leadership together influence every aspect of the program. According to that study, leaders of effective programs were found to coordinate efforts, build a positive climate, locate resources, provide ongoing staff development opportunities, provide vision and structure, organize assessment records, communicate with parents and community, work one-on-one with teachers, and provide many other multi-component tasks. Conversely, Harste **(1989)** states that when "principals and administrators were seen as obstacles to progress" (p. **49),** the success of the reform initiative was not as great. "No evidence of effective schools with weak leadership has emerged in reviews of effectiveness research" (Sammons, et al., **1995,** p. **12).** On the contrary, effective leadership impacts every aspect of the organization either directly or indirectly (Sammons, et al., **1995).** Therefore in the model presented, the leadership components are portrayed as one element surrounding the rest of the components.

Figure *6*

A proposed model of a whole-school literacy program
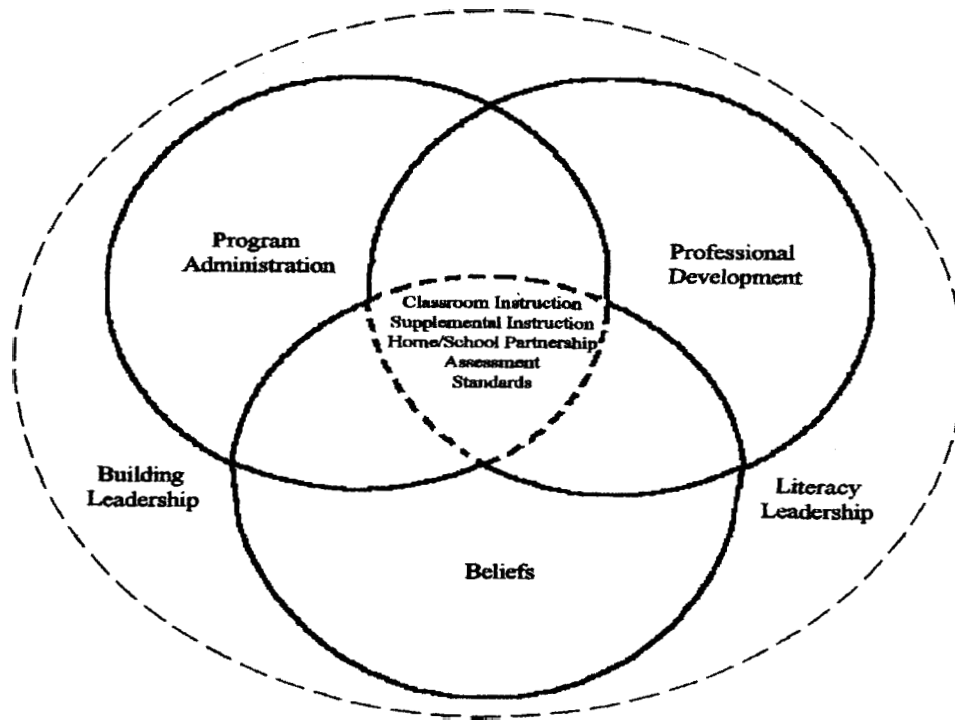
To illustrate the layers of importance and the interdependence of the components more fully, think of an expectant mother. The unborn child **is** the focus, she who is dependent upon everything else working well in order to survive yet who is also most important. In the literacy program, the five components placed in the center of the design are those dependent upon all other components being effective yet those that have the most impact on student performance. Next, the embryonic fluid surrounds the unborn child to create a protective and stable environment for the child to grow. In the literacy program, the components of beliefs, program administration, and professional development create that protective and stable environment in order for the program to fully develop. Last, the mother influences every aspect **of** her unborn child's being by

understanding what is needed and when, and by providing it to ensure good health. In the literacy program, those in leadership positions influence every aspect of the program by understanding all of components of the program and by providing direction and support throughout.

This model is offered with the full understanding that it is one thing to say that effective schools have a particular lund of model, and yet quite another to know how schools get from being an improvement school to being a model school. In fact, "we do not yet understand how to create comprehensive and effective reform efforts" (Hatch, **2000,** p. **347).** Schwahn and Spady **(1998)** state that "only when the organizational structure and the staff are aligned with the school vision can productive and exciting change happen for children" (p. **45).** This statement implies that these foundational components need to be in place first before a school begins to align the rest of the components. Additionally, schools need to "have a strong school community capable of developing the knowledge needed for improvement" (Hatch, 2000, p. **352).** Just as there is no single reading program that works for all students (Maine Department of Education, 2000; Manzo & Manzo, **1993),** and there is no one program design for every school (Slavin, et al., **1994),** there is no one way in which to scale-up a program (Hatch, **2000).**

However, the findings presented here and those of other researchers mentioned above suggest that in the development of a literacy program, schools might set the foundation by first developing unified beliefs and understandings about learning and teaching. Second, they might build an organizational structure that reflects those beliefs while allowing for constant review and revision of the beliefs. And last, they might plan a professional development program that ties into the school's beliefs and is supported by

92

the organizational structure. Most important, however, is that schools first build a shared leadership capacity (Fullan & Miles, **1992**) that can direct a sustained effort over many years (Bean, **1995**) and that understands the dynamics of change (Hill & Crevola, **1999).**

<u>Components that Contributed the Least to the Program</u>

An interesting, yet questionable, finding for question **3 was** that both the building leadership and literacy leadership components had the lowest factor loadings and the weakest correlation coefficients. This result suggests that leadership does not have as high an impact on the whole-school program as all other components. Conversely, many research studies cite leadership as one of the most important components of a whole-school program (Hill & Crevola, **1999).**

The interesting finding, however, was that the responses for both leadership components (items **43** through **48** for building leadership and **66** through **71** for literacy leadership) from all case study schools rated both kinds of leadership highly. Yet, the findings from the analysis of the additional data showed that only the model schools had literacy specialist positions on staff. Additionally, the improvement schools did not agree that they even had someone on staff that provided literacy leadership. Finally, in model schools, it was specifically noted in two places that literacy leadership was the most important aspect of professional development and the best support for guiding instructional practices.

Therefore, it **is** suggested that the definitions used in this study to measure both types of leadership be revisited to explore possible reasons why this similarity might have occurred. The following is offered as a possible means to justify revisiting, and possibly revising, the definitions:

1. Many of the research studies upon which the definitions were constructed were of effective schools and programs. In other words, they had as their sample those schools that were considered effective. For example, the most recent study of literacy programs in Maine schools conducted by the Center for Inquiry at the Maine Department of Education (2000) selected only effective schools for their sample, as determined by student performance on the **MEA.** Then commonalities to all were determined from which to develop a list of characteristics specific to effective schools. The Center for Inquiry's study, and many others like it, did not include a comparison group of schools that were considered not effective.

2. The results of the examination of the case studies indicated, based on the definitions constructed from effective schools research, that there **was** no, or little, difference in the building leadership and literacy leadership components between model schools and improvement schools.

3. The results of this study also indicated that the correlations between building leadership and literacy leadership and all other components were relatively weak and that the comparative contribution of building leadership and literacy leadership to the whole program was small. This comparatively small contribution to the whole program makes sense if there really was no difference in both leadership components between model and improvement schools as it was defined here.

As a result, more questions are raised about leadership than are answered. For example, since all schools rated both types of leadership highly based on these definitions, can we conclude that leadership really doesn't make any difference? Or, if leadership does make a difference, then what specifically are those differences between

model school leadership and improvement school leadership that were not uncovered in this study? Finally, is it possible that the participants were not able to give honest opinions about leadership because of the risk of being identified or because of a lack of comparative perspective?

The following criticism about the selection process could possibly have had an effect on the results for the leadership components. First, these two components asked for information about individuals who held the leadership positions in the school, unlike the other components that asked for information about concepts, policies, groups, and organizational structure. Since the teams were small – between four and nine members – the aggregate of their scores, if they were low, may be cause for concern because even though individuals' scores or names were not disclosed, a low score **from** a small group still would point to only a few individuals. Therefore, participants may not have felt that the confidentiality measures taken to protect them in this study were enough to give completely honest answers to the items in both leadership components. Therefore, it is concluded that the results for these two components are very tenuous. It is suggested that further research about building and literacy leadership needs to be conducted before any conclusions are drawn.

Predicting Student Literacy Achievement

The results of Questions **4** and 5 suggested that socioeconomic status was the only consistent predictor of student achievement. While many research studies show that socioeconomic status is the major predictor of student achievement (e.g., Creemers & Reegitz, 1995; Rowe, 1995; Snow, et al., 1998), it is not *so* clear in this case. Specifically, only a small percentage of the reading and writing scores, **20** percent and **18**

percent respectively, was explained by socioeconomic status in question 5 where the predictor variables were socioeconomic status and the total school score; a much larger percentage remained unexplained. These results could have been because the relationships between socioeconomic status and student achievement in both reading and writing were strong, but the relationships between the school total score with the achievement measures were very weak. Additionally, the distribution for each of the variables was not normal and therefore violated one **of** the assumptions necessary for a multiple regression analysis. As a result, conclusions suggesting that socioeconomic status is the only predictor of student literacy achievement are premature.

Regardless of these potential flaws, the results of the multiple regression analyses should not be disregarded. For example, the results of question 4, where reading achievement was the dependent variable, showed three variables that predicted student achevement: socioeconomic status, beliefs, and assessment. Socioeconomic status was the first predictor of student reading achievement with 20 percent of the variance explained. When socioeconomic status and assessment were combined, they explained **29** percent of the variance in student reading achievement. And when beliefs was added to socioeconomic status and assessment, they accounted for **43** percent **of** the variance. This result leaves a much smaller percentage of student reading achievement unexplained.

Research supports the finding that **SES** is the primary predictor of student achievement (Rowe, **1995).** Additionally, research (Sammons, et al., **1995)** and theory (Schwahn & Spady, **1998)** supports the finding that school beliefs predict student

achievement. However, the finding that assessment inversely predicts student reading achievement remains a puzzle.

A literacy program evaluation of a small Maine school conducted by Boucher (1998) may provide insight into this puzzle and may point in a direction in which to begin exploring reasons for this finding. In Boucher's evaluation, the school was seeking an explanation of why their **MEA** reading scores were consistently very low. They had instituted a reading program that reflected their beliefs about how students learn to read, their professional development plan was ongoing, comprehensive, and focused specifically **on** their reading program, and the school's reading assessment process directly measured what and how students were taught. In addition, the students' scores on standardized reading tests were consistently very high, as well as the scores on the school's reading program tests. This was a case where had this school participated in this study, they would have scored very high on the assessment component while having a very low score on the student achievement measure, the MEA reading score.

When all the students of this school were assessed using an informal reading inventory, an assessment tool that identifies types of reading errors (i.e. graphophonic, semantic, and syntactic) and **types of** comprehension abilities (i.e. recall, inference, conclusions, etc.), Boucher **(1998)** found interesting results. The students, when trying to figure out an unknown word in a reading passage, used sounding-out skills with no attention to meaning. Additionally, the students had no difficulty answering comprehension questions when the answers were explicitly stated in the passage but had difficulty when the answers were implicit. These lower-level skills are typically required in basal-type program tests and standardized tests (Murphy, **1998).** The analysis of the

students' reading performance based on the reading inventory assessment reflected the program, the assessment process, and the school's definition of reading. Interestingly, the MEA is a test that requires students to infer meaning, draw conclusions, and interpret passages; these are processes that reflect a more complex definition of reading and are typically used in a more authentic assessment process (Murphy, **1998).** The conclusion was that "the students could read if reading was defined at a basic level, as reflected in the school's reading program tests and the standardized tests. However, the students did not do well on a reading assessment that defined reading with a more complex definition such as the MEA" (Boucher, **1998,** p. 2). The problem of the low MEA scores, it appeared, may be because of a difference in the underlying definitions **of** reading between the school and the Maine Department of Education and, as a result, in how reading was assessed in the different situations. Accordingly, Borman (2000) states that "the choice of the evaluation model has a significant impact on the results and on the interpretation of the program's effects" (p. **33).**

Given this example, it might be possible that the same problem could be occurring in other schools. Specifically, it could be that schools in this study scored high on the assessment component because the items addressed an overall connection among the school's beliefs, instruction, and assessment within the school program. The issue here may be that the definition of reading according to the school is very different from the definition of reading that is assessed in the **MEA. If** so, this may result in low scores on the **MEA** and also cause the assessment component scores to negatively correlate with student achievement in this study. Further study in this area would help clarify this issue.

Implications for Further Research

Based on the findings of this study, the following three major areas of research are suggested to further our understanding:

1. clarify the definitions **of** the building leadership and literacy leadership components of a whole-school literacy program;

2. compare the results of student literacy achievement on school-based assessments with the results of student literacy achievement on the Maine Educational Assessment; and

3. conduct a follow-up study using different methods than those in this study to evaluate the effects of the components of a whole-school literacy program on student achievement.

Suggested Research in Leadership

The findings in the leadership components of this study are tenuous at best because they are the exact opposite of the findings in effectiveness research. **As** noted in detail earlier, it is believed that the survey used in this study did not effectively measure the components of building leadership and literacy leadership. Since the focus of these two components was on specific individuals in the school's leadership positions and because each school's results were reported back to the individual schools, it is questioned whether the participants felt safe to respond with complete honesty for these two components. Therefore, further research is suggested to clarify the roles and responsibilities of building leaders and literacy leaders in respect to whole-school literacy programs.

In **an** ethnographic study evaluating schools' first year of implementation of the Literacy Collaborative in Maine, Boucher, Lyon, and Moore (2000) found many

differences in both building leadership and literacy leadership among schools. It is

believed that the one-on-one interview format contributed to the success of uncovering

the detailed findings in that study.

Similarly, Bean, Knaub, and Swan (2000) conducted a national two-stage study

resulting in a detailed description of the leadership responsibilities of literacy specialists.

In the first stage, school principals completed a survey indicating the responsibilities of

the school's literacy specialist. In the second stage, one-on-one interviews were

conducted with the literacy specialists to discuss their roles and responsibilities.

Given the detailed findings in the study by Bean, Knaub, and Swan (2000) and by

Boucher, Lyon, and Moore (2000), it is suggested that similar methods be used for

further research of the building and literacy leadership definitions. Mostly, it is advised

that data-collection methods include ethnographic interviews rather than surveys.

<div align="center">Suggested Research to Correlate Student Achievement Measures</div>

The type of assessment we use to evaluate a student's reading performance

reflects what we believe reading to be and what and how we teach (Murphy, 1998). As

was illustrated in the previous discussion, it is possible for students to perform well on a

school's assessment of reading and writing and, at the same time, score poorly on the

MEA. Interestingly, Lee (1998b) states that "the Maine Educational Assessment was

designed primarily for the evaluation of programs rather than individuals. Thus, the

MEA **is** expected to provide information for schools to make decisions about curricula

and instruction" (p. **21**). Given this explanation about the purpose of the MEA, it could

be assumed that the reading and writing portions of the **MEA** would accurately measure

the effects of school literacy programs. **As** a result, then, it might be said that even

though the students in the school evaluation conducted by Boucher (1998) could read according to several different assessment tools, the program itself could still be considered poor and ineffective based on the **MEA.** Therefore, research is suggested to compare student literacy performance on local assessments with student literacy performance on the **MEA** to confirm the use of the **MEA** as a reflection of student achievement and school literacy programs.

In a study examining a similar comparison at the state and national level, Lee (1998b) first compared national performance standards with Maine performance standards and second compared Maine student performance improvement on national assessments with student performance improvement on the MEA. Lee found that the MEA performance standards "are highly comparable to or even more rigorous than national performance standards" (p. **2).** It was also found that "the sizes of state **MEA** reading and math score gains tend to be somewhat greater than are observed in national assessment results" (Lee, 1998b, p.2). Lee offers as a reason for the greater gains on the state assessment, "the impact of the **MEA** on school curriculum and instructional practices" (p.3). To confirm that the impact of the **MEA** on literacy program design and implementation are consistent throughout the state, it is suggested that a replication of Lee's study be conducted at the state and local level. This might confirm the use of the **MEA** as a performance measure in studies such as the one reported here.

Suggested Follow-up Research on Whole-School Literacy Programs

Some researchers have shown that when whole-school programs are implemented consistently over time, with specific attention to all the components, then there is measurable improvement of student achievement (i.e., Balfanz & MacIver, **2000;** Boykin,

2000; Hill & Crevola, 1999). Based on these findings, it is suggested that a longitudinal study might produce more definitive findings than did the cross-sectional study reported here. Additionally, a new survey instrument might be considered based on the results of the first literacy program study conducted by the Center for Inquiry at the Maine Department of Education (2000) since the findings were specific to effective elementary literacy programs in Maine. Such an instrument might provide more state-specific component definitions and as a result a more accurate assessment of literacy programs specific to what is deemed effective in this state. Finally, the inclusion of additional data-collection methods is advised to confirm survey findings – such as interviews, observations, and document analyses – and the use of multiple student achievement measures to adequately represent student performance.

Conclusion

The first purpose of this research study was to identify how elementary schools in Maine vary in their implementation of the components of a whole-school literacy program. The second purpose was **to** determine to what degree each **of** the components contributed to the whole program. The final purpose was to determine the effects of each of the components on student achievement, and of the whole program itself on student achievement.

The hypotheses about variation in program implementation suggested that there would not be substantial variation within schools but there would be substantial variation among schools. These hypotheses proved to be correct. In fact, there was shown to be great variation in the implementation of all the components of literacy programs among schools. The case study uncovered **22** items in seven components specifying extreme

differences between model schools and improvement schools. The identification of these 22 items is a major finding of this research.

In the effort to determine the degree to which each of the components contributed to the whole program, the hypothesis that there would be some components that contributed more than others was substantiated. Using bivariate correlation and factor analysis, it was found that the components of beliefs, program administration, and professional development contributed the most. This finding contributed to the development of a new whole-school literacy program model where these three components form the foundation of the program. The results surrounding the building leadership and literacy leadership components raised questions about the construct definitions and the methods of data collection for these particular components. Further research was suggested focusing on the building leadership and literacy leadership components to confirm their placement in the model.

The last purpose of this study – to determine the effects of the individual program components and the whole program on student reading and writing achievement – is one that has been pursued by many researchers. It was hypothesized that student achievement would vary depending upon the implementation **of** the components and the implementation of the whole program. This was not the case. The multiple regression analyses showed that only socioeconomic status predicted reading and writing achievement when the whole program was included as the predictor variable. In addition, only socioeconomic status predicted student achievement in writing when all ten components were included as the predictor variables. However, the results of the multiple regression analysis for reading achievement when all ten components were

entered as the predictor variables showed that socioeconomic status, assessment, and beliefs predict student achievement. A puzzling finding was that assessment had a strong negative correlation with student achievement in the regression. A possible explanation for this finding and a suggestion for further research were offered as a result.

In conclusion, the results of this research have contributed to our understanding **of** whole-school literacy programs by specifying detailed differences between model and improvement schools. Additionally, they have added to the research used to design literacy program models and prompted a revised model for whole-school literacy programs. Finally, it has provided an example of the difficulties encountered when attempting to evaluate the effects of whole-school literacy programs on student achievement and suggested alternative methods that might subsequently be more successful.

[1] Balfanz & MacIver, 2000; Bodilly, **1996;** Cole-Henderson, 2000; Creemers, **1997;** Creemers & Reezigt, **1996;** Frazee, **1996;** George, Grissom, & Just, **1996;** Haynes, **1998;** Hill & Rowe, **1996;** Kushman & Yap, **1999;** Sammons, Hillman, & Mortimore, **1995;** Slavin & Madden, 2000; Wasik, Karweit, Bond, Woodruff, Jaeger, & Adee, 2000.

[2] Anderson & Pellicer, **1998;** Bakall, Kurland, Ross, & Dones, **1991;** Crevola & Hill, **1998;** Harste, **1989;** Hill & Crevola, **1999;** Maine Department of Education, 2000; Pikulski, **1994;** Purkey & Smith, **1983;** Slavin, Karweit, Wasik, Madden, & Dolan, **1994;** Winfield & Hawkins, **1993;** Winfield, Hawkins, Stringfield, **1992;** Wong & Meyer, **1997;** Wong & Sunderman, **1997;** Wong, Sunderman, & Lee, **1997.**

[3] Research, including literacy program evaluation and whole-school evaluation, combine the building leadership and literacy leadership into one component equaling a **total** of nine whole-school components. The study presented here will measure these two types of leadership separately. In order to avoid confusion and for consistency, the number of whole-school components will always be stated as ten with the understanding that the leadership component is divided into two separate components.

[4] This is the key number of components that will be used throughout this study and explained in explicit detail.

'Anderson & Pellicer, **1998;** Bakall, Kurland, Ross, & Dones, **1991;** Balfanz & MacIver, 2000; Bodilly, **1996;** Cole-Henderson, **2000;** Creemers, **1997;** Creemers & Reezigt, **1996;** Crevola & Hill, **1998;** Frazee, **1996;** George, Grissom, & Just, **1996;** Harste, **1989;** Haynes, **1998;** Hill & Crevola, **1999;** Hill & Rowe, **1996;** Kushman & Yap, **1999;** Maine Department of Education, **2000;** Pikulski, **1994;** Purkey & Smith, **1983;** Sammons, Hillman, & Mortimore, **1995;** Slavin & Madden, 2000; Slavin, Karweit, Wasik, Madden, & Dolan, **1994;** Wasik, Karweit, Bond, Woodruff, Jaeger, & Adee, **2000;** Winfield & Hawkins, **1993;** Winfield, Hawkins, Stringfield, **1992;** Wong & Meyer, **1997;** Wong & Sunderman, **1997;** Wong, Sunderman, & Lee, **1997.**

[6] Winfield & Hawkins, **199;** Wong, Sunderman, & Lee, **1997.**

[7] Crevola & Hill, **1998;** Bakall, et al., **1991;** Slavin, et al., **1994.**

[8] There are four forms of this survey that will be used for the actual **study.** Each form addresses a particular respondent position: building principal, classroom teacher, supplemental service provider, and literacy specialist. Corresponding items on each survey address the same attribute of the component worded specifically for the position of the respondent.

[9] The northern region included Arrostook, Penobscot, Piscataquis, Washington, and Hancock counties. The central region included Kennebec, Somerset, Franklin, Knox,

Lincoln, Sagadahoc, and Waldo counties. The southern region included Androscoggin, Oxford, Cumberland, and York counties.

[10] Small schools have only one classroom per grade level, medium schools have two classrooms per grade level, and large schools have more than two classrooms per grade level.

[11] With the exception of case study schools **A** and E, all schools had total agreement for each component among team members. In case-study **school A,** *the **only*** component without agreement was beliefs. In case-study school E, the only component without agreement was supplemental instruction. Because of this, school **A** was excluded from the analysis of the beliefs component and school E was excluded from the analysis of the supplemental instruction component.

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APPENDICES

Appendix A

EARLY LITERACY INVENTORY (PILOT SURVEY FORM)

<u>Early Literacy Inventory</u>
Spring 2000

Classroom Teacher Survey

School Name _____

Position _____

Grade level _____

Survey Directions:
This **survey** asks you to respond to **94** items that are divided into 7 sections. The sections are lettered A through H. Each section requires a different type of response and is explained in the directions at the beginning of the section. Please read carefully through the directions for each section before you respond to that section. This survey should take you between 1 and **1.5** hours to complete. Please be sure to respond to *every* item.

Section A – questions 1 through 71:
Please think carefully about each of the following statements and circle the letter(s) next to each statement that best describes your agreement based on the following answer key. Read the statements carefully **so** you know to whom they are referring and with what you are agreeing or disagreeing. Some of the statements are written in a positive form and others are in a negative form so please read them very carefully. Please be sure to answer <u>every</u> question.

Answer Descriptors:

SA = Strongly Agree: You **agree completely** with the statement and no amount *of* discussion could make you change your mind.

A = Agree: You **agree** with the statement but you could be swayed in another direction if a strong argument were presented.

AS = Agree Somewhat: **You tentativeiy agree** with this statement and you could be very easily swayed.

DS = Disagree Somewhat: You **tentatively** disagree with this statement and you could be very easily swayed.

D = Disagree: You **disagree** with this statement but you could be swayed in another direction if a strong argument were presented.

SD = Strongly Disagree: You **disagree completely** with the statement and no amount of discussion could make you change your mind.

1. All school staff share a common belief about
   how students learn to read and write.
   SA   A   SA   **SD**   **D**   **SD**

2. Our school staff does not have a common vision about
   what we want our students to achieve in literacy.
   SA   **A**   SA   **SD**   **D**   **SD**

3. Each staff member believes that he or she can make a
   difference in the lives and education of our students.
   SA   **A**   **SA**   **SD**   D   **SD**

4. Our collective beliefs and understandings about teaching
   and learning form the foundation for our literacy program.
   SA   A   SA   **SD**   **D**   **SD**

5. All school staff does not work toward our shared vision.
   SA   A   SA   **SD**   **D**   **SD**

6. Our staff believes in the importance of modeling positive
   attitudes toward each other and the students.
   SA   A   SA   **SD**   D   **SD**

7. Classroom literacy instruction for my grade level is not
   consistent across classrooms.
   SA   A   **SA**   **SD**   D   **SD**

8. In my classroom, every student receives daily individual
   instruction in reading and writing.
   SA   **A**   **SA**   **SD**   **D**   **SD**

9. In my classroom, every student receives daily small-group
   instruction in reading and writing.
   SA   A   SA   **SD**   D   **SD**

10. In my classroom, every student receives daily whole-group
    instruction in reading and writing.
    SA   **A**   SA   **SD**   D   **SD**

11. Classroom literacy instruction is not consistent throughout
    the K-3 classrooms in our school.
    SA   **A**   SA   **SD**   D   **SD**

12. Every day I combine direct teacher instruction, teacher-
    guided learning, and independent time for student practice in
    reading and writing.
    SA   A   SA   **SD**   D   **SD**

13. Classroom literacy instruction in grades K –3 is not
    aligned with the state standards.
    SA   **A**   SA   SD   D   SD

14. I can support all of my literacy instructional practices
    with theory and research.
    SA   **A**   **SA**   **SD**   **D**   **SD**

15. My classroom instruction is not coordinated with the
    supplemental instruction provided for my students
    (i.e. Special Education, Title 1, Reading Recovery, etc.).
    SA   **A**   SA   SD   D   SD

16. The support staff is included in discussions and meetings
    about literacy programming.
    SA   A   SA   SD   D   SD

17. Supplemental instruction provided for students who need
    extra support in literacy is not individualized to meet
    each student's needs.
    SA   A   SA   SD   D   SD

18. I meet frequently and regularly to collaborate with
    the support staff that provides literacy intervention
    to my students.
    SA   A   SA   SD   D   SD

19. Supplemental services in literacy are not provided flexibly or diagnostically. **SA   A   SA   SD   D   SD**

20. *Supplemental* services are provided *early* and *relentlessly*. **SA   A   SA   SD   D   SD**

21. When I have a student who is struggling with reading or writing, I have no access to alternative programs and resources. **SA   A   SA   SD   D   SD**

22. Our school district supports professional development by fostering an environment of continuous improvement. **SA   A   SA   SD   D   SD**

23. The professional development opportunities in literacy offered by our district are planned to align with our school's standards. **SA   A   SA   SD   D   SD**

24. Our staff is not provided with regularly scheduled time during the workday to work toward the school's literacy goals. **SA   A   SA   SD   D   SD**

25. We are provided with ongoing support for new initiatives beyond the initial introductory session. **SA   A   SA   SD   D   SD**

26. I meet *frequently* and regularly with other classroom teachers to plan or collaborate. **SA   A   SA   SD   D   SD**

27. Professional development offered in our school is not practical and does not apply to my needs as a teacher. **SA   A   SA   SD   D   SD**

28. We are provided time to reflect on our teaching practices. **SA   A   SA   SD   D   SD**

29. Throughout the school, communication with parents is a two-way conversation. **SA   A   SA   SD   D   SD**

30. In our school, parents are embraced as full partners in their children's education. **SA   A   SA   SD   D   SD**

31. Our community does not provide literacy resources and opportunities for children and families. **SA   A   SA   SD   D   SD**

32. Our school provides literacy resources and opportunities for children and families. **SA   A   SA   SD   D   SD**

33. Our school does not have an organized program to develop and foster partnerships with families and community members. **SA   A   SA   SD   D   SD**

34. I meet regularly with parents to review their child's progress. **SA   A   SA   SD   D   SD**

35. Parents and community members do not often volunteer in our school. **SA   A   SA   SD   D   SD**

36. In our building, literacy program decisions are made by school-based committees.   SA   A   SA   SD   D   SD

37. Final decisions about hiring new teachers and support staff are made at the school level.   **SA**   A   SA   SD   D   SD

38. Resources, materials, and budgeting for our school's literacy program are developed and monitored at the central office.   **SA**   **A**   **SA**   **SD**   **D**   **SD**

39. Our school's literacy program is organized to foster focused and purposeful instruction.   SA   A   SA   SD   D   SD

40. District support is provided to our school to ensure the effective operation of our literacy program.   SA   A   SA   SD   D   SD

41. Our literacy program is not developed and coordinated at the school level.   SA   A   **SA**   SD   D   SD

42. I do not have an extended, uninterrupted time block for literacy instruction in my classroom.   **SA**   **A**   **SA**   SD   D   SD

43. Our principal is a strong leader (defined as firm, purposeful, and proactive)   SA   A   SA   SD   D   SD

44. Our principal is not knowledgeable about literacy research and best practices.   **SA**   **A**   SA   SD   D   SD

45. Our principal is committed to instructional improvement in reading and writing.   SA   A   SA   SD   D   SD

46. Our principal respects each teacher's individual learning style.   **SA**   A   SA   SD   D   SD

47. Our principal demonstrates an understanding of the institutional change process.   **SA**   A   SA   SD   D   SD

48. Our principal does not effectively communicate with the staff.   **SA**   A   SA   SD   D   SD

49. Student assessment data in reading and writing are used to inform our professional development direction in literacy.   **SA**   A   SA   SD   D   SD

50. Schoolwide student assessment data in reading and writing are not used to evaluate the school's literacy program.   **SA**   A   SA   SD   D   SD

51. The assessment approaches I use in my classroom do not parallel my instruction.   SA   A   SA   SD   D   SD

52. The assessment approaches I use are ongoing and provide information to inform my instruction.   **SA**   A   SA   SD   D   SD

53. The assessment approaches used in our school do not measure student performance of our school's standards.   SA   A   SA   SD   D   SD

54. In our school, we track each student's literacy performance from K to grade 3. **SA** A **SA SD** **D** **SD**

55. The assessment tools I use provide detailed and diagnostic information about each individual student. **SA** A **SA SD** **D** **SD**

56. The assessment tools I use do not provide information that I can use to direct my classroom teaching. SA A SA **SD** D **SD**

Note: for statements 57 & **58,** the word "current" means developed within the last 3 to 5 years.

57. Our school has current literacy content standards (<u>what</u> students should know) established: **SA** A **SA SD** **D** **SD**

58. Our school has current literacy performance standards (<u>how well </u>student should perform) established: **SA** A **SA SD** D **SD**

59. Our literacy standards include a minimum level at which all students must achieve. **SA** A **SA SD** D **SD**

60. Our literacy standards do not include a desired level that challenges student to exceed the minimum standard. SA A SA **SD** D **SD**

61. Students are aware of the standards they are expected to meet. SA **A** SA **SD** D **SD**

62. Our school standards **do** not reflect our beliefs **of** best practice. SA A SA **SD** **D** **SD**

63. Our school standards reflect what we believe about student learning. **SA** A SA **SD** D **SD**

Note: For statement numbers **64** and **65,** please check only one answer. If you check YES for statement number 65, please be sure to complete the statement that follows that number.

64. We have a certified literacy specialist in our school _____FULL **TIME**
_____**PART TIME**
NOT AT ALL

65. We have a person in our school who, while not being a certified literacy specialist, provides informal literacy leadership. _____ **YES**
_____ NO

This person's job title is _____
Note: If you checked FULL **TIME** or **PART TIME** for question number **64** please complete questions **66** to 71 below and then continue with the rest of the survey. If you checked NOT **AT** ALL for question number **64** please skip questions 66 to 71 below and proceed to page 8 of this survey to begin again with section B.

66. Our literacy leader does not provide support to teachers to improve their instruction (i.e. modeling, resources, etc.).   SA   A   SA   SD   D   SD

67. Our literacy leader has a high level of knowledge of kindergarten through grade 3 literacy education.   SA   A   SA   SD   D   SD

68. *Our* literacy leader does **not** provide in-school professional development.   SA   A   SA   SD   D   SD

69. Our literacy leader collects, monitors, and disseminates student achievement information.   SA   A   SA   SD   D   SD

70. Our literacy leader does not facilitate staff discussions focused on student assessment data.   SA   A   SA   SD   D   SD

71. Our literacy leader effectively communicates with the staff   SA   A   SA   SD   D   S

Section B – number 72:
For question number 72, please check only one.

72. Who in your district is responsible for leading the work of developing standards?
_____ SUPERINTENDENT/ASST. SUPT.
_____ CURRICULUM COORDINATOR
_____ PRINCIPAL/ASST. PRINCIPAL
_____ LITERACY SPECIALIST
_____ TEACHER
_____ OTHER_____

Section C – number 73 & 74:
For question number 73 & 74, please check **all that** apply

73. When I have a student who is struggling with reading or writing I have access to the following school resources:
_____ A LITERACY SPECIALIST
_____ A SPECIAL EDUCATION TEACHER
_____ ANOTHER CLASSROOM TEACHER
_____ PROFESSIONAL MATERIALS
_____ ALTERNATE PROGRAMS
_____ ALTERNATE MATERIALS

74. What sources of information do you use when planning your classroom literacy instruction?
_____ DISTRICT CURRICULUM
_____ MAINE LEARNING RESULTS
_____ PUBLISHED TEACHERS MANUALS
_____ PROFESSIONAL RESOURCE BOOKS
_____ DEVELOPMENTAL CONTINUA
_____ COLLEAGUE IMPUT
_____ ASSESSMENT INFORMATION
_____ LITERACY SPECIALIST
_____ PARENT INPUT
_____ OTHER_____

Section D – numbers 75 to 81:

For questions 75 to **81,** please check **only** the specified number of items indicated for each checklist. The number of required items is written in bold type at the end of each question.

75. In your opinion, which of the following are the most important components of your classroom literacy program? **Check** off **five (5) items.**

_____Interactive Read Alouds
_____Shared Reading
_____Guided Reading
_____Independent Reading/SSR
_____Students Reading Aloud
_____Choral Reading
_____Author Study
_____Genre Study
_____Literacy Skills and Strategy Mini-lessons
_____Word Study Activities
_____Literature Discussion Groups or Circles
_____Shared Writing
_____Interactive Writing
_____Independent Writing
_____Writing workshop
_____Computer Assisted Reading/Writing
_____Use of a Wide Variety of Reading Materials
_____Thematic or Integrated Learning Activities
_____Other _____

76. Of the methods listed in item **75,** which would you most like to learn more about or improve in your practice? **Please circle three (3) items.**

77. Which of the following word recognition strategies do you most often teach? Check off **five (5) items.**

_____Meaning (context clues)
_____Structure (syntax)
_____Visual (letter sounds, graphophonics)
_____Syllabication
_____Sight vocabulary
_____Rereading
_____Reading on
_____Substitutions
_____Skipping
_____Picture clues
_____Self-correction
_____Asking for help

78. Of the methods Jisted above, which would you most like to learn about or improve in your practice? **Please circle three (3) items.**

79. Which of the following comprehension strategies do you most often teach? **Please check five (5) items.**

_____Set a purpose for reading
_____Activate prior knowledge
_____Generate and answer their own questions to guide reading
_____Make predictions
_____Draw inferences/conclusions
_____Summarize main ideas
R e t e l l text events in sequence
_____Identify important details
_____Identify story elements and structure
_____Compare and contrast story elements
_____Determine point of view
_____Distinguish fact from opinion
_____Answer teacher posed questions
_____Use "think aloud" procedures
_____Participate in text discussions
_____Connect text to self, personal experiences, other texts
_____Use visualization techniques
_____Use graphic organizers (webs, outlines, KWL charts, etc.)
_____Self-monitor for understanding
Extend understanding through writing, artwork, drama, etc.

80. Of the methods listed in number 79, which would you most like to learn more about or improve in your practice? **Please circle three (3) items.**

81. What guides your choice in professional development activities?
Check three (3) items.

_____Personal interest
_____School-wide initiatives/goals
_____School District initiatives
_____Graduate program requirement
_____Availability of opportunity
_____Proximity to home
_____Other _____

Section E – numbers 82 to 85:
For questions 82 to *85,* please check all **items that apply.**

82. What interventions exist to support literacy development and/or struggling readers in your school?

_____Title I
_____Reading Recovery
_____Instructional Tutors
_____Volunteer Tutors
_____After School Programs
_____Summer Programs
_____ESL Programs
_____Project Story Boost
_____Other instructional *program(s)* _____

83. Which of the following systems do you use for regular sharing of information between school and home to support literacy development?

_____Newsletters
_____Calls Home
_____Home/school Journals
_____Homework Activities
_____Home Reading Logs
_____Parent / Teacher Conferences, With Portfolios _____ Without Portfolios _____
_____Parent/Teacher/Student Conferences, With Portfolios ——— Without Portfolios ———
_____Reading/Writing Workshops for Parents
_____Take Home Books/activities
_____Parent Readers in Classroom
_____Parent and/or Community Volunteers
_____Reading Incentive Programs _____
_____Field Trips

84. Which of the following resources are available to children/families in your community?
_____Local Library
_____School Library
_____Public Programs for **4** Year Olds
_____Headstart Programs
_____Literacy Programs for families with children aged birth to five (i.e. Even Start, Born to Read, Parents as Teachers Too, etc.)
_____Other Community Services Focused on Literacy _____

85. What format of professional development opportunities related to literacy have you been involved with during the past **2-3** years?

_____Matriculated Graduate Program in Literacy
_____Matriculated Graduate Program in Another Area
_____Non-Matriculated Graduate Courses
_____Conferences
_____Workshops
_____Professional Development Networks/Alliances, Partnerships
_____Teacher research groups
_____Literacy Collaborative
_____Specialized Training
_____Other _____

Section F – number 86:
86. Next to each professional development topic below, please complete each of the following directions:
- check the line under the word **Available** next to the topics that have been made available to you by your school.
- check the line under the words **Taken Part** if you have taken part in the professional development topics that you checked off as **Available** to you.
- check the line under the words Would Like next to the topics that you would like to **take** part in whether or not they have been made available to you.

Topics	Available	Taken Part	Would Like
Literacy Instruction	_____	_____	_____
Literacy Assessment	_____	_____	_____
Setting Literacy Benchmarks	_____	_____	_____
Reading Recovery Training	_____	_____	_____
Observing Young Learners Course	_____	_____	_____
Learning Results Alignment	_____	_____	_____
Peer Coaching	_____	_____	_____
Classroom Management	_____	_____	_____
Instruction for Struggling Students	_____	_____	_____
Accelerated Learning Techniques	_____	_____	_____
Collecting Data to Inform Instruction	_____	_____	_____
other _____	_____	_____	_____

Section G – numbers 87 – 93 :
For questions **87** to 93, please write your answer on the lines provided. Please be as specific as possible within the confines of the space provided.

87. What **ongoing** supports in your building or district are most helpful in guiding your instruction and assessment practices?

_____

_____

_____

_____

88. Which professional development opportunities related to literacy instruction and assessment have been most helpful and influential to your practice? Why?

_____

_____

_____

_____

89. What kinds of professional development opportunities would you like to see more of? **Why?**

_____

_____

_____

_____

90. Describe two aspects of **your own** literacy program/instruction you feel are strengths.

_____

_____

_____

_____

91. Describe two aspects of **your own** literacy program/instruction which you would like to improve.

_____

_____

_____

_____

92. Describe two aspects of **your school's** literacy program you feel are strengths.

_____

_____

_____

_____

93 Describe two aspects of **your school's** literacy program you would like to see improved.

_____

_____

_____

_____

Section H – question 94:

94. Please complete the table on the following page according to directions below.
- In the first column, please place a check mark next to the **five (5)** literacy assessment tools that you prefer to use. If there is a line next **to** the assessment tool that you checked off, please indicate the specific name of the tool if there is one.
- In the columns marked frequency, please circle the frequency with which you **use** the five tools you selected in column one, Using the key below circle only **one (1)** frequency.
- In the columns marked purpose, please circle the purposes for which you use the five tools you selected in column **one.** Using the key below circle **all purposes that apply.**

Frequency
D = Daily
W = Weekly
M = Monthly
Y = Yearly

Purpose
1 = Determine effectiveness of curriculum
2 = Diagnose reading abilities/disabilities
3 = Inform instruction
4 = Group students
5 = Assign grades
6 = Inform parents

Assessment Tool	Frequency				Purpose					
Observation Survey	D	W	M	Y	1	2	3	4	5	6
Running records for accuracy rate/text level	D	W	M	Y	1	2	3	4	5	6
Miscue analysis	D	W	M	Y	1	2	3	4	5	6
Retellings	D	W	M	Y	1	2	3	4	5	6
IRIs _____	D	W	M	Y	1	2	3	4	5	6
Developmental Reading Assessment (DRA)	D	W	M	Y	1	2	3	4	5	6
Conferencing about reading	D	W	M	Y	1	2	3	4	5	6
Observations with anecdotal notes	D	W	M	Y	1	2	3	4	5	6
Portfolios	D	W	M	Y	1	2	3	4	5	6
Standardized achievement tests _____	D	W	M	Y	1	2	3	4	5	6
Basal reading assessment _____	D	W	M	Y	1	2	3	4	5	6
Word lists _____	D	W	M	Y	1	2	3	4	5	6
Skills checklists _____	D	W	M	Y	1	2	3	4	5	6
Writing prompts _____	D	W	M	Y	1	2	3	4	5	6
Performance tasks	D	W	M	Y	1	2	3	4	5	6
Student interviews	D	W	M	Y	1	2	3	4	5	6
Attitude surveys	D	W	M	Y	1	2	3	4	5	6
Students self-assessment	D	W	M	Y	1	2	3	4	5	6
Other _____	D	W	M	Y	1	2	3	4	5	6

Appendix B

PILOT STUDY PRELIMINARY ANALYSIS

PILOT STUDY PRELIMINARY ANALYSIS

Summary of the Pilot Study Factor Analysis and Reliability Results on Schoolwide

Literacy Program Components

Beliefs: **A** factor composite of school team's report about common beliefs and
understandings in literacy acquisition in the following aspects including factor loadings:
staff share common beliefs, 0.91; staff have a common vision, 0. 43; staff believe they
make a difference, 0.69; beliefs form the foundation of program, 0.64; staff work toward
shared vision, 0.91; staff believes in modeling positive attitudes, 0.39. The factor has an
eigenvalue of 2.90 and explains 48.31 percent of the combined variance. The alpha
coefficient of reliability is 0.77.

 Classroom Literacy Program: A factor composite of school team's report about the
classroom literacy program in the following aspects including factor loadings: grade-level
instructional consistency, 0.51; daily individual instruction, 0.73; daily small-group
instruction, 0.63; daily whole-group instruction, 0.40; K – 3 instructional consistency,
0.72; daily combined direct teacher instruction, teacher-guided learning, and independent
practice, 0.62; instruction aligned with state standards, 0.70; instruction practices
supported by theory and research, **0.43.** The factor has an eigenvalue of 2.93 and
explains 36.60 percent **of** the combined variance. The alpha coefficient of reliability is
0.72.

Supplemental Instruction: **A** factor composite of school team's report about the
supplemental literacy instruction in the following aspects including factor loadings:
coordination with regular classroom, 0.64; support staff included in program discussions,
0.63; instruction is individualized, 0.5**8;** collaboration with classroom teachers, 0.86;

services are flexible and diagnostic, 0.58; services are provided early and relentlessly, 0.85; access to alternative programs and resources, 0.56. The factor has an eigenvalue of 3.26 and explains 46.62 percent of the combined variance. The alpha coefficient **of** reliability is 0.79.

Professional Development: **A** factor composite of school team's report about professional development in literacy in the following aspects including factor loadings: continuous improvement, 0.76; aligned with school's standards, 0.91; regularly scheduled time during the work day, 0.70; ongoing support for initiatives, 0.82; teachers meet regularly to collaborate, 0.77; practical and applies to teacher needs, 0.73; time to reflect, 0.70. The factor has an eigenvalue of **4.15** and explains 59.26 percent of the combined variance. The alpha coefficient of reliability is 0.86.

Home/School Partnership: **A** factor composite of school team's report about home/school partnerships in literacy in the following aspects including factor loadings: two-way communication, 0.66; parents are full partners, **0.71;** community resources, 0.78; school resources, 0.64; organized program to develop partnerships, 0.65; regular meetings with parents to review student progress, 0.68; parent and community volunteers, 0.78. The factor has an eigenvalue of 3.45 and explains 49.32 percent of the combined variance. The alpha coefficient of reliability is 0.81.

Organizational Structure: **A** factor composite of school team's report about organizational structure of the literacy program in the following aspects including factor loadings: school-based program decisions, 0.45; final hiring decisions made at school-level, 0.27; resources, materials, and budgeting developed and monitored at the school level, **0.34;** program organized to foster focused and purposeful instruction, 0.67; district

support for effective operation, 0.47; program developed and coordinated at school-level, **0.93;** extended and uninterrupted time block for classroom literacy instruction, 0.75. The factor has an eigenvalue of 2.51 and explains 35.83 percent **of** the combined variance. The alpha coefficient of reliability is 0.63.

Building. Leadership: **A** factor composite of school team's report about the building leadership in the following aspects including factor loadings: strong (firm, purposeful, & proactive), 0.77; knowledgeable about literacy research and practice, 0.42; committed to instruction improvement, 0.80; respects teacher learning styles, 0.79; understands institutional change process, 0.92; effective communication, 0.55. The factor has an eigenvalue of 3.17 and explains 52.80 percent of the combined variance. The alpha coefficient of reliability is 0.74.

Assessment: **A** factor composite of school team's report about assessment in the following aspects including factor loadings: data used to inform professional development direction, 0.73; data used to evaluate the program, 0.69; approaches parallel instruction, 0.81; approaches are ongoing, 0.64; approaches measure performance on school standards, 0.90; longitudinal tracking of student performance, 0.75; tools provide diagnostic information, 0.86; results inform instruction, 0.83. The factor has an eigenvalue **of** 4.90 and explains 61.83 percent of the combined variance. The alpha coefficient of reliability is 0.88.

Standards: A factor composite of school team's report about standards in the following aspects including factor loadings: current literacy content standards, 0.91; current literacy performance standards, 0.92; include minimum standards, 0.77; challenge beyond **the** minimum standards, **0.80;** students are aware of standards, 0.87; reflect beliefs of best

practice, 0.81; reflect beliefs about student learning, 0.66. The factor has an eigenvalue

of 4.75 and explains 67.83 percent of the combined variance. The alpha coefficient of

reliability **is** 0.91.

Literacy Leadership: **A** factor composite of school team's report about the literacy

leadership in the following aspects including factor loadings: provides support to

teachers, 0.77; high level of knowledge about literacy education, 0.48; provides in-house

professional development, 0.80; collect, monitors, and disseminates students achievement

data, 0.77; facilitates student-data discussions, 0.43; effective communication, 0.70. The

factor has an eigenvalue of 2.73 and explains 45.47 percent of the combined variance.

The alpha coefficient **of** reliability is 0.70.

Appendix C

EARLY LITERACY INVENTORY (RESEARCH STUDY FORM)

Early Literacy Inventory
Department of Education

Classroom Teacher Survey

Survey Directions:
This survey asks you to respond to 92 items. Please mark all of your answers on the scan form provided with this survey. For your ease, the survey is separated into several labeled sections that correspond with labeled sections on the scan form. Please be careful when marking the scan form to be sure that you are marking the correct item number on the scan form that corresponds with the item number on this survey. This survey should take you approximately 1 hour to complete. Complete all items to the best of your knowledge. Please respond to <u>every</u> item. Do not leave any item blank.

Items 1 through 71:
Please think carefully about each of the following statements and mark the box on the scan form that best describes your agreement based on the following answer key. Read the statements carefully *so* you know to whom they are referring and with what you are agreeing or disagreeing. Please check often to be sure you are correctly matching the item on the scan form with the item on survey sheet. Please be sure to answer *every* question.

Answer Descriptors:

SA = Strongly Agree: **You agree completely** with the statement and no amount of discussion could make you change your mind.

A = Agree: **You agree** with the statement but you could be swayed in another direction if a strong argument were presented.

SWA = Somewhat Agree: You **tentatively agree** with this statement and you could be very easily swayed.

SWD = Somewhat Disagree: You **tentatively disagree** with this statement and you could be very easily swayed.

D = Disagree: You **disagree** with this statement but you could be swayed in another direction if a strong argument were presented.

SD = Strongly Disagree: You **disagree completely** with the statement and no amount of discussion could make you change your mind.

Beliefs

1. Our school staff shares a common belief about how students learn to read and write.

2. Our school staff has a common vision about what we want our students to achieve in literacy.

3. Each staff member believes that he or she can make a difference in the lives and education of our students.

4. Our collective beliefs and understandings about teaching and learning form the foundation for our school's literacy program.

5. All members of our school staff work toward our shared vision.

6. Our staff believes in the importance of modeling positive attitudes toward each other and the students.

Classroom Instruction

7. Classroom literacy instruction for my grade level is consistent across classrooms.

8. In my classroom, every student receives daily individual instruction in reading and writing.

9. In my classroom, every student receives daily small-group instruction in reading and writing.

10. In my classroom, every student receives daily whole-group instruction in reading and writing.

11. Classroom literacy instruction is consistent throughout the K-3 classrooms in our school.

12. Every day I combine direct teacher instruction, teacher-guided learning, and independent time for student practice in reading and writing.

13. Classroom literacy instruction in grades K –3 is aligned with the state standards.

14. I can support all **of** my literacy instructional practices with theory and research.

Supplemental Instruction

15. My classroom instruction is coordinated with the supplemental instruction provided for my students (i.e. Special Education, Title 1, Reading Recovery, etc.).

16. The support staff is included in discussions and meetings about literacy programming.

17. Supplemental instruction provided for students who need extra support in literacy is individualized to meet each student's needs.

18. I meet frequently and regularly to collaborate with the support staff that provides literacy intervention to my students.

19. Supplemental services in literacy are flexibly provided based on student performance during instruction.

20. Supplemental services are provided as early as possible and as long as necessary.

21. When I have a student who is struggling with reading or writing, I have access to alternative programs and resources.

Professional Development

22. Our school district supports professional development by fostering an environment of continuous improvement.

23. The professional development opportunities in literacy offered by our district are planned to align With our school's standards.

24. Our staff is provided with regularly scheduled time during the workday to work toward the school's literacy goals.

25. We are provided with ongoing support for new initiatives beyond the initial introductory session.

26. I meet frequently and regularly with other teachers to plan or collaborate.

27. Professional development offered in **our** school is practical and applies to my needs as a teacher.

28. We are provided time during the workday to collectively reflect on our teaching practices.

Home/School Partnership

29. Throughout the school, communication with parents is a two-way conversation.

30. In our school, parents are embraced as full partners in their children's education.

31. Our local community provides literacy resources and opportunities for children and families.

32. Our school provides literacy resources and opportunities for children and families.

Word Recognition Strategies
Column A
76A. Which of the following word recognition strategies do you most often teach? *Murk only five (5) items in Column A.*

Column B
76B. Of the methods listed, which would you most like to learn about or improve in your practice? *Murk only three (3) items in Column B.*

Comprehension Strategies
Column **A**
77A. Which of the comprehension strategies on the list do you most often teach? *Murk only fwe (5) items in Column A.*

Column **B**
77B. Of the methods listed, which would you most like to learn more about or improve in your practice? *Murk only three (3) items in Column B.*

Professional Development
Murk only three (3) items.
78. What guides your choice in professional development activities?

Literacy Interventions
Murk all that apply
79. What interventions exist to support literacy development and/or struggling readers in your school?

Home/School Communication
Murk all that apply
80. Which of the following systems do you use **for** regular sharing of information between school and home to support literacy development?

Community Resources
Murk all that upply
81. Which of the following resources are available to children/families in your community?

Professional Development
Murk all that apply
82. What format **of** professional development opportunities related to literacy have **you** been involved with during the past **2-3** years?

Professional Development

Mark all that apply

83. Next to each professional development topic, please complete each of the following directions:

- In Column A, mark all boxes for topics that have been made **Available** to you by your school.
- In Column B, mark the boxes for topics in which you have **Taken Part.**
- In Column C, mark all boxes for topics that you **Would Like** to take part in whether **or** not they have been made available to you.

Assessment Tools

Mark only five (5) items

84. Please complete the table according to directions below.

- In Column **A,** please mark the five *(5)* literacy assessment tools that you most prefer to use.
- In the Column B, please mark the **Frequency** with which you use the five tools you selected in Column **A. Using** the key below *mark only one (1) frequency for each tool.* If the exact frequency with which you use the tool is not listed, please mark the box that most closely represents your frequency.
- In Column C, please mark the purposes for which you use the five tools you selected in Column **A.** Using the key below *mark all purposes that apply.*

Frequency	**Purpose**
D = Daily	1 = Determine effectiveness of curriculum
W = Weekly	2 = Diagnose reading abilities/disabilities
M = Monthly	3 = Inform instruction
Y = Yearly	4 = Group students
	5 = Assign grades
	6 = Inform parents

Items 85 to 92

Items **85** to **92** are written on side two of page two on the scan form, please read and respond thoughtfully to each question or statement in the space provided on the form. Please provide as much information as possible within the confines of the space provided.

Early Literacy Inventory
Department of Education

School | **Position**

☐ Principal
☐ Classroom Teacher
☐ Special Education
☐ Tide 1
☐ Literacy Specialist

Grade Level You Teach (check all that apply)

☐ K   ☐ 2
☐ 1   ☐ 3

Beliefs

	SA	A	SWA	SWD	D	SD
1.	☐	☐	☐	☐	☐	☐
2.	☐	☐	☐	☐	☐	☐
3.	☐	☐	☐	☐	☐	☐
4.	☐	☐	☐	☐	☐	☐
5.	☐	☐	☐	☐	☐	☐
6.	☐	☐	☐	☐	☐	☐

Classroom Instruction

	SA	A	SWA	SWD	D	SD
7.	☐	a	☐	☐	☐	☐
8.	☐	☐	☐	☐	☐	☐
9.	☐	☐	☐	☐	☐	☐
10.	☐	☐	☐	☐	☐	☐
11.	☐	☐	☐	☐	☐	☐
12.	☐	☐	☐	☐	☐	☐
13.	☐	☐	☐	☐	☐	☐
1?.	☐	☐	☐	☐	☐	

Supplemental Instruction

	SA	A	SWA	SWD	D	SD
15.	☐	☐	☐	☐	☐	☐
16.	☐	☐	☐	☐	☐	☐
17.	☐	☐	☐	☐	☐	☐
18.	☐	☐	☐	☐	☐	☐
19.	☐	☐	☐	☐	☐	☐
20.	☐	☐	☐	☐	☐	☐
21.	☐	☐	☐	☐	☐	☐

Professional Development

	SA	A	SWA	SWD	D	SD
22.	☐	☐	☐	☐	☐	☐
23.	☐	☐	☐	☐	☐	☐
24.	☐	☐	☐	☐	☐	☐
25.	☐	☐	☐	☐	☐	☐
26.	☐	☐	☐	☐	☐	☐
27.	☐	☐	☐	☐	☐	☐
28.	☐	☐	☐	☐	☐	☐

Home/School Partnership

	SA	A	SWA	SWD	D	SD
29.	☐	☐	☐	☐	☐	☐
3 0 G		☐	☐	☐	☐	☐
31.	☐	☐	☐	☐	a	☐
32.	☐	☐	☐	☐	☐	☐
33.	☐	☐	☐	☐	☐	☐
34.	☐	☐	☐	☐	☐	☐
35.	☐	☐	☐	☐	☐	☐

Program Administration

	SA	A	SWA	SWD	D	SD
36.	☐	☐	☐	☐	☐	☐
37.	☐	☐	☐	☐	☐	☐
38.	☐	☐	☐	☐	☐	☐
39.	☐	☐	☐	☐	☐	G
40.	☐	☐	☐	☐	☐	☐
41.	☐	☐	☐	☐	☐	☐
42.	☐	☐	☐	☐	☐	☐

Building Leadership

	SA	A	SWA	SWD	D	SD
43.	☐	☐	☐	☐	☐	☐
44.	☐	☐	☐	☐	☐	☐
45	☐	☐	☐	☐	☐	☐
46	☐	☐	☐	☐	☐	☐
47	☐	☐	☐	☐	☐	☐
48	☐	☐	☐	☐	☐	☐

Assessment

	SA	A	SWA	SWD	D	SD
49.	☐	☐	☐	☐	☐	☐
50.	☐	☐	☐	☐	☐	☐
51	☐	☐	☐	☐	☐	☐
52	☐	☐	☐	☐	☐	☐
53	☐	☐	☐	☐	☐	☐
54	☐	☐	☐	☐	☐	☐
55	☐	☐	☐	☐	☐	☐
56	☐	☐	☐	☐	☐	☐

Standards

	SA	A	SWA	SWD	D	SD
57.	☐	☐	☐	☐	☐	☐
58.	☐	☐	☐	☐	☐	☐
59	☐	☐	☐	☐	☐	☐
60.	☐	☐	☐	☐	☐	☐
61	☐	☐	☐	☐	☐	☐
62.	☐	☐	☐	☐	☐	☐
63	☐	☐	☐	☐	—	☐

Literacy Leadership

64. ☐ Full-time
☐ Part-time
☐ Not at all
65. ☐ Yes ☐ No.

	SA	A	SWA	SWD	D	SD
66.	☐	☐	☐	☐	☐	☐
67.	☐	☐	☐	☐	☐	☐
68	☐	☐	☐	☐	☐	☐
69.	☐	☐	☐	☐	☐	☐
70.	☐	☐	☐	☐	☐	☐
71.	☐	☐	☐	☐	☐	☐

Developing Standards
Mark only one (1)

72. ☐ Superintendent/Asst.Super.
☐ Curriculum Coordinalor
☐ Principal/Asst. Principal
☐ Literacy Specialist
☐ Tea-her
☐ Other

Sources of Information
Mark all that apply

73. ☐ Literacy specialist
☐ Special educauon teacher
☐ Classroom teacher
☐ Professional materials
☐ Alternative programs
☐ Alternative materials

Mark all that apply

74. ☐ District curriculum
☐ Maine Learning Results
☐ Published teacher's manuab
☐ Professional resource books
☐ Developmental conunua
☐ Colleague input
☐ Assessment information
☐ Literacy specialist
☐ Parenr input
☐ Olhcr

ID Number

Classroom Literacy Components

75. **Please mark five (5)** items in column **A** and three (3) items in column B.

A	B	
☐	☐	Interactive read alouds
☐	☐	Shared reading
☐	☐	Guided reading
☐	☐	Independent reading/SSR
☐	☐	Students reading aloud
☐	☐	Choral reading
☐	☐	Author study
☐	☐	Genre study
☐	☐	Literacy skills & mini-lessons
☐	☐	word study activities
☐	☐	Literature discussion **groups**
☐	☐	Shared writing
☐	☐	Interactive writing
☐	☐	Independent writing
☐	☐	Writing workshop
☐	☐	Computer assisted reading/writing
☐	☐	A wide variety of reading materials
☐	☐	Thematic/integrated learning activitie
☐	☐	Other

Word Recognition Strategies

76. Please **mark five (5)** items in column **A** and three (3) items in column B

A	B	
☐	☐	Self-correction
☐	☐	Syllabication
☐	☐	Sight vocabulary
☐	☐	Rereading
☐	☐	Reading **on**
☐	☐	Substitutions
☐	☐	Skipping
☐	☐	Picture clues
☐	☐	Asking for help
☐	☐	**Meaning** (context clues)
☐	☐	Structure (syntax)
☐	☐	**Visual** (letter sounds. graphophonics)

Comprehension Strategies

77 Please mark fire (5) items in column A and three (3) items in column B.

A	B	
☐	☐	**Set a purpose** for reading
☐	☐	Activate prior knowledge
☐	☐	Generate **own questions** to guide reading
☐	☐	Make predictions
☐	☐	Draw inferences/conclusions
☐	☐	Summarize main ideas
☐	☐	Retell text **events** in sequence
☐	☐	Identify important details
☐	☐	Identify **story** elements and structure
☐	☐	Compare **and** contrast story elements
☐	☐	Determine point of view
☐	☐	Distinguish fact from opinion
☐	☐	Answer teacher posed questions
☐	☐	Use "think aloud- procedures
☐	☐	Participate in text discussions
☐	☐	Connect text to self, personal experiences
☐	☐	**Use** visualization techniques
☐	☐	**Use** graphic organizers
☐	☐	Self monitor for understanding
☐	☐	Extend understanding through writing, artwork. drama. etc.

Professional Development
(Mark three (3) items)

78. ☐ Personal interest
- ☐ School-wide initiatives/goals
- ☐ School district initiatives
- ☐ Graduate program requirement
- ☐ Availability of opportunity
- ☐ Proximity to home
- ☐ Other

Literacy Interventions
(Mark all that apply)

79. ☐ Title I
- ☐ Reading Recovery
- ☐ Instructional tutors
- ☐ Volunteer tutors
- ☐ After-school tutors
- ☐ Summer programs
- ☐ **ESL** programs
- ☐ P r o p Story Boost
- ☐ Other program(s)

Home/School Communication
(Mark all that apply)

80 ☐ Newsletters
- ☐ Calls home
- ☐ Home/school journals
- ☐ Homework activities
- ☐ Home reading **logs**
- ☐ Parent/teacher conferences
- ☐ Parent/teacher/student Conferences
- ☐ Reading/writing workshops for parents
- ☐ Take-home books/activities
- ☐ Parent readers in classroom
- ☐ Parent and/or community volunteers
- ☐ Reading incentive programs
- ☐ Field trips

Community Resources
(Mark all that apply)

81. ☐ Local library
- ☐ School library
- ☐ Public programs for 4 year olds
- ☐ Headstart programs
- ☐ Literacy programs for families with children aged birth to five
- ☐ Other community services focused on literacy

Professional Development
(Mark all that apply)

82. ☐ Matriculated graduate program (Literacy)
- ☐ Matriculated graduate program (other)
- ☐ Non-matriculated graduate courses
- ☐ Conferences
- ☐ Workshops
- ☐ Professional development networks
- ☐ Teacher research groups
- ☐ Literacy collaborative at UMaine
- ☐ School-based literacy committee
- ☐ Specialized training
- ☐ Other

144

83. Professional Development
(Mark all that apply)

	A Available	B Taken Part	C Would Like
a. Literacy (reading/writing) instruction	☐	☐	☐
b. Literacy assessment	☐	☐	☐
c. Setting literacy benchmarks	☐	☐	☐
d. Reading Recovery training	☐	☐	☐
e. Observing Young Learners course	☐	☐	☐
f. Learning Results alignment	☐		☐
g. Peer coaching	☐	☐	☐
h. Classroom management	☐	☐	☐
i. Instruction **for low** achieving students	☐	☐	☐
j. Accelerated learning techniques	☐	☐	☐
k. Collecting data to inform instruction	☐	☐	☐
l. Other	☐	☐	☐

84. Assessment Tools
(Mark only 5)

	A	B Frequency	C Purpose
a. Observation survey	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
b. Running records for accuracy rate/text level	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
c. Miscue analysis	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
d. Retellings	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
e. IRIs	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
f. Developmental Reading Assessment (DRA)	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
g. Conferencing about reading	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
h. Observations with anecdotal notes	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
i. Portfolios	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
j. Standardized achievement tests	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
k. Basal reading assessment	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
l. Word lists	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
m. Skills checklists	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
n. Writing prompts	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
o. Performance casks	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
p. Student interviews	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
q. Attitude surveys	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
r. Students self-assessment	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
s. Other	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐

ID Number

Do Not Mark

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145

85. **What ongoing** supports in your building or district *are* most helpful in guiding instruction and assessment practices?

86. Which professional development opportunities related to literacy instruction and assessment have been most helpful and influential? **Why?**

87. What kinds of professional development opportunities would you like to see more of? **Why?**

88. Describe two aspects of **your own** literacy program/instruction you feel are strengths.

89. Describe two aspects of **your own** literacy program/instruction you would **like** to improve.

90. Describe two aspects of **your school's** literacy program you feel are strengths

91. Describe two aspects of **your school's** literacy program you would like to see improved.

92. If you stated on question 65 you have a person in your school who provides informal literacy leadership, please indicate this person's job title. _____

Appendix D

LETTER FROM THE MAINE COMMISSIONER OF EDUCATION

TO: Elementary Principals, K-3 Teachers, Literacy Specialists, and Literacy
support Staff

FROM: J. Duke Albanese, Commissioner

RE: Regional Literacy Meetings

DATE: February 14, 2000

I am writing to invite you to participate in a networking opportunity for your school's literacy program. As we in the Department shape our support of schools developing comprehensive local assessment systems, we need a clear picture of early literacy instruction and assessment practices. As you may be aware, the Department established a Center for Inquiry on Literacy in the fall of 1998. The Center provides a vehicle for sustained and reflective support of literacy practices in Maine. During its first year, Connie Goldman, with a team of some of Maine's finest practitioners and scholars in this area, conducted research regarding early literacy practices in Maine schools. This research has yielded some important common characteristics found in successful early literacy programs. Findings **of** the research project will be published in a report to be distributed this spring.

This year, two Department **of** Education consultants have been assigned to this work: Jaci Holmes, our Child Development Services Director and Early Childhood Consultant, and Lee Anne Larsen, a Distinguished Education with the Department this year in the area of Early Literacy. Jaci and Lee Anne are building on the Department's initial research by involving additional districts. We are approaching this as a collaborative inquiry, seeking to learn from each other as we all strive to accomplish the critical task of helping our children become effective communicators. In short, we want to help educators identify what literacy practices are working successfully with their students **and** to encourage dialogue regarding ways they can improve their practices to achieve even greater success

To this end, you are invited to apply to attend the first of several Regional Literacy Meetings. Information about the date, time, and location of the meeting for schools in your county is attached. We are asking schools to send teams of **6-7** members,

which should include one teacher from lundergarten, first, second, and third grades, as well as the building principal, literacy specialist (if one is employed), and one other person involved in literacy in your school (such as a special educator, Title I coordinator or tutor, or Reading Recovery teacher). While we would like to be able to accept every school that applies, we will only be able to accommodate **18** schools per region in this next phase of the Center's work. From the group of schools that apply, a sample representing the diversity of the region will be selected. Schools will be notified of their selection by March 6, 2000, and directions to the meetings will be included in the notification.

At the meeting, Jaci and Lee Anne will share information about the Center for Inquiry on Literacy and will provide you with a sampling of literacy resources. They will **ask** you to complete a literacy inventory about your school's program. There will be also an opportunity to share ideas with colleagues from other participating schools. Dinner will be provided at no cost. **An** agenda for the meeting is attached, as is a form to complete and return to the Department in the envelope provided by February 28, 2000.

Please note that the purpose of these meetings is to get accurate information about literacy practices in Maine schools. It will not be used in any way to evaluate the quality of a district's efforts. **As** we make the case with policymakers on the need for resources to support the *Learning Results* work in each school, it is essential that we have accurate information about what is happening in local schools. I encourage your school to participate in the session in your region, whether your school is currently focusing attention on literacy issues or not. This is an opportunity for Maine educators to engage in shared inquiry, to learn from each other, and to continue to support high literacy achievement for Maine children. If you have any questions, please **do** not hesitate to contact the Center for Literacy at one of the numbers below.

Jaci Holmes (287-3272)
      Child Development Services Director and Early Childhood Consultant
Lee Anne Larsen **(287-7689)**
      Distinguished Educator for Early Literacy

Regional Literacy Meeting

Site: _____

Date: _____

School Name: _____

*Note: If your school does not contain a K-3 population, please include participants from the school(s) in your system which have the grade levels your school does not have to create a team for the meeting.

School Address: _____

_____

School Phone: _____

School FAX: _____

School E Mail: _____

Names of Attendees:

     Principal: _____

     Literacy Specialist: _____

     Supplemental Support Person: _____

     Kindergarten Teacher: _____

     First Grade Teacher:_____

     Second Grade Teacher: _____

     Third Grade Teacher: _____

*Please return this form in the envelope provided by **February 28, 2000** or fax to 287-3884 attention Jaci Holmes.*

Appendix E

DEMOGRAPHIC INFORMATION SHEET

DEMOGRAPHIC INFORMATION SHEET

School Number_____ Region _____

Please complete all of the following information. Bring this sheet with you when you register at your session.

Our school includes grade _____ to grade _____

The total number of students in this school is _____

The average number of students per class in grades K – 3 is _____

We have a K – 3 classroom teaching staff of _____ teachers.

We have a K – 3 special education staff of _____ teachers and _____ technicians.

We have a K – 3 Title 1 staff of _____ teachers and _____ technicians.

The percentage **of** K – 3 classroom teachers who have a Master's Degree in <u>Literacy</u> **is** _____ %

The percentage of K – 3 classroom teachers who have a Master's Degree in another area is _____%

The percentage of literacy support personnel who have a Master's degree in <u>Literacy</u> is _____%

The percentage of literacy support personnel who have a Master's Degree in another area **is** _____%

The current principal has been in this position for _____ years.

The previous principal was in the position for _____ years.

Appendix F

RESEARCH STUDY PRELIMINARY ANALYSIS

RESEARCH STUDY PRELIMINARY ANALYSIS

Summary of the Study Factor Analysis and Reliability Results of the Schoolwide

Literacy Program Components

Beliefs: **A** factor composite of school team's report about common beliefs and understandings in literacy acquisition in the following aspects including factor loadings: staff work toward shared vision, **0.91;** staff have a common vision, 0.86; staff share common beliefs, **0.84;** beliefs form the foundation **of** program, **0.81;** staff believes in modeling positive attitudes, 0.75; staff believe they make a difference, 0.64. The factor has an eigenvalue of **3.90** and explains **64.98** percent of the combined variance. The alpha coefficient of reliability is **0.89.**

 Classroom Instruction: A factor composite of school team's report about the classroom literacy program in the following aspects including factor loadings: instruction aligned with state standards, **0.74;** grade-level instructional consistency, **0.743;** K – 3 instructional consistency, **0.73;** daily combined direct teacher instruction, teacher-guided learning, and independent practice, **0.69;** instruction practices supported by theory and research, **0.62;** daily small-group instruction, 0.55; daily individual instruction, **0.54;** daily whole-group instruction, **0.47.** The factor has an eigenvalue **of 3.31** and explains **41.3**1 percent of the combined variance. The alpha coefficient **of** reliability is **0.79.**

Supplemental Instruction: **A** factor composite of school team's report about the supplemental literacy instruction in the following aspects including factor loadings: services are flexible and diagnostic, **0.83;** instruction is individualized, **0.78;** access to alternative programs and resources, **0.71;** collaboration with classroom teachers, **0.69;** support staff included **in** program discussions, **0.69;** services are provided early and

relentlessly, 0.69; coordination with regular classroom, 0.61. The factor has an eigenvalue of 3.61 and explains 51.53 percent of the combined variance. The alpha coefficient of reliability is 0.84.

Professional Development: **A** factor composite of school team's report about professional development in literacy in the following aspects including factor loadings: ongoing support for initiatives, 0.81; practical and applies to teacher needs, 0.80; aligned with school's standards, 0.78; continuous improvement, 0.76; regularly scheduled time during the work day, 0.64; time to reflect, 0.56; teachers meet regularly to collaborate, 0.46. The factor has an eigenvalue of 3.41 and explains 48.73 percent of the combined variance. The alpha coefficient of reliability is 0.82.

Home/School Partnership: **A** factor composite of school team's report about home/school partnerships in literacy in the following aspects including factor loadings: parents are full partners, 0.78; two-way communication, 0.76; school resources, 0.72; regular meetings with parents to review student progress, 0.66; parent and community volunteers, 0.62; organized program to develop partnerships, 0.54; community resources, 0.48. The factor has an eigenvalue of 3.04 and explains 43.48 percent of the combined variance. The alpha coefficient of reliability is 0.77.

Program Administration: **A** factor composite of school team's report about program administration of the literacy program in the following aspects including factor loadings: program developed and coordinated at school-level, 0.76; program organized to foster focused and purposeful instruction, 0.75; district support for effective operation, 0.70; school-based program decisions, 0.68; resources, materials, and budgeting developed and monitored at the school level, 0.65; final hiring decisions made at school-level, 0.50;

extended and uninterrupted time block for classroom literacy instruction, 0.42. The factor has an eigenvalue **of** 2.92 and explains **4** 1.80 percent of the combined variance. The alpha coefficient of reliability is 0.75.

Building Leadership: **A** factor composite of school team's report about the building leadership in the following aspects including factor loadings: strong **(firm** purposeful, **&** proactive), 0.88; understands institutional change process, 0.87; effective communication, 0.86; committed to instruction improvement, 0.82; respects teacher learning styles, 0.76; knowledgeable about literacy research and practice, 0.75. The factor has an eigenvalue of 4.07 and explains 67.78 percent of the combined variance. The alpha coefficient of reliability is 0.90.

Assessment: **A** factor composite of school team's report about assessment in the following aspects including factor loadings: tools provide diagnostic information, 0.75; results inform instruction, 0.73; approaches are ongoing, 0.70; approaches measure performance on school standards, 0.69; longitudinal tracking of student performance, 0.65; approaches parallel instruction, 0.64; data used to evaluate the program, 0.60; data used to inform professional development direction, 0.58. The factor has an eigenvalue of 3.58 and explains 44.76 percent of the combined variance. The alpha coefficient of reliability is 0.81.

Standards: **A** factor composite of school team's report about standards in the following aspects including factor loadings: reflect beliefs of best practice, 0.92; reflect beliefs about student learning, 0.92; current literacy performance standards, 0.87; challenge beyond the minimum standards, 0.85; current literacy content standards, 0.84; include minimum standards, 0.80; students are aware of standards, 0.79. The factor has an

eigenvalue of **5.13** and explains **73.35** percent of the combined variance. The alpha coefficient of reliability is **0.94.**

Literacy Leadership: **A** factor composite of school team's report about the literacy leadership in the following aspects including factor loadings: facilitates student-data discussions, **0.83;** provides support to teachers, **0.82;** provides in-house professional development, **0.82;** effective communication, **0.77;** high level of knowledge about literacy education, **0.76;** collect, monitors, and Qsseminates students achievement data, **0.74.** The factor has an eigenvalue of **3.746 and** explains **62.43** percent of the combined variance. The alpha coefficient of reliability is **0.87.**

Appendix G

SUMMARY OF STATISTICALLY SIGNIFICANT COMPONENTS

Table A.1

<u>Summary of Statistically Significant Components</u>

School	1	2	3	4	5	6	7	8	9	10
R		X			X					
Q									X	
S				X						
T							X			
U	X									
A	X									
O										X
E			X							
V							X			
W		X								
P	X						X			
I									X	
X										X
H										X
N		X		X					X	
Y							X			
Total	4	2	1	2	1	0	4	0	3	3

Note: Number headers stand for the following components: 1) Beliefs, 2) Classroom instruction, 3) Supplemental instruction, 4) Professional development, 5) Home/school partnership, 6) Program administration, 7) Building leadership, 8) Assessment, 9) Standards, 10) Literacy leadership.

Appendix H

ANALYSTS OF VARIANCE TABLES

Table **A.2**

Analysis of Variance of the Beliefs Component Scores

Source	df	SS	MS	F	Sig
School	38	116.34	3.06	5.03	.00
Error	206	125.31	.61		
Total	244	241.66			

Table A.3

Analysis of Variance of the Classroom Instruction Component Scores

Source	df	SS	MS	F	**Sig**
School	38	95.87	2.52	3.25	.00
Error	201	156.00	.78		
Total	239	251.87			

Table A.4

Analysis of Variance of the Supplemental Instruction Component Scores

Source	df	SS	MS	F	**Sig**
School	38	82.65	2.18	3.05	.00
Error	204	145.30	.71		
Total	242	227.95			

Table A.5

Analysis of Variance of the Professional Developement Component Scores

Source	df	SS	MS	F	Sig
School	38	97.23	2.56	4.46	.00
Error	203	116.56	.57		
Total	241	213.79			

Table A.6

Analysis of Variance of the Home/School P ıt   ɘɪ   Scores

Source	df	SS	MS	F	Sig
School	38	109.88	2.89	4.27	.00
Error	205	138.70	.67		
Total	243	248.58			

Table A.7

Analysis of Variance of the Program Administration Component Scores

Source	df	SS	MS	F	Sig
School	38	119.33	3.14	5.63	.00
Error	202	112.70	.56		
Total	240	232.02			

Table A.8

Analysis of Variance **of** the Building Leadership Component Scores

Source	df	SS	MS	F	Sig
School	38	104.18	2.74	5.34	.00
Error	205	105.32	.51		
Total	243	209.50			

Table A.9

Analysis of Variance of the Assessment Component Scores

Source	df	SS	MS	F	Sig
School	38	125.31	3.30	6.06	.00
Error	206	112.10	**.54**		
Total	244	237.41			

Table A.10

Analysis of Variance of the Standards Component Scores

Source	df	SS	MS	F	Sig
School	38	137.17	3.61	6.16	.00
Error	202	118.30	.59		
Total	240	245.48			

Table A.11

Analysis of Variance of the Literacy Leadership Component Scores

Source	df	SS	MS	F	Sig
School	32	95.34	2.98	4.43	.00
Error	142	95.42	.67		
Total	174	190.76			

Appendix I

SAMPLE **SCATTER** PLOTS

CASE STUDY SCATTER PLOTS

Figure A.1

Scatter plot of reading scores and school **total scores**

school total score

Figure **A.2**

school total score
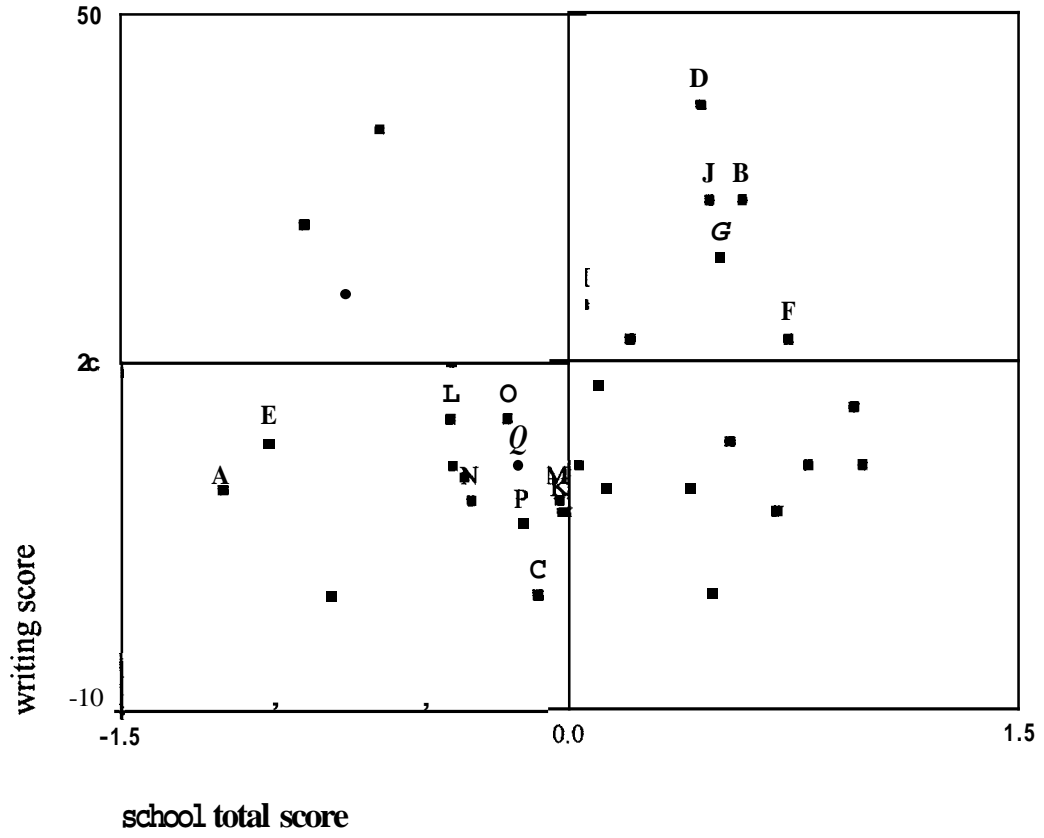
Appendix J

CONTENT ANALYSIS CHECKLIST

Early Literacy Inventory
Free Response Questions Coding Sheet

School Number: _____

85. What ongoing supports in your building or district are most helpful in guiding instruction and assessment practices?

Response Categories	1	2	3	4	5	6	7
School/District Goals							
Literacy Leadership							
Colleague Collaboration Time							
Colleague Mentoring							
Study Groups							
S. W. Assessments/Benchmarking							
Curriculum Committees							
Professional Development							
Literacy Intervention Services							

86. Which professional development opportunities related to literacy instruction and assessment have been most helpful and influential?

Response Categories	1	2	3	4	5	6	7
General Literacy Courses							
Reading Recovery Training							
Observing Young Learners							
Workshops/Conferences							
Grade Level Release Time							
S. W. Assessments/Benchmarking							
Ongoing, Building Level **S.D.**							
Literacy Leadership/Mentoring							
Reading Research							
MAP Pilot							
Limited Opportunities for P.D.							

Why?

Response Categories	1	2	3	4	5	6	7
Support of Colleagues							
Current Research							
Expand Knowledge Base							
Self-Selected Interests							
Interventions to Use							
Examining Student Work							

87. What kinds of professional development opportunities would you like to see more of?

Response Categories	1	2	3	4	5	6	7
Literacy Inst/Assess. **Courses**							
Reading Recovery Training							
Observing Young Learners							
Child Development Courses							
Workshops/Conferences							
Mentoring/Coaching							
Grade Level Meetings							
Data Collection & Examination							
Literacy							
Learning Results							

Why?

Response Categories	1	2	3	4	5	6	7
Complexity of Literacy Topics							
Consistency of Language							
Collaboration with Colleagues							
Setting Appropriate Expectations							
Use of Data							

88. Describe two aspects of your own literacy program/instruction you feel are strengths.

Response Categories	1	2	3	4	5	6	7
Reading Instruction Practices							
Reading Assessment Practices							
Writing Instruction Practices							
Writing Assessment Practices							
Management Strategies							
Home/School Connections							

89. Describe two aspects of your own literacy program/instruction you would like to improve.

Response Categories	1	2	3	4	5	6	7
Reading Instruction Practices							
Reading Assessment Practices							
Writing Instruction Practices							
Writing Assessment Practices							
Management Strategies							
Home/School Connections							
Curriculum Scope & Sequence							

90. Describe two aspects of your school's literacy program you feel are strengths.

Response Categories	1	2	3	4	5	6	7
Collaboration of Staff							
Interventions for Struggling Reade							
Dedication of Staff							
S.W. Assessment/Benchmarking							
Literacy Materials							
Professional Development Oppt.							
Instructional Literacy Strategies							
Strength of Primary Programs							

91. Describe two aspects of your school's literacy program you would like improved.

Response Categories	1	2	3	4	5	6	7
More literacy materials							
More time for instruction							
Consistent instruction across class							
Attitudes of staff toward change							
Increased interventions							
Home/School Connections							
Opportunities to collaborate							
Improve management systems							
Improve instructional strategies							
Improve assessment strategies							
Increase academic focus of K							

BIOGRAPHY OF THE AUTHOR

Lucie C. Boucher **was** born in Biddeford, Maine on February 17, 1957. She graduated from Biddeford High School in 1975. She attended the University of Southern Maine and graduated in 1990 with a Bachelor's degree in Elementary Education. Additionally, she attended the University of Maine and graduated in 1994 with a Master's degree in Literacy Education. She returned to the University of Maine in 1997 to continue study in literacy education.

Over the past decade, Lucie has worked in the central Maine area as a classroom teacher, literacy specialist, Title 1 director, IASA coordinator, building administrator, and private consultant. She is a candidate for the Doctor of Education degree in Literacy Education from The University of Maine in December, 2000.