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ABSTRACT

This paper examines reading issues and strategies for the 21st century, analyzing interventions that could become models for ensuring quality and alignment in preservice teacher education and reviewing the "Gap Analysis of Preservice and Inservice Teacher Training of Reading Instruction: Large-Scale Survey Study." It also synthesizes findings from reading research studies in preservice teacher education and provides recommendations, action plans, and thoughts for preservice teacher education in reading and literacy in general. Four sections present "Overview of Critical Issues and Strategies for the 21st Century and Beyond" (e.g., rapid teacher retirement, poverty and second language students, and alternative certification); "Interventions for Alignment in Preservice Teacher Education" (e.g., Higher Education Act: Title II, public school teacher quality, and teacher quality and student achievement); "NCREL's 'Gap Analysis of Preservice and Inservice Teacher Training of Reading Instruction: Large-Scale Survey Study'"; and "Synthesis of Preservice Teacher Education Research Studies in the Field of Reading" (e.g., preservice teachers' perspectives, teaching experiences, and diagnostic teaching). Two appendixes include the National Council for Accreditation of Teacher Education (NCATE) Standards and Matrix from "Initial Programs for Middle/Junior High and Senior High School English Language Arts Teaching" and "International Reading Association (IRA) Standards for Specialized Reading Professionals." (Contains 63 references.) (SM)

Educating Preservice Teachers: The State of Affairs

NCREL

North Central Regional Educational Laboratory

"Applying Research and Technology to Learning"

Educating Preservice Teachers: The State of Affairs

November 2001

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Introduction

Purpose

The purpose of this paper is to provide (1) an overview of reading issues and strategies for the 21st century and beyond; (2) an analysis of interventions that could be used as models for ensuring quality and alignment in preservice teacher education; (3) an overview of the *Gap Analysis of Preservice and Inservice Teacher Training of Reading Instruction: Large-Scale Survey Study* (Young, Grant, Montbriand, & Therriault, in press), developed by North Central Regional Educational Laboratory (NCREL); and (4) a synthesis of the findings from reading research studies in preservice teacher education. The paper also will provide recommendations, action plans, and concluding thoughts for preservice teacher education in reading and literacy in general. The paper's primary audience is higher education (i.e., deans responsible for policies, and faculty who teach reading and/or language arts methods courses) and the state departments of education in NCREL's region.

In addition, this paper lends support to the large-scale, seven-state survey *Gap Analysis* study conducted by NCREL for preservice and inservice education of teachers at the elementary and secondary levels; the *Professional Development for Teachers of Reading* paper (Grant, Young, & Montbriand, 2001); and NCREL's Policy Issue No. 9, *Improving Reading in America: Are Teachers Prepared?* (Young, 2001).

The Challenges of Preservice Teacher Preparation

Expectations for teachers are high in today's educational reform and policy agendas. Teachers need to be experts in one or more specific subjects. They also must be prepared to effectively handle the challenges of a growing diverse population of students with a variety of multicultural, multilinguistic, and multiability needs. Teachers also are expected to manage the far-reaching changes that are taking place in and out of schools. This situation is especially true for teachers responsible for providing literacy instruction and combating reading failure in classrooms across the country.

Literacy teachers must possess a level of comprehensive academic qualifications that include in-depth preservice studies based on sound standards and research linked to effective practice and student achievement. Therefore, it is imperative that preservice teacher-preparation programs and the requirements of state departments of education are addressed when examining traditional and alternative routes to teacher education. The balance between what is required of teachers and what is offered to them has a significant impact on the quality of their teaching and their capacity to implement effective literacy instruction.

Training that teaching force is a lengthy process, and one that should be filled with high-quality learning experiences based on sound theoretical principles. Adequate time should be allotted for applying these theoretical principals to practice as well as for reflecting on one's learning. Preservice teacher-education programs play a significant role in the preparation of a highly qualified teaching work force, which is necessary to support the development of a complex 21st century society.

Preservice Teacher Education Programs Under the Spotlight

Across the country, schools of education and teacher education programs are the focus of policymakers and legislators. Schools of education can respond to the many pressures and queries by first aligning their programs with established national standards delineated for the preparation of teachers responsible for students' literacy development. Such standards have been developed by the International Reading Association (1998), National Council for Accreditation of Teacher Education (2000), and National Council of Teachers of English (1996). Teacher preparation programs also should be aligned with the teacher certification and licensure standards of their individual state departments of education. Most important, those responsible for teacher preparation programs must respond to the queries they receive with sound empirical information that supports the need for developing well-rounded, comprehensive teacher-education programs. This alignment would elevate the status of the teaching profession to one with standards that produce highly qualified teachers. These teachers would then be prepared to meet the challenges of eliminating reading failure and the academic achievement gap across the country.

To meet these challenges, the science and art of teaching should be carefully analyzed. Teaching is more than using strategies, best practices, good classroom management, or certain instructional materials. Preservice teachers need to understand the theories of reading and how they are significantly interwoven with strategies, best practices, and instructional materials. Teachers also must have the ability to solve problems and determine individual student needs.

Information in the education field provides insight concerning the need for linking research to practice in teacher education (Zeichner & Liston, 1990). Hollingsworth (1989) and Zeichner and Tabachnick (1981) reveal the importance of theory in producing effective decision-making teachers, who in turn transfer their knowledge of theory into practical teaching experiences. In teacher preparation, however, there have been theoretical debates concerning the value and efficacy of certain theories and their linkage to instructional practice (Aaron, Chall, Durkin, Goodman, & Strickland, 1990a, 1990b). Teacher educators realize the impact of these debates as they strive to prepare prospective reading teachers through preservice teacher-education programs.

Overview of Critical Issues and Strategies for the 21st Century and Beyond

In the 21st century, it is extremely important for the educational community and policymakers to carefully reflect and strategically set forth action plans to address the following issues: rapid retirement of teachers, poverty and second-language students, recruitment of minority teachers, alternative certification, and induction programs for beginning teachers. These issues will have a significant impact on the teaching force and on teacher preparation programs.

Rapid Retirement of Teachers

The teaching force is retiring at a rapid, continuous rate. The attrition rate of teachers leaving the profession within their first five years of teaching also is a major issue of concern (National Commission on Teaching and America's Future, 1996). The U.S. Department of Education (1996) projects that by 2006, as many as 190,000 additional teachers will be needed across the country to keep schools stabilized while the profession strives to adjust to teacher retirement, teacher attrition, and the increase in student population. According to Moats (1999), America will need to hire about two million new teachers over the next ten years. Teacher preparation programs will need to carefully and empirically test the most effective and efficient ways of preparing teachers to meet the literacy needs of all students.

Poverty and Second-Language Students

The population of children from poverty and second-language backgrounds will continue to escalate. It is projected that the number of Hispanic school-age children will increase by 47 percent between 2000 and 2020 (Smith, Young, Bae, Choy, & Alsalam, 1997). Throughout the history of teaching, there always has been a need to ensure quality education and fair testing for children from culturally and linguistically diverse populations. With the increase of demographical diversity across the country, this need becomes a critical factor concerning how teachers are prepared to teach.

Recruitment of Minority Teachers

There is a growing need to recruit and retain high-quality teachers who represent and understand the cultural context of students from cultural and linguistically diverse backgrounds (Grant & Secada, 1990). As the population of America's K-12 schools grows more diverse, efforts are underway to recruit teachers who more accurately reflect the ethnic and linguistic diversity present in schools. Several institutions, organizations, and foundations have taken a role in increasing the number of minorities teaching in the classrooms of today and tomorrow.

University Programs to Recruit Minority Teachers

Several institutions in NCREL's region have programs aimed at recruiting minority teachers. Many operate in conjunction with filling the need for qualified teachers in urban schools.

Bilingual Education Teachers. University of Illinois at Chicago. To meet the growing demand for bilingual educators, this program works to help provisionally certified bilingual teachers earn

their standard teaching certificates. It offers a supportive cohort for teachers as they work through their programs, an opportunity to substitute full-time bilingual teaching experiences for the student-teaching requirement, field experiences that capitalize on existing relationships among bilingual and nonbilingual professionals, and customized professional development to meet each bilingual education teacher's particular needs.

Center for Excellence in Urban Teaching. Hamline University, Minneapolis, Minnesota. This center focuses on three areas to encourage men and women of color to enter the teaching profession: (1) supporting high school students of color who wish to pursue careers in education; (2) supporting undergraduate students of color in their pursuit of education degrees and enhancing their preparation to teach effectively in urban classrooms; and (3) creating relationships and support circles among new teachers, undergraduates, and high school students of color to support their educational goals.

Opening Doors Summer Research Institute. Ohio State University, Columbus, Ohio. Since 1992, this program has accepted 92 graduate students who have participated in a six-week summer program to help prepare talented minority students for advanced degrees in education. The goal of the program is to support these students as they enter the academic world of research and teaching. Since the program's inception, student participation has been as follows: 58 percent were African Americans; 23 percent were Hispanic/Chicano/Latino Americans; 13.1 percent were Asian Americans, and 4.3 percent were Native Americans (National Education Association, n.d.).

Paraprofessional to Teacher Scholarship Program. University of Toledo, Toledo, Ohio. This program provides scholarships for part-time study to paraprofessionals from underrepresented populations to help them become teachers. The Toledo Public Schools guarantees teaching positions to graduates of this program and provides mentoring support through their beginning years of teaching.

Project TEACH. Ohio State University, Columbus, Ohio. In collaboration with the Columbus Public Schools and the Atlanta University Consortium, Project TEACH (Teachers Exploring the Importance of Ethnic and Cultural Heritage) works to recruit qualified persons of color into the teacher preparation programs at Ohio State University. This program provides financial, cultural, social, and academic support, along with job placement help and continued support through the first years of teaching.

NEA and AACTE Projects to Recruit Minority Teachers

Project of the National Education Association. The National Education Association (NEA) has taken a position on the recruitment and retention of minority teachers necessary to meet the increasingly diverse student population in America's schools. In 1994, the NEA Representative Assembly called for the "establishment of a national directory of successful strategies for the recruitment and retention of minority teachers" (NEA, 1999). Updated in 1998, this document, *National Directory of Successful Strategies for the Recruitment and Retention of Minority Teachers* (NEA, 1998) has been disseminated throughout the nation.

Projects of the American Association of Colleges for Teacher Education. The American Association of Colleges for Teacher Education (AACTE) has developed two projects to recruit minority educators. One project is the Ford Foundation Minority Teacher Education Consortia Project. Composed of institutions in Alabama, Florida, Georgia, Louisiana, North Carolina, the Navajo Nation, and Regional Latino in California, this project supports efforts to uncover the reasons for the lack of minority teachers and to find ways to remedy these shortages. Through national invitational policy forums, this project targets institutional policies that prevent minority students from enrolling in and completing teacher education programs (AACTE, 2001b).

The second project is the Metropolitan Life Foundation Institute on Culturally Responsive Practice, which is funded and operated by AACTE. Its goal is to find teachers who are especially effective with African American, Asian/Pacific Island, Hispanic, and Native American students as well as students from other diverse ethnic backgrounds. Through a fellowship program in 1999, selected teachers were linked with institutions that prepare teachers through work groups that discussed the following issues:

- "Strategies for involving parents, students, and communities in joint efforts to improve local schooling."
- "Structural enhancements to and constraints on effective culturally responsive practice." (AACTE, 2001a)

This project continued with a conference in Washington, D.C., in 2000, where the regional work groups reconvened to:

- "Examine and analyze the work of the Institute to date."
- "Develop strategies to disseminate and advance the work of the Institute and culturally responsive practice in general."
- "Plan PK-16 policy and practice-oriented resources, which reflect principles and approaches endorsed by program participants and build on related accomplishments in this area to date."
- "Engage in professional development activities that strengthen the Fellows' capacity to become more effective culturally responsive practitioners and advocates for related improvements in policy and practice." (AACTE, 2001a)

AACTE also has agreed to serve as a clearinghouse for resources on culturally responsive practice, with an emphasis on those resources relevant to teacher educators.

Alternative Certification

Alternative certification is a fast and growing option for professionals and others interested in teaching to consider instead of the traditional four-year program. According to the U.S. Department of Education (2001), Secretary of Education Rod Paige announced that $5 million

has been awarded over a two-year period to the National Council on Teacher Quality to establish the American Board for Certification of Teacher Excellence (ABCTE).

In order to build highly qualified teachers to meet the needs of a growing student population, Secretary Paige postulates that ABCTE will need to "create a high standard of excellence for teachers from nontraditional backgrounds that will allow those teachers a high level of portability and credibility within the educational system" (U.S. Department of Education, 2001). To support this process, the National Council on Teacher Quality will "develop a system to recognize master teachers who demonstrate superior academic content knowledge and document improved student learning in their classrooms" (U.S. Department of Education, 2001).

ABCTE will put in place recruitment and assessment centers that will pool skilled professionals who have the interest and ability to become teachers, without the traditional preservice education. At the end of this two-year project, ABCTE will implement two levels of certification in teaching. The first level is the establishment of the Passport System for New Teachers. It will provide aspiring new teachers with a passport, useable anywhere in the nation, which will certify their mastery of particular subjects and professional skills. The second level of ABCTE's teacher certification is the establishment of the Master Teacher Certification, which will specify that teachers have documented that they have significantly increased student achievement. The certification also will show that teachers have exceptional proficiency within certain subjects, as well as a comprehensive understanding and a level of mastery concerning the basics of professional teaching skills. Secretary Paige stated, "We hope this initiative will encourage professionals from other careers and bright liberal arts students to enter the teaching field and stay there" (U.S. Department of Education, 2001).

Induction Programs for Beginning Teachers

The induction of preservice teachers into the work force is an issue of consideration. Educators need to ensure the successful transition from preservice teacher education into the teaching work force. These new teachers need to be provided with effective ongoing training and support (i.e., modeling, classroom visits, debriefing sessions that focus on effective instructional classroom strategies, and classroom management skills). The following is a list of guidelines for schools in the process of creating effective induction programs:

- A mentoring/coaching component is an essential part of the program. Before school starts, the beginning teacher is assigned to a mentoring coach.

- There is always some type of professional development offered to the beginning teacher before the first week of the school year. The professional development offered could focus on one or more of the following: school culture, home-school connections, classroom strategies, classroom management, and stress reduction.

- A structure for modeling effective teaching during the beginning teacher's daily instructional time (e.g., one possible structure could be team teaching) is set in place as a natural part of the school day.

- A strong sense of administrative support is evident.

- Opportunities for beginning teachers to have observation visits in master teachers' classrooms are in place.

- Beginning teachers are provided with systematic ongoing professional development whereby the beginning teachers have an active role in the planning, implementation, and evaluation of the professional development process.

- Beginning teachers are given the opportunity to actively participate in classroom-level action research or schoolwide action research within the first year of teaching.

The first year of school for a beginning teacher is critical. Therefore, the transition from preservice teacher education to the teaching work force must establish an effective system for supporting new teachers.

Educators and all major stakeholders involved in the process of educating America's children must come to realize that preparing teachers to meet the needs of today's children is an intensive process. This process does not have a simple formula. The task is complex and arduous, and it calls for the combined efforts of all involved with preservice teacher education to ensure quality and alignment as America moves forward to serve and develop one of its most valuable resources—its children.

A concluding question should be considered after viewing issues that face teacher education in the 21st century: *How does higher education ensure quality and alignment in preservice teacher education?*

Interventions for Alignment in Preservice Teacher Education

There is no single formula for an exemplary preservice teacher education program. However, there are many resources that can inform and guide educators on how to ensure quality and alignment within their preservice teacher education programs. This section will review information that educators will find useful as they examine how to move forward in aligning their preservice programs and creating a balanced equilibrium between what teachers are taught, believe, are required to know, and practice.

Higher Education Act: Title II

History and Background

In 1998, the Higher Education Act was reauthorized and adopted into law. A portion of this Act, Title II, provided funding for higher learning and included a new set of reporting statutes. Specifically, Title II provided new funds to be allocated toward teacher quality enhancement at the state, institution, and school-district level. Also included were a series of statutes requiring institutions and states to report data to the U.S. Department of Education as well as the public regarding teacher education programs and teacher certification (American Association of Colleges for Teacher Education [AACTE] Education Policy Clearinghouse, 2000). To aid states and institutions of higher education in complying with the new reporting statutes, the National Center for Education Statistics (2000) created the *Reference and Reporting Guide for Preparing State and Institutional Reports on the Quality of Teacher Preparation.* This document will hereafter be referred to as the *Reporting Guide*. Two versions of this guide are described below.

In January 1999, a consultative committee of 55 individuals was convened and provided the first set of standard definitions to be used in reporting data as well as workable methodology for collecting data. The first set of guidelines was created in July 1999 and distributed to the public for comment. The U.S. Department of Education reviewed hundreds of comments on the initial guidelines and determined that the first draft was not useable for gathering data. The second set of guidelines were created, commented on by the public, and finalized on April 19, 2000 (AACTE Education Policy Clearinghouse, 2000).

The second *Reporting Guide* was created to aid states by providing a set of standard definitions regarding teacher preparation programs, waivers, and program completers (i.e., teachers who have some record of successful completion of a training program) (NCES, 2000). The document also provides information on the responsibilities of institutions and the nature of the data that would need to be collected and reported (e.g., pass rates). Finally, the guide provides sample instruments for gathering information about teacher preparation programs and examples of generated reports.

The Impetus for the Title II Section of the Higher Education Act

As stated in the *Reporting Guide* (NCES, 2000), half of the teachers hired in the next ten years will be first-time teachers. This fact, coupled with public demand for increased school performance and student achievement, is listed as the rationale for incorporating Title II into the

Higher Education Act (NCES, 2000). The Title II Section of the Higher Education Act also incorporates "accountability" provisions for the first time. The *Reporting Guide* states:

> Title II also includes new accountability measures in the form of reporting requirements for institutions and states on teaching preparation and licensing. The need for this reporting is clear. Everyone agrees that new teachers must be better prepared to teach students to higher standards. Yet, there are no comprehensive data available on how well institutions prepare teachers, what states require of individuals before they are allowed to teach, and how institutions and states are raising their standards for the teaching profession. (NCES, 2000, p. 1)

The Reporting Guide Elements

One goal of the *Reporting Guide* is to provide a set of standard definitions that all states will use in collecting and reporting data on the quality of teacher preparation programs. Those definitions are listed below:

- ***Teacher Preparation Program:*** "A state-approved course of study, the completion of which signifies that a student has met all of the state's educational and/or training requirements for initial certification or licensure to teach in the state's elementary or secondary schools."

- ***Program Completer:*** "A person who has met all of the requirements of a state-approved teaching-preparation program. Program completers include all those who are documented as having met such requirements" (i.e., degree, certificate, program, credential, transcript, or other written proof).

- ***Alternative Route to Certification or Licensure:*** "As defined by the state" (i.e., any route or program that is designated by the state as being an alternative program to initial certification or licensure).

- ***Regular Teacher Preparation Program:*** "Any teacher preparation program that is not an alternative route to initial certification or licensure."

- ***Waiver:*** "Any temporary or emergency permit, license, or other authorization that permits an individual to teach in a public school classroom without having received an initial certificate or license from that state or any other state." (NCES, 2000, p. 5)

Advice and Statutory Requirements

Another goal of the *Reporting Guide* is to provide states and institutions with information regarding what data to collect and where to collect it. For example, states and institutions must consult with testing services and testing companies to work out issues of obtaining pass-rate information. The *Reporting Guide* also provides specific details about what data would be necessary to include in annual report cards on the quality of teacher preparation.

According to the Title II mandates, both states and institutions that provide teacher training must report certain types of information. First, the institutions must provide pass rates, program descriptions, and accreditation status of programs to the state. In addition, institutions are encouraged to provide this information to the public. Institutions that do not provide the required information each year to the state could receive a $25,000 fine.

However, institutions that have ten or less students completing teacher preparation programs are required to report only every three years (referred to as the *rule of ten*). States are required by the Act to collect information above and beyond what institutions are mandated to provide to the state. States report directly to the U.S. Department of Education. There are no consequences for states that do not report. Below is a list of requirements for the "report cards" of the states and institutions.

Institutional Report Cards to the States

These report cards must provide annually to each state the following information:

- Pass rates for graduates.
- Comparison of the institution's pass rates compared to average pass rates of the state.
- Program information—that is, the number of students in each program, the average number of hours of supervised practice teaching, and the faculty-to-student ratio in practice teaching.
- Accreditation information regarding whether the teaching preparation program is accredited or approved by the state.
- Information on whether the program has been identified as low performing by the state.

Reports for the U. S. Department of Education

States are required to report the following information to the U.S. Department of Education:

- Description of teacher-certification assessments and certification requirements (the qualifying score), and how well these are aligned with K-12 standards of the state.
- Standards that prospective teachers must meet to attain certification.
- The percentage of teaching candidates who passed certification.
- Extent to which teachers have been given waivers (number of waivers issued) and the distribution of waivers issued over high and low socioeconomic-status school districts.
- Description of alternative routes to certification and percentage of students in these programs.

- Information on future exams that teachers may take.

Observations and Reflections

Quality of the Definitions. The functionality of some of the definitions has been questioned (AACTE Education Policy Clearinghouse, 2001). For example, regular and alternative programs often use the same licensure and certification procedures but are treated differently. There is an assumption in the *Reporting Guide* that alternative programs may not be as rigorous as regular programs. This assumption may be unwarranted in some instances.

Use of Pass Rates. The level of analyses that the *Reporting Guide* advocates is pass rates of students in teacher preparation programs—that is, how many students have passed all requirements of a teacher preparation program and are designated as a "completer." The *Reporting Guide* states, "In the Title II accountability system, institutional pass rates are a key measure of the performance of teacher preparation programs" (NCES, 2000, p. 7).

The evaluation of teacher programs is complicated and multidimensional. Understanding the evaluation of teacher programs is to first understand the manner in which teachers are evaluated. Doyle (1983) provides a conceptual schema for instructional evaluation that underscores the complexity of evaluating teachers. Doyle's conceptualization of teacher evaluation includes five dimensions: teaching models, teaching modes, instructional characteristics, student characteristics, and educational outcomes. The proposed evaluation of teacher programs forwarded by the *Reporting Guide* examines only one dimension—pass rates.

Considering the size and scope of the Title II mandate, the use of pass-rate information seems reasonable. However, the *Reporting Guide* does not provide information on what to conclude from pass-rate information. It does not respond to how such high or low pass rates inform the public about the quality of training at institutions.

The assumption made by the *Reporting Guide* is that institutions reporting high pass rates do so because of grade inflation and low program quality (i.e., programs that are too easy for students). This assumption is plausible in some instances but may not be representative of institutions as a whole. For example, in competitive high-quality institutions, higher pass-rate levels may be due to a rigorous selection process (i.e., a process that eliminates poor-quality candidates) or a very intensive high-quality program. Elevated pass rates are not necessarily the result of an easy program.

Similar to pass rates, failure rates also could be construed to make arguments that an institution is not providing a quality program, that the quality of students in the program is poor, or that the program is difficult and selective (i.e., a good program). Without other descriptive information on the qualities of candidates in programs and more quantitative measures of the programs, pass-rate information is very difficult to interpret. It could be argued that pass rates alone will not provide any useful information on the quality of teacher preparation programs. Finally, it is unclear how the reported pass-rate information will be used by the U.S. Department of Education to enforce accountability as suggested by the Title II provisions.

Accountability. Accountability is one goal in the Title II mandate. Individual states and schools should be held more responsible for the education process in an increasingly decentralized government (Ladd, 1996). Based on pass-rate information, the states and the U.S. Department of Education will reward institutions that demonstrate "acceptable" pass rates and increased public scrutiny of institutions that do not report acceptable pass rates. States and institutions are aware of this situation and can manipulate accountability programs by tailoring programs to achieve the proper pass-rate levels. It is not clear whether this tailoring improves the teacher-training program or not. As Ladd (1996) suggests, accountability programs have the potential for improving student outcomes, but they should not be viewed as a substitute for additional resources or increased capacity to deliver education services.

Data Collection Issues. One potential problem of the Title II mandate is the nature of program testing processes. Some institutions pass only teachers in training programs who have first passed licensing and certification tests. Consequently, their pass rates will be 100 percent. It is unclear how many schools use this process and what affect it would have on the overall reporting in a state.

Another important issue not addressed in the *Reporting Guide* is the costs incurred by institutions that need to fill out "report cards." In the Title II Implementation *Fact Sheet* (AACTE Education Policy Clearinghouse, 2000), reference is made to these costs. The *Fact Sheet* states that schools will need to consider staff time and monies from other school reform programs to provide all of the information required by the mandate. Finally, for states that pay testing agencies to provide testing and keep records, it is unclear how testing agencies will provide access to relevant information and what this access will cost.

Comparisons. The purpose of the Title II section is to aid states and institutions by comparing programs within states. The *Reporting Guide* states:

> The Department will not use the pass-rate data collected in these annual reports for the purpose of making comparisons among states, and it will strongly advise the public not to do so. The Department recognizes that the many differences among state approaches to teacher preparation, such as the use of different tests, different cut scores on examinations, and different admissions standards for teacher preparation programs, makes these kinds of comparisons inappropriate and invalid. (NCES, 2000, p. 9).

The public will compare states, and the states will use the data to tailor programs. The very nature of the reporting format of the *Initial Report of the Secretary on the Quality of Teacher Preparation* (Office of Postsecondary Education, 2001) affords the comparisons between states.

Privacy Issues. One final issue that needs to be addressed is that of privacy. The *Reporting Guide* provides sample data that includes the names of preservice teachers. Test-score information is sensitive and personal in nature. Individuals have specific privacy rights when this data is reported. States and institutions need to be aware of these rights when preparing reports.

National Council for Accreditation of Teacher Education (NCATE)

The National Council for Accreditation of Teacher Education (NCATE) is a specialty organization that consists of 33 professional associations of teachers, teacher educators, content specialists, and local and state policymakers. NCATE has established a standards-based accreditation system that begins with preservice preparation and continues with teacher licensure and advanced professional development. These standards require institutions to "articulate the research base upon which their programs were developed" (NCATE, 2001a).

Even though NCATE accreditation is a rigorous process, it often is recommended as a way to reform the teacher education system. The National Commission on Teaching and America's Future (1996) proposes that all universities and colleges be required to obtain accreditation. In addition, the Educational Testing Service states that "proponents [e.g., Wise & Leibbrand, 1996)] have asserted that NCATE has led the way in changing teacher preparation to match more rigorous licensing and master teacher certification requirements and in encouraging links between student and teacher standards" (Gitomer, Lathman, & Ziomek, 1999, p. 8). This same study suggests that students attending NCATE-accredited institutions have higher passing rates on the Praxis test than those attending other institutions.

In the last decade, NCATE has moved from an evaluation system oriented to the curriculum, to a system oriented to candidate performance. In the next three years, the following new performance-based accreditation standards will be in place:

- Candidate knowledge, skills, and dispositions
- Assessment system and unit evaluation
- Field experiences and clinical practice
- Diversity
- Faculty qualifications, performance, and development

These accreditation standards help to align NCATE with standards and licensing assessments of the National Board for Professional Teaching Standards. They also integrate technology into the accreditation system. They have been test-piloted with 30 institutions (NCATE, 2001b), and NCATE is in the process of producing implementation guides.

As of October 2001, 517 institutions were accredited (NCATE, 2001a), and another 83 were candidates or precandidates for accreditation. Of these 517 institutions, 118 are in NCREL's seven-state region. (See Table 1.)

Table 1. Teacher Education Programs in the NCREL Region

State	Number of Approved Teacher-Education Programs	Number of NCATE-Accredited Institutions	Percentage of NCATE-Accredited Institutions
Illinois	57	18	32 %
Indiana	37	33	89 %
Iowa	32	5	16 %
Michigan	31	15	48 %
Minnesota	26	17	66 %
Ohio	50	19	38 %
Wisconsin	33	11	33 %

Given the number of colleges and universities with approved teacher-education programs in NCREL's region, the figures are relatively small. Only two of seven states—Indiana and Minnesota—have more than 50 percent of NCATE-accredited colleges and universities.

During the accreditation process, NCATE examines many subject areas. This paper focuses only on standards for the following:

- Elementary English language arts
- Middle and high school English language arts
- Reading specialists, reading coordinators, and teacher educators

The professional organizations that comprise NCATE help by providing grade-level and content-based standards and reviewing programs for such content. Because multiple organizations are involved in the NCATE review process, each organization has developed its own criteria. For example, the Association for Childhood Education International (ACEI) has developed program standards for elementary teacher education. The curriculum standard for English language arts states:

> Candidates demonstrate a high level of competence in use of English language arts and they know, understand, and use concepts from reading, language and child development, to teach reading, writing, speaking, viewing, listening, and thinking skills and to help students successfully apply their developing skills to many different situations, materials, and ideas. (NCATE, 2000)

For middle and high school English language arts, NCATE partnered with the National Council of Teachers of English (NCTE), which developed *Initial Programs for Middle/Junior High and Senior High School English Language Arts Teaching*. The framework consists of the following five standards. (For additional information, refer to Appendix A.)

- Structure of the Basic Program
- Attitudes for English Language Arts

- Knowledge of English Language Arts
- Pedagogy for English Language Arts
- Field-Based Experiences in English Language Arts (NCTE, 1997)

NCATE also accredits programs for reading specialists, reading coordinators, and teacher educators in the area of reading. For these standards, NCATE partnered with the International Reading Association (IRA), which developed *Standards for Reading Professionals*. When being evaluated, each of the programs uses the same standards. The evaluator specifies on the form which program is represented and then rates it, using the following four levels of proficiency:

> **"A - Awareness**
> Has awareness of the different aspects of literacy development and related teaching procedures.
>
> **B - Basic Understanding**
> Has knowledge about specific instructional tasks and has fundamental proficiency in the performance of those tasks for the aspect of literacy development.
>
> **C - Comprehensive Understanding**
> Is able to apply proficiency broad, in-depth knowledge of the different aspects of literacy development in instructional settings.
>
> **O - Not Applicable"** (IRA, 1998, p. 8)

The 16 areas of literacy competencies for reading professionals were developed by the IRA to cover knowledge and beliefs about reading, instruction and assessment, and organizing and enhancing a reading program. (For additional information, refer to Appendix B.)

1. Theoretical Base
2. Knowledge Base
3. Individual Differences
4. Reading Difficulties
5. Creating a Literate Environment
6. Word Identification, Vocabulary, and Spelling
7. Comprehension
8. Study Strategies
9. Writing
10. Assessment
11. Communicating Information About Reading
12. Curriculum Development
13. Professional Development
14. Research
15. Supervision of Paraprofessionals
16. Professionalism (IRA, 1998, pp. 9-22)

Perspectives of Teachers Unions: AFT and NEA

Two of the most powerful teacher unions in the United States—the American Federation of Teachers and the National Education Association—have addressed teacher preparation. Both organizations offer a range of initiatives, resolutions, and publications that address this critical issue.

The American Federation of Teachers

With one million members, the American Federation of Teachers (AFT) is the second largest teachers union in the country. It serves a wide range of education personnel including teachers, school support staff, health-care professionals, higher-education faculty, and state and local employees (AFT, 2000a).

The mission of AFT includes a commitment to its members to "give voice to their legitimate professional ... aspirations, [and] to strengthen the institutions in which we work" (AFT, 2000b). One of the components of this mission is a dedication to improving education and teacher quality. A resolution passed by the AFT (1998) states:

> The goals of American education are to assure that children of all races, religions, classes, and national backgrounds master a demanding core curriculum and other material to prepare them to assume their civic and social responsibilities in a democratic society, to compete in the global economy, and to benefit from postsecondary educational opportunities.

Sandra Feldman, AFT president, describes the role that teacher quality plays in achieving these high goals: "In districts where the conditions are rough and the pay is low—in other words, districts serving our poorest and neediest children, the ones who need the best teachers—schools often end up getting the least qualified new teachers" (Feldman, 1998).

Problems in Teacher Education as Perceived by AFT. The AFT's work on improving teacher quality is based on several perceptions of the current state of education. First, the organization notes that there are "two somewhat conflicting views of teacher education" held by policymakers. As a result, "new policies reflect a widely shared attitude among the public that intelligent, college-educated people can learn all they need to know about teaching either on the job or during a single summer of well-planned instruction" (AFT, 2000a, p. 23). At the same time, states are requiring that future teachers take a combination of specific courses and numbers of credits. "These mandates are rarely considered in terms of their impact on a coherent course of study, and teacher education programs are required to change or add courses in an almost ad hoc fashion" (AFT, 2000a, p. 23).

Based on these and other observations, the AFT instituted a task force of educational leaders in elementary, secondary, and higher education to study issues related to improving the preparation of teachers.

Task Force to Improve Teacher Education. This task force sought to find solutions to the following problems identified by educators:

- "Difficulty in recruiting the ablest students...."
- "Inadequate standards for entering and exiting teacher education programs."
- "Underinvestment by the university in teacher education."
- "Poor coordination between teacher education and liberal arts faculty."
- "Little consensus about what should comprise the pedagogy curriculum."
- "Difficulty, within a four-year program, in finding enough time and the proper balance of coursework in liberal arts, pedagogy, and a major in an academic discipline."
- "Lack of standards for clinical programs resulting in haphazard recruiting and training of supervising personnel, along with inadequate collaboration among the professionals concerning program goals, student oversight, and assessment."
- "Clinical experiences that often are too brief and do not require students to take sufficient responsibility for instruction." (AFT, 2000a, p. 6)

In their search for solutions to the above-mentioned problems, this task force conducted "extensive literature reviews, analyzed state policies, and surveyed training institutions" (p. 15). Members primarily were concerned with issues of (1) entry and exit standards for teacher candidates, (2) clinical experiences, and (3) subject matter and pedagogical curricula.

Recommendations. Based on this study, the task force makes the following recommendations to improve the preparation of teachers in the United States:

- "Require core liberal arts courses."
- "Institute higher entry criteria."
- "Institute a [voluntary] national entry test."
- "Require an academic major."
- "Develop core curricula in pedagogy."
- "Strengthen the clinical experience."
- "Institute a rigorous exit/licensure test."
- "Take a five-year view." (This recommendation suggests that in the traditional four years for an undergraduate baccalaureate program, future teachers cannot receive the necessary knowledge and skills for effective classroom teaching.)
- "Strengthen induction."
- "Require high standards for alternative programs." (AFT, 2000a, pp.7-10)

AFT recognizes the enormity of these recommendations and understands that there must be a concerted and combined effort from several educational stakeholders. It calls upon university presidents to make the improvement of teacher education programs a priority, to NCATE to strengthen its requirements, to legislators to allocate the funds necessary for large-scale improvement, and to teacher educators and their counterparts in the K-12 setting to come to agreement on a set of clear, well-defined expectations for preservice teacher performance. It also asks teachers unions at all levels to "work to ensure quality by advocating, at the state and local levels, for policies and programs in regard to teacher development, licensure, and continuing professional development" (AFT, 1998).

Finally, AFT believes that in order for children to have quality teachers, the teaching profession must be strengthened and viewed as a true profession. It states, "No package of teacher education reforms can be expected to ensure a continuing supply of qualified teachers unless it is coupled with high-caliber induction programs, better salaries, and improved working conditions" (AFT, 2000a, p. 15).

National Education Association

The National Education Association (NEA) is the largest organization of educators in the United States, with over 2.6 million members (NEA, 2000). This organization also has taken a position on the preparation of teachers. In January 1999, NEA President Bob Chase made the following recommendations for teacher education:

- High standards for those wishing to enter the profession.
- More in-classroom experiences for preservice teachers.
- Mentoring and support for new teachers. (NEA, 1999)

In 1994, NEA launched a Teacher Education Initiative that established partnerships between teacher preparation institutions and local schools. The purpose of this collaboration was to "accelerate the pace of change and renewal in teacher preparation and practice to produce better performing students" (NEA, 2001a, p. 1).

According to NEA (2001a), the goals of the Teacher Education Initiative are to (1) provide answers to key issues of teacher preparation through a research and practice collaboration with seven teacher education institutions throughout the country, (2) identify outstanding practices and programs in teacher education and prepare a monograph describing this work, and (3) organize a network of professional development schools.

NEA (2001a) has the following roles in the improvement of teacher education:

- Provides support for research in how to promote systemic change in higher education that supports quality teaching.
- Publishes and distributes the findings of its research.
- Provides grants of $10,000 to seven partner institutions.

- Convenes regular meetings that bring teacher educators together with others who have a stake in quality instruction and student achievement.

- Is conducting a five-year longitudinal study within its partner institutions to describe the characteristics of quality teacher-education programs.

In addition to the Teacher Education Initiative, several resolutions related to teacher preparation were passed by the NEA Representative Assembly. Resolution D-2 (NEA, 2001b) states that teacher education programs should "emphasize the recruitment of underrepresented candidates and should include a policy of affirmative recruitment" to meet the need for a diverse teaching population. This resolution also recommends that all institutions that prepare educators should be accredited by the National Council for Accreditation of Teacher Education.

NEA has taken a position on the admission of aspiring teachers to teacher education programs, stating that the standards must be "rigorous yet flexible enough to allow admittance to those who demonstrate potential for effective practice" (NEA, 2001c). These admission standards must include evaluation with a variety of tools, including grades, interviews, portfolios, and recommendations from teacher education faculty and other educators (NEA, 2001b).

NEA (2001d) also has resolved that the content of teacher education programs must include the following components:

- Involvement of prekindergarten through adult-education teachers as well as teacher educators.

- Measures of performance that accurately measure the knowledge and skills necessary for effective teaching.

- Coursework in the liberal arts, content-area specialty, reading, and knowledge, and instructional strategies for students who are learning English.

- Studies in educational theory, curriculum, classroom management, assessment, and teaching strategies.

- The use of technology in instruction.

- The involvement of multicultural, multiethnic content into instruction and teaching strategies appropriate for culturally diverse students.

- Theories and teaching strategies for critical thinking, collaborative work, and conflict resolution.

Teacher Quality of Public School Teachers

The National Center for Education Statistics (NCES) is another resource that can provide useful information regarding quality and alignment in preservice teacher education. It is responsible for collecting, analyzing, and reporting data regarding the status of educational practices in the United States and abroad. The center was originally created in order to fulfill a congressional mandate. NCES provides data to such organizations as the U.S. Department of Education, Congress, states, education policymakers, and the general public (Lewis et al., 1999).

In response to growing concerns that preservice teachers receive quality instruction, NCES conducted a study that surveyed various aspects of teacher quality in the United States. The report, *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (Lewis et al., 1999), highlights important findings about teacher quality. The study also underscores difficulties associated with providing any profile on teacher preparation and qualifications. The study states:

> Teacher quality is a complex phenomenon, and there is little consensus on what it is or how to measure it. For example, definitions range from those that focus on what should be taught and how knowledge should be imparted to the kinds of knowledge and training teachers should possess. There are, however, two broad elements that most observers agree characterize teacher quality: (1) teacher preparation and qualifications, and (2) teaching practices. (Lewis et al., 1999)

The NCES study focuses on the first above-mentioned elements, using a survey of full-time public school teachers. In the study, *teacher quality* is defined as teachers' preparation, their qualifications, and the nature of the environments in which they work. It provides specific information on the following four topics: teachers' feelings of preparedness, preservice learning and teaching assignments, continued learning, and supportive work environment. Each of these sections is reviewed below.

Teachers' Feelings of Preparedness

According to Lewis et al. (1999), less than half of American teachers reported feeling "very well prepared" to meet teaching challenges:

- Only 20 percent of U.S. teachers surveyed indicated they were very well prepared to integrate educational technology into classroom instruction.
- Only 20 percent of U.S. teachers surveyed indicated they were very well prepared to meet the needs of students with disabilities.
- Only 28 percent of U.S. teachers surveyed indicated they were very well prepared to use student-performance assessment techniques.
- Only 41 percent of U.S. teachers surveyed indicated they were very well prepared to implement new teaching methods.

- Only 36 percent of U.S. teachers surveyed indicated they were very well prepared to implement state or district curriculum and performance standards.

Preservice Learning and Teaching Assignments

The NCES study indicates that there is a growing concern that many of the nation's teachers are underqualified to teach. This concern is reflected in the fact that teachers are being assigned subject areas for which they do not have the proper preservice training or are being given temporary teacher certification. The following results, taken directly from the NCES study, indicate:

- "Virtually all teachers had a bachelor's degree, and nearly half (45 percent) had a master's degree. More high school teachers had an undergraduate or graduate major in an academic field (66 percent), compared with elementary school teachers (22 percent) and middle school teachers (44 percent)."

- "Most of the teachers (92 percent and 93 percent, for departmentalized and general elementary, respectively) were fully certified in the field of their main teaching assignment. However, emergency and temporary certifications were higher among teachers with three or fewer years of experience compared to teachers with more teaching experience. For example, 12 percent of general elementary classroom teachers with three or fewer years of experience had emergency or temporary certification, whereas less than 1 percent of general elementary classroom teachers with ten or more years of experience had emergency or temporary certification. The results are similar for departmentalized teachers."

- "Despite the fact that the measure of out-of-field teaching used in this report is conservative—it includes only teachers' main teaching assignments in core fields—the results indicate that a number of educators were teaching out of field. For example, the percent of teachers in Grades 9 through 12 who reported having an undergraduate or graduate major or minor in their main teaching assignment field was 90 percent for mathematics teachers, 94 percent for science teachers, and 96 percent for teachers in English/language arts, social studies/social science, and foreign language. This means that 10 percent of mathematics teachers, 6 percent of science teachers, and 4 percent of English/language arts, foreign language, and social studies/social science teachers in Grades 9 through 12 were teaching out of field. The percentage of teachers who reported having an undergraduate or graduate major or minor in their main teaching assignment field was significantly lower for teachers of Grades 7 through 12 than for teachers of Grades 9 through 12 for mathematics (82 percent), science (88 percent), English/language arts (86 percent) and social studies/social sciences (89 percent), indicating that teachers in Grades 7 and 8 are less likely to be teaching in field than are teachers in Grades 9 through 12." (Lewis et al., 1999)

Continued Learning: Professional Development and Teacher Collaboration

The NCES study states that traditional approaches to professional development have come under criticism because professional development often lacks portability (i.e., authentic connections to

the classroom), and many professional development sessions are not effective because they are short term. It provides the following findings regarding professional development:

- "Virtually all teachers participated in professional development activities (99 percent) and at least one collaborative activity (95 percent) in the last 12 months. Participation in professional development activities typically lasted from one to eight hours, or the equivalent of one day or less of training. Teachers were most likely to participate in professional development activities focused toward areas that reformers emphasize (e.g., implementing state or district curriculum and performance standards, integrating technology into the grade or subject taught, using student performance assessment techniques)."

- "Nineteen percent of teachers had been mentored by another teacher in a formal relationship; 70 percent of teachers who were mentored at least once a week reported that it improved their teaching 'a lot.' "

- "Increased time spent in professional development and collaborative activities was associated with the perception of significant improvements in teaching. For every content area of professional development, a larger proportion of teachers who participated for more than eight hours believed it improved their teaching a lot, compared with teachers who participated for eight hours or less.... For example, teachers who spent more than eight hours in professional development on in-depth study in the subject area of their main teaching assignment were more likely than those who spent one to eight hours to report that participation in the program improved their teaching a lot (41 percent versus 12 percent). Moreover, teachers who participated in common planning periods for team teachers at least once a week were more likely than those who participated a few times a year to report that participation improved their teaching a lot (52 percent versus 13 percent)." (Lewis et al, 1999)

Supportive Work Environment

The NCES study indicates that the support teachers receive from schools and their communities also is important in understanding teacher quality. It provides the following information relating to supportive work environment:

- "One-third of teachers had participated in an induction program when they first began teaching. However, newer teachers were more likely to have participated in some kind of induction program at the beginning of their teaching careers than were more experienced teachers (65 percent of teachers with 3 fewer years of experience versus 14 percent of teachers with 20 or more years of experience)."

- "Teachers perceived relatively strong collegial support for their work; 63 percent strongly agreed that other teachers shared ideas with them that were helpful in their teaching. In addition, many teachers also felt supported by the school administration, with 55 percent agreeing strongly that the school administration supported them in their work and 47 percent agreeing strongly that goals and priorities for the school were clear."

- "Teachers perceived somewhat less support from parents than from other teachers and the school administration. Only one-third of teachers agreed strongly that parents supported them in their efforts to educate their children."

- "Collegial, school, and parental support varied by the instructional level of the school, with elementary school teachers perceiving stronger support than high school teachers." (Lewis et al., 1999)

Teacher Quality and Student Achievement: State Policy Evidence

Ensuring quality and alignment in preservice teacher education also should be examined at the state level. Darling-Hammond (2000) provides useful teacher-qualification information gleaned from state surveys, state case analyses, the Schools and Staffing Surveys (SASS), and the National Assessment of Educational Progress (NAEP). She provides quantitative and qualitative evidence that there is a link between teacher qualifications and student performance. Her findings underscore the importance of improving teacher preservice programs because improvements in teacher preparation are expected to lead to improvements in student performance. Her findings specifically relate to improving preservice teacher education.

Darling-Hammond's (2000) results indicated that teacher preparation and certification are stronger correlates of student achievement in reading than student socioeconomic status, language status, class size, spending levels, and teacher salaries. The implications of these results suggest that states wishing to improve student achievement should concern themselves with the preparation of the teachers they hire (Darling-Hammond, 2000). Further, she indicates that states can have an impact upon the qualifications of teachers hired through the use of policy:

> States that repeatedly lead the nation in student achievement in mathematics and reading have among the most highly qualified teachers in the country and have made longstanding investments in the quality of teaching.... The three leaders—Minnesota, North Dakota, and Iowa—have all had a long history of professional-teacher policy and are among the 12 states that have state professional standards boards which have enacted high standards for persons entering the teaching profession. They are recently joined at the top by Wisconsin, Maine, and Montana, states that have also enacted rigorous standards for teaching and that are among the few which rarely hire unqualified teachers on substandard licenses. Iowa, Minnesota, Montana, North Dakota, and Wisconsin have some of the lowest rates of out-of-field teaching in the country and among the highest proportions of teachers holding both certification and a major in the field they teach.... Maine joined these states in requiring certification plus a disciplinary major when it revised its licensing standards in 1988. (Darling-Hammond, 2000)

National Commission on Excellence in Elementary Teacher Preparation for Reading Instruction

The National Commission on Excellence in Elementary Teacher Preparation for Reading Instruction, which will serve until May 2003, has designed a research model worthy of examination for strategically and empirically analyzing preservice teacher education. The

research is conducted at eight university sites. The commission will complete three studies designed to understand what works and what are the best ways of creating and maintaining successful preservice teacher education programs. The studies are the Features of Excellence Study, the Teacher Educator Survey, and the Beginning Teacher Study.

The Features of Excellence Study

The focus is on examining the common trends and unique features of the teacher education programs within the study. The purpose is to clearly identify features and critical elements, within the eight research sites, that lead to excellence in beginning teachers' reading instruction. This research section is qualitative in nature. The end product of the study is to provide a feature analysis report, which includes a comprehensive description explaining eight key features and methods of implementation from the study that are specific examples of high-quality preservice teacher education programs. The International Reading Association (2001) identifies the features of excellence identified in this study:

- Programs based on clearly defined institutional missions, which reflect their purpose and goal.

- Faculty who have a clear, unified vision of how the mission will be integrated throughout the teacher education program.

- Faculty who endeavor to maintain the integrity and quality of the literacy program while working through a variety of factors, such as a lack of resources, constraints imposed by schools, and requirements of the university and state departments of education.

- Faculty who embrace and model a student-centered approach to teaching and learning, with the hope that their preservice teachers will transfer this approach to their own instructional practice.

- Faculty who ensure that high-quality, reflective, supervised apprenticeship programs are in place within their teacher education programs.

- Preservice teacher-education programs that are based upon current research and professional standards and that deliver broad-based, in-depth content to best meet the needs of their diverse students.

- Preservice programs that have a clear set of standards and procedures for entering and exiting the program in an effort to maintain quality and academic accountability, and retain high-quality reading teachers who can demonstrate the necessary knowledge and skills to help children from all ethnic backgrounds with their literacy development.

The Teacher Educator Survey

This survey asked teacher educators to determine the importance of various program components. The International Reading Association (2001) notes that the survey instrument examined the following three key issues:

- A demographic section that developed key information about teacher educators.
- A values section that ascertained how teacher educators rate the importance of program features deemed necessary for producing excellent beginning reading teachers.
- A section that asked teacher educators to rate the programs they use that produce excellent beginning reading teachers.

The Beginning Teacher Study

The final study of the commission examined the beliefs and instructional performance of the beginning teachers who graduated from the schools used in the study. These beginning teachers were compared to beginning teachers from programs that did not emphasize reading instruction. Still in progress, the study is designed to provide empirical evidence concerning the relationships among teacher preparation programs, beginning teachers' belief systems, knowledge and skills, reading instruction, and children's reading achievement. Eventually, the commission will provide educators with a database for monitoring program effectiveness with the goal of stimulating collaborative research into effective reading teacher education.

NCREL's Gap Analysis of Preservice and Inservice Teacher Training of Reading: Large-Scale Survey Study

Course Requirements

NCREL examined teacher-preparation programs in 50 public and private universities and colleges throughout its seven-state region. Programs were selected from large and small institutions in both rural and urban areas representing geographical locations within the northern, southern, eastern, and western portions of each state. Reading course requirements in elementary education, secondary education, and reading specialist programs were evaluated. In addition, the following types of required courses were examined:

- Knowledge courses in which students study a body of information about reading (i.e., the psychology of reading development, English language structure and its applications, and diagnostic and corrective instruction).

- Methods courses in which future teachers study teaching methods, often practicing with groups of students.

- Clinical experiences in which future teachers spend a significant amount of time working with students and teachers in schools.

After examining these courses—along with catalog descriptions and syllabi when available—NCREL compared the findings to state department of education regulations and the standards of the International Reading Association (IRA), and the National Council of Teachers of English (NCTE). Among the findings:

- Not one of the 50 preservice programs examined in the seven-state NCREL region meets the IRA's literacy standards for teaching elementary school (Grades K-5).

- Out of those 50 programs, one institution—Ohio University—meets the IRA's recommendations for credit-hour standards in its teacher-preparation program. Twenty-two other schools meet the criteria but not the number of recommended credit hours, possibly due to differences in how credit hours are calculated.

Furthermore, each state within NCREL's region regulates elementary and secondary teacher preparation differently. Some states rely on content-area standards while others have specific course requirements. For example, at the elementary level:

- Illinois requires a two-hour methods of teaching reading course. Beginning in July 2003, new teachers must meet standards specifically developed for all teachers of language arts.

- Indiana requires that all teachers at all levels of licensure (kindergarten, elementary, and secondary) must demonstrate knowledge and skills in reading instruction. Currently, all

teacher education programs within the state require a minimum of six hours of reading instruction to prepare elementary teachers to meet the state-mandated standards.

- Iowa requires nine hours in methods of elementary language arts, elementary reading, and children's literature.

- Michigan currently requires six hours in teaching reading for elementary teachers but is in the process of changing to a standards-based beginning teacher license.

- Minnesota holds teachers accountable for understanding the impact of reading ability on student achievement in information media, recognizing the varying reading comprehension and fluency levels represented by students, and possessing the strategies to assist students to read library and media materials effectively.

- Ohio requires six hours in reading, three of which have to be in phonics.

- Wisconsin requires 12 hours in teaching reading and language arts; developmental reading at the elementary level; children's literature; and language arts emphasizing writing, speaking, and listening, with a clinical in reading.

Two states in the NCREL region—Michigan and Wisconsin—have course requirements related to secondary reading. Michigan requires three hours. Wisconsin requires six hours in content-area reading with a clinical in language arts emphasizing writing, speaking, and listening, which is more rigorous than standards recommended by IRA. Even though the states mandate the number of credit hours in reading that are required before a candidate should graduate from the teacher preparation program, not all colleges and universities meet those state requirements. When asked how they account for the missing hours in reading, many university officials said they incorporate these topics into other education courses. Upon examination, however, the descriptions of these other courses do not specify how reading and literacy are incorporated.

Standards for Beginning Language Arts Teachers

In its publication *What Matters Most: Teaching for America's Future*, the National Commission on Teaching and America's Future (1996), analyzed schools of education and reported that they had "major flaws in teacher preparation" and "unenforced standards for teachers" (p. 10). Beginning with the premise that the quality of teachers is the most important factor in children's education, the commission makes two recommendations to improve student learning. First, it calls for "renewing the national promise to bring every American child up to world-class standards in core academic areas" (p. 64). Second, it recommends "developing and enforcing rigorous standards for teacher preparation, initial licensing, and continuing development" (p. 64). A performance-based standards approach to teacher licensing and certification is a significant departure from traditional methods that have prescribed testing, credits, and courses as the primary requirements for becoming a teacher.

The seven states in NCREL's region—Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin—are at different stages of standard development. Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin have standards for student learning. Illinois, Indiana, Michigan,

Minnesota, and Wisconsin have a set of standards for beginning teachers' performances. Illinois, Michigan, and Minnesota have specific standards for elementary language arts teachers, and Wisconsin's standards are in the draft stage.

The Interstate New Teacher Assessment and Support Consortium (INTASC) is the organization that has been the most influential in the development of state and local teacher-education standards. Through a process initiated in 1990, this group created a set of standards intended to serve as a framework to guide reform in schools of education. Based on a learner-centered form of instruction, the standards describe teachers who can "adapt instruction to student understandings and needs" and facilitate "teachers' deep knowledge of subjects and students" (INTASC, 1995). These standards have undergone extensive public review and have been used by many institutions and state departments as guidelines for standards-based teacher licensing.

Like all current standards, both those for students and for educators, INTASC standards are "performance based," meaning that they describe what "teachers should know, be like, and be able to do" (INTASC, 1995). This system, according to INTASC, resembles that of other professions in which candidates must pass rigorous examinations to be licensed in the profession and consequently produce better teachers.

Other prominent organizations also have participated in the movement to produce performance standards for beginning teachers. The National Council for Accreditation of Teacher Education (NCATE, 2000) has established criteria for the content and pedagogical knowledge necessary for preservice teachers to enter the profession. Also, two of the standards by which NCATE evaluates schools of education deal with future teachers' performances and their assessment (NCATE, 2001b).

Another national organization that focuses on teacher standards is the National Board for Professional Teaching Standards. Through the rigorous process of National Board certification, experienced teachers demonstrate their excellence in a set of standards created to describe effective teaching. The expectation is for teachers to move easily from the standards for new teachers to those describing mature, accomplished teaching (National Board for Professional Teaching Standards, 2001).

Finally, the National Council of Teachers of English (NCTE) and the International Reading Association (IRA) have developed documents specifically aimed at the preparation of language arts teachers. Both of the documents are extensive and thorough and are an excellent resource for any educational institution preparing to undertake the development of standards for language arts teachers. *Guidelines for the Preparation of Teachers of English Language Arts* (NCTE, 1996) is "a statement of what effective teachers of the English language arts need to know and be able to do" (NCTE, 1996, p. 1). This document is written in standards format and emphasizes attitudes, content knowledge, and pedagogical knowledge and skills necessary for effective language arts instruction.

The IRA's publication *Standards for Reading Professionals*, revised in 1998, describes "what reading professionals should know about the literacy process and the teaching proficiencies they should possess to effectively apply that knowledge to the development of literacy in individuals

of all ages and levels" (IRA, 1998, p. iv). These standards, which cover knowledge and beliefs about literacy, are organized in a matrix according to different categories of educators: classroom professionals—including early childhood, elementary, and middle and secondary teachers; special education teachers; adult-education teachers; specialized reading professionals; and allied professionals. Each standard is labeled as necessary at the following levels: awareness, basic understanding, comprehensive understanding, or not applicable.

State standards for student learning increasingly reflect an approach to instruction in which learners experience concepts and socially negotiate their meaning in the authentic context of complex learning environments. As the National Commission on Teaching and America's Future (1996) observed, "Teaching in ways that help diverse learners master challenging content is much more complex than teaching for rote recall or low-level basic skills" (p. 27). Many educators and policymakers believe that standards for teachers will help achieve the goal of more in-depth learning for students.

Testing and Licensure in NCREL's Region

Teacher testing is gaining widespread attention within NCREL's region, especially in Illinois. Recently, a *Chicago Sun-Times* investigation revealed that 5,243 Illinois teachers, some of whom are currently teaching, failed at least one certification test (Rossi, Beaupre, and Grossman, 2001). Certification testing includes a basic-skills test and a subject-area test. Based on the results of the *Chicago Sun-Times* investigation, it seems evident that more attention needs to be focused on teacher testing to determine who is failing the tests and whether the failure is linked to the quality of the tests and student achievement.

Supporting this premise, the American Federation of Teachers (2000a) also investigated teacher testing and found that "individual states and institutions generally set very low cutoff scores for demonstration of mastery" (p. 20). Within NCREL's seven-state region, there is a variety of testing requirements and cut-off scores for teacher candidates. The following is a synopsis of those requirements and scores by individual state.

Illinois

The Illinois State Board of Education requires every preservice teacher to take the Illinois Certification Testing System (ICTS) Basic Skills test before licensure. Preservice teachers are required to receive a passing score of 240 out of 300. Candidates in elementary education must also take the K-9 Elementary test. This test covers language arts, math and science, social studies, health, physical education, fine arts, and professional knowledge. Preservice teachers must receive a score of 70 out of 100 to pass (P. Wieke, personal communication, November 20, 2000).

Besides taking the Basic Skills test, secondary preservice teachers specializing in English language arts also must take the English subject-area test. This test covers writing, reading, language, listening, speaking, assessment, and literature. As with the elementary test, a candidate must score at least 70 to pass.

Indiana

The Indiana Professional Standards Board requires all preservice teachers to complete the Praxis Pre-Professional Skills Test (PPST). This test is comprised of three sections: reading, writing, and math. The teachers are required to receive 176, 172, and 175, respectively, to pass the test. All teachers applying for elementary K-3, 1-6, and K-6 licenses are required to take the Praxis Reading Specialist Test (see Educational Testing Service, 2001). The test description says it is intended "for candidates with advanced preparation (i.e., those with a master's degree or coursework comparable to the training needed for a master's degree) who expect to have specialized responsibilities related to the teaching of reading at any level from kindergarten through twelfth grade" (Gitomer, Lathman, & Ziomek, 2001). The assessment tests teaching knowledge in the following content categories:

- Linguistic and cognitive bases of the reading process
- Comprehension
- Word identification
- Vocabulary development
- Methodologies
- Diagnosis and program improvement

The qualifying score is 370. According to the Indiana Professional Standards Board (2001), "This score was determined by the standard-setting activity and accounts for the fact that some portions of the Reading Specialist Test are not relevant to the beginning elementary teacher."

Candidates for teaching English at the middle and high school levels are required to take not only the Praxis Pre-Professional Skills Test but also the Praxis English Language, Literature, and Composition Content Knowledge Test. The qualifying score for this test is 153. It assesses preservice teachers' knowledge of the following:

- American literature
- British literature
- Classical and word literature
- Analysis of poetry and prose
- Language and composition

Iowa

Beginning in the 2001-02 school year, Iowa is requiring Praxis II testing. Candidates preparing to teach elementary education are required to take the Praxis Elementary Education Curriculum, Instruction, and Assessment Test. This test assesses the following categories:

- Reading and language arts curriculum, instruction, and assessment
- Mathematics curriculum, instruction, and assessment
- Science curriculum, instruction, and assessment
- Social studies curriculum, instruction, and assessment
- Arts and physical education curriculum, instruction, and assessment
- General information about curriculum, instruction, and assessment

According to the Iowa Board of Educational Examiners (2001):

> There have been no validation studies conducted in Iowa through ETS to establish a "cut" score or minimum score. The legislation states that each prospective graduate must complete the content and pedagogy tests, but no minimum score must be attained.

Elementary education graduates also are required to take the Praxis Principles of Learning and Teaching K-6 test. This test assesses the following content categories:

- Organizing content knowledge for student learning
- Creating an environment for student learning
- Teaching for student learning
- Teacher professionalism

Graduates of secondary English language arts programs must take the Praxis Principles of Learning and Teaching 7-12 test, which assesses the same content categories as the K-6 version but includes issues specific to Grades 7-12. They also must also take the Praxis English Language, Literature, and Composition Content Knowledge test, which assesses the following content categories:

- American literature
- British literature
- Classical and word literature
- Analysis of poetry and prose
- Language and composition

Michigan

Michigan requires all teacher candidates to take a basic skills test administered by the National Evaluation Systems. Elementary candidates also are also required to take an elementary exam, which assesses the following content categories:

- Social studies
- Math
- Science
- Physical education
- Health
- Language arts

Secondary candidates for teaching English language arts must complete an English subject-area test, which assesses the following content categories:

- Meaning and communication
- Literature and understanding
- Genre and craft of language
- Skills and processes

The qualifying score for each of the Michigan tests is 220.

Minnesota

Minnesota mandates that all teacher candidates take the Praxis Pre-Professional Skills Test and the Praxis Principles of Learning and Teaching Test, respective to their grade level. The Pre-Professional Skills Test is comprised of three sections: reading, writing, and math. The qualifying scores are 173 for reading, 172 for writing, and 169 for math.

Those taking the Principles of Learning Test for Grades K-6 must get a qualifying score of 152, and those taking it for Grades 7-12 need a qualifying score of 140. Elementary education candidates also are required to take the Praxis Elementary Education Content Knowledge Test, with a qualifying score of 140.

Candidates for teaching high school English language arts also are required to take the Praxis English Language, Literature, and Composition Content Knowledge Test, which requires a qualifying score of 148.

Ohio

Ohio's testing system differs somewhat from that of the other states. The elementary category is divided into early childhood (Grades PreK-3) and middle childhood (Grades 5-9). Both groups take the Praxis Principles of Learning Test, but early childhood teachers take the Grades K-6 version and middle childhood teachers take the Grades 5-9 version. Both tests require a qualifying score of 168. Those candidates in early childhood who intend to teach elementary (Grades K-8 or Grades 1-8) also have to also take the Praxis Elementary Education Curriculum, Instruction, and Assessment Test, with a qualifying score of 162.

Candidates for teaching English under the Adolescence to Young Adult category are required to take not only the Principles of Learning Test for Grades 7-12 with a qualifying score of 165 but also the Praxis English Language, Literature, and Composition Content Knowledge Test, with a qualifying score of 167.

Wisconsin

As of May 2001, Wisconsin requires all teacher candidates to take only the Pre-Professional Skills Test (K. Lind, personal communication, May 27, 2001). They must score 175 in reading, 174 in writing, and 173 in math.

The following table (Table 2) depicts specifications for teacher testing within NCREL's region.

Table 2. Teacher Testing in NCREL's Region

State	Tests for Elementary	Qualifying Scores	Tests for Secondary English Language Arts	Qualifying Scores
Illinois	Illinois Certification Testing System Basic Skills	240	Illinois Certification Testing System Basic Skills	240
	K-9 Elementary	70	English	70
Indiana	Praxis PPST Reading Writing Math	 176 172 175	Praxis PPST Reading Writing Math	 176 172 175
	Praxis Reading Specialist	370	Praxis English Language, Literature, and Composition: Content Knowledge	153
Iowa	Praxis Elementary Education: Curriculum, Instruction, and Assessment	No minimum score required	Praxis Principles of Learning and Teaching: 7-12	No minimum score required
	Praxis Principles of Learning and Teaching: K-6	No minimum score required	Praxis English Language, Literature, and Composition: Content Knowledge	No minimum score required
Michigan	Basic Skills	220	Basic Skills	220
	Elementary Education	220	English/language arts	220
Minnesota	Praxis PPST Reading Writing Math	 173 172 169	Praxis PPST Reading Writing Math	 173 172 169
	Praxis Principles of Learning and Teaching: K-6	152	Praxis Principles of Learning and Teaching: 7-12	140
	Elementary Education: Content Knowledge	140	Praxis English Language, Literature, and Composition: Content Knowledge	148

Ohio	Praxis Principles of Learning and Teaching: K-6	168	Praxis Principles of Learning and Teaching: 7-12	165
	Praxis Elementary Education: Curriculum, Instruction, and Assessment	162	Praxis English Language, Literature, and Composition: Content Knowledge	167
Wisconsin	Praxis PPST Reading Writing Math	 175 174 173	Praxis PPST Reading Writing Math	 175 174 173

Synthesis of Preservice Teacher Education Research Studies in the Field of Reading

Considering the multidimensional factors in teacher education that should be examined, educators can no longer postulate that preservice teachers will teach effectively once they have subject-matter knowledge, understand models of curriculum, and have some type of practice in the field. All of these are important; however, the investigation of preservice teacher education in the field of reading needs to expand to provide in-depth insights as the field moves forward.

According to Anders, Hoffman, and Duffy (2000), 19,457 studies have been conducted in reading during the past 30 years. Of that number, only 140 focused on preservice reading education. These studies varied in their methodological investigation and research rigor, leaving questions and concerns about the nature of preservice reading education. As a result of the findings from the studies, seven key thesis statements were identified, providing supportive reflections that could prove useful as educators look at adding value to preservice teacher education in reading.

This synthesis of preservice teacher-education research studies in the field of reading provides a review of the research taken from core categories in the field of preservice teacher education in reading research. These categories are: an analysis of the past, preservice teachers' perspectives, elementary and secondary levels, teaching experiences, and diagnostic training.

An Analysis of the Past

The Torch Lighters: Tomorrow's Teachers of Reading (Austin & Morrison, 1961). A reflection on the history of any system or culture is often a great teacher. This research study provided a light indeed for educators to begin to take a comprehensive look at the nature and quality of preservice teacher education in reading. As of 2001, the reading field is still addressing some of the same problems analyzed during this study. This research study had two major purposes: (1) to learn how the colleges and universities in the United States were preparing future teachers of reading, and (2) to suggest major recommendations for improving teacher preparation in reading instruction. The study carefully analyzed the admission, curriculum, and certification practices for preservice teachers at 74 universities. The study also analyzed the content and the manner in which courses were conducted, causes of reading problems, reading research needs, and anticipated changes needed in reading instruction.

The lessons learned from this study are broad in scope and critical to summarize as points of reflection and guidance for preservice education, state departments of education, policymakers, and schools. Austin and Morrison (1961) list 22 recommendations:

1. All preservice teachers must make formal application to teacher education programs. At the end of their second year, they must be reviewed for their level of academic proficiency, mental and emotional maturity, aptitude for teaching effectiveness, and competency in elementary grade skills.

2. Preservice teachers should be permitted and encouraged to elect a field of concentration other than elementary education. However, they also should complete their reading methods coursework and student teaching.

3. Faculty members responsible for training preservice teachers should make every effort to inculcate in their students a sense of pride in their chosen profession.

4. Senior faculty, who are prominent in the field of reading research, should take an active role in the instruction of undergraduates. They should at least teach one undergraduate reading course per semester.

5. Class time allocated to reading instruction, whether taught as a separate course or integrated with language arts, must be the equivalent to at least three semester-hour credits.

6. Basic reading instruction offered to preservice elementary teachers should be expanded to include content and instructional techniques for the intermediate and upper grades.

7. The faculty must continue to emphasize that no one method of word recognition, such as phonetic analysis, should be used to the exclusion of other word-attack techniques. The preservice teachers must be exposed to a variety of opinions related to other significant issues in reading, such as grouping policies, prereading materials, techniques of beginning reading instruction, and teaching machines.

8. The faculty must take greater responsibility in making certain that their students have mastered essential principles of phonetic and structural analysis.

9. A course in basic reading instruction should be required for all preservice secondary teachers.

10. Universities need to offer a course or inservice training in reading instruction that is specifically designed for principals, supervisors, and cooperating teachers.

11. The case-study or problem-centered approach needs to be implemented to provide preservice teachers with the opportunity to relate theory to practice and to analyze, interpret, and solve practical instructional concerns.

12. Every preservice teacher must be abreast of techniques, interpretation, and evaluation of current and past research. Preservice teachers also should have access to a variety of professional reading journals.

13. All faculty members responsible for teaching reading or language arts courses must have sufficient time to observe and confer with their students during the practical teaching experience. They also must have sufficient time to consult with the cooperating teacher and administrative staff (e.g., the principal).

14. Additional experimental research should be conducted in the areas of critical reading, study skills, and grouping practices.

15. Universities need to recruit, train, and certify cooperating teachers. After the cooperating teachers undergo certification, they could serve as university associates. They could participate in the formulation of practice teaching programs, preservice teacher seminars, and in the final evaluation of preservice teachers' performance. Cooperating teachers at this level should receive financial remuneration for their role in preservice teacher education.

16. Universities need to appoint a community liaison to the local school system to achieve a closer collaboration between schools and the university to support the schools in enhancing reading and other academic instruction.

17. Universities should encourage preserve teachers to remain in their cooperating school sites for a full day during the practice teaching program to help them gain a greater understanding of the continuity of the reading program.

18. Universities must ensure that no more than two students be assigned to practice-teach within one cooperating classroom.

19. Students assigned to one classroom during their practice teaching experience also must have time allocated to participate in an observational program that allows them to gain experience with children at different grade levels.

20. When preservice teachers are found to have specific deficiencies in their understanding of the reading program, the preservice teacher must be required to return to the university for additional coursework following his or her practice teaching. If the preservice teacher is deficient in his or her instructional techniques, the apprenticeship program must be prolonged until the necessary level of competency is demonstrated.

21. Universities need to reexamine the criteria they use to evaluate students during the practice teaching experience to ensure that a passing grade in practice teaching or student teaching is in fact a passing grade where the student has completely demonstrated a level of competency in teaching reading and other elementary grade skills.

22. Universities need to establish a follow-up program to ascertain their graduates' views concerning the impact and usefulness of the preservice teacher-education program on their teaching. The major questions for investigation would be:

    - Was the teacher education program in reading adequate in its preparation of teachers?
    - What were the strengths of the teacher education program?
    - What were the weaknesses of the teacher education program?

The Torch Lighters Revisited (Morrison & Austin, 1977). This analysis is a follow-up to the first report, *The Torch Lighters: Tomorrow's Teachers of Reading* (Austin & Morrison, 1961). The authors wanted to determine the extent to which their recommendations were adopted or modified. They also wanted to ascertain what additional changes had taken place within teacher preparatory programs. *The Torch Lighters Revisited* study consisted of a three-part questionnaire, which covered the following areas:

- The extent of adoption of the original 22 recommendations made in *The Torch Lighters*. (The result indicators were: in effect, modified or strengthened, not in effect, not applicable, no response.)

- Significant changes that had taken place in recent years in colleges and universities where preservice teachers of reading were being prepared.

- Suggested recommendations for the future, as indicated by respondents to the questionnaire.

The lessons learned from this study show that for each one of the 22 recommendations there were percentage points for the *in effect* category ranging from 24 percent to 84 percent. The *modified or strengthened* category had percentage points ranging from 11 percent to 28 percent. The *not in effect* category had percentage points ranging from 1.2 percent to 57.8 percent. The highest areas that showed no effect or change were the following:

- Universities need to recruit, train, and certify cooperating teachers. After the cooperating teachers undergo certification, they could serve as university associates. They could participate in the formulation of practice teaching programs and preservice teacher seminars, and in the final evaluation of preservice teachers' performance. Cooperating teachers at this level should receive financial remuneration for their role in preservice teacher education (57.8 percent).

- Additional experimental research should be conducted in the areas of critical reading, study skills, and grouping practices (50 percent).

- When preservice teachers are found to have specific deficiencies in their understanding of the reading program, the preservice teacher must be required to return to the university for additional coursework following his or her practice teaching. If the preservice teacher is deficient in his or her instructional techniques, the apprenticeship program must be prolonged until the necessary level of competency is demonstrated (49.7 percent).

- There should be a required course in basic reading instruction for all secondary preservice teachers (48.4 percent).

- There is a need for course offerings or inservice training in reading instruction designed specifically for principals, supervisors, and cooperating teachers (42.2 percent).

The recommendations for the future indicated by the respondents on the questionnaire revealed a concern for the increased number of required courses, the need for an earlier introduction of the preservice teacher to realistic reading settings and interaction with children, the quality of faculty responsible for teaching reading courses, and the need for federal funding to support preservice teachers and preservice teacher-education programs.

Preservice Teachers' Perspectives

Future Teachers' Reflections, Perceptions, and Anticipations About Reading and Writing (Lickteig, Johnson, & Johnson, 1999). This study was designed to ascertain preservice elementary education teachers' reflections on learning to read and write, their perceptions about language arts (reading, writing, speaking, and listening), and their anticipations about what they will experience as elementary school language arts teachers. The preservice teachers were given a 30-item survey, which focused on the categories of reflections, perceptions, and anticipations. The survey included questions such as the following:

Reflections

- Who had the greatest influence on you as a reader?
- Who had the greatest influence on you as a writer?

Perceptions

- In the past year, about how many books have you read for pleasure or information?
- How would you characterize your reading ability?

Anticipations

- As a future teacher, which category of language arts do you most look forward to teaching and why?
- As a future teacher, which category of language arts do you least look forward to teaching and why?

The lessons learned from this study provide guidance for teacher educators as they reexamine the focus of their reading language arts methods courses. When asked who had the greatest influence on them as a reader, 66 percent responded *mother, father, or family member*, and 38 percent indicated *teacher*. When asked who had the greatest influence on them as a writer, 47 percent responded *teacher*, and 16 percent indicated *mother, father, or family member.*

The study revealed that the preservice teachers characterized themselves as occasional readers with average reading ability and occasional writers with average writing ability. The preservice teachers indicated that writing provided them with the least pleasure under the language arts domain. They also indicated that out of the four areas covered in language arts (i.e., reading, writing, speaking, and listening), they would allocate the least amount of instructional time to writing. The preservice teachers indicated that writing does not have a significant impact on one's success in life, and that out of the four areas covered in language arts, it is the most difficult to teach.

What those preservice teachers revealed concerning writing is very informative. These findings provide insight not only for teacher educators concerning the redesign of reading/language arts methods courses but also for inservice teachers at the classroom level. The study offers practical instructional suggestions that address the preservice teachers' perceptions concerning writing:

- Create a positive writing environment where preservice teachers are provided with daily writing activities, which include professional journal writing on observations, reflections, and reading-response journal entries.

- Conduct writers' workshops and conferencing at the university level.

- Model the metacognitive aspects of writing and the writing process.

The Belief Systems and Instructional Choices of Preservice Teachers (Lonberger, 2000). This study investigated three research questions concerning preservice teachers' belief system:

1. What is reading?
2. How do you believe young children learn to read?
3. How would you teach a young child to read?

These questions were based on the belief that preservice teachers' philosophies reflect their perceptions of the reading process, children's reading development, and how reading should be taught. The preservice teachers in this study responded twice to the questions—once on the first day of class prior to any discussion about the course, and again during the last class period. The responses were classified by reading-theory orientation, such as:

- Bottom-up responses, which emphasized reading as a skills-base function that highlights the use of phonics and describes the reader's task as receiving information.

- Top-down responses, which emphasized reading as a constructing-meaning process, where the reader is active and engaged. The reader actively uses what he or she already knows about a topic to bring meaning to what an author has written.

- Interactive responses, which emphasized reading as using decoding skills and constructing meaning. This classification was an integration of both the bottom-up and the top-down theories.

The frequencies of the responses were tabulated into raw scores and percentages. The study also analyzed the consistency of preservice teachers' belief systems across responses by determining levels of congruence or incongruence.

To measure what impact the preservice teachers' belief system had on their understanding of reading and how it should be taught, the preservice teachers were asked to devise a lesson plan on word recognition for a primary grade (Grades 1-3) that would reflect their beliefs about reading. The preservice teachers were observed teaching the lessons at a campus lab school. The lesson plans were evaluated to analyze levels of congruence or incongruence with the preservice

teachers' already stated beliefs and philosophies concerning the three research questions mentioned above. This analysis also was matched with an end-of-semester questionnaire, which questioned the preservice teachers a final time on the above research questions under investigation.

The study revealed changes in preservice teachers' perceptions. Prior to any course participation, 51.4 percent of the preservice teachers defined reading as an interactive process. Yet 48.6 percent of the preservice teachers' responses about how children learn to read reflected a bottom-up orientation. When initially asked how they would teach a young child to read, 62.1 percent of preservice teachers' beliefs reflected a bottom-up orientation.

By the end of the study and reading course, however, the research revealed that the preservice teachers' perceptions were becoming closely aligned with their pedagogical practices. After receiving opportunities to reflect and practice their beliefs within a constructive environment, the majority of the preservice teachers in this study adopted an interactive and top-down belief system concerning reading. They gained a greater understanding of the educational implications of their beliefs. Also, they could apply their beliefs and understanding about reading into meaningful and engaged classroom practice for their students. In closing, the preservice teachers revealed that they moved to a stage in which they consciously think about the congruency of their beliefs when they create lesson plans.

Elementary and Secondary Levels

The Effects of Teacher Training on Preservice Elementary Education Majors' Conceptual Framework of Reading (Shaw, 1994). This study investigated whether an elementary reading methods course and student teaching have an effect on teachers' theoretical models of teaching reading (i.e., top-down, bottom-up, or interactive). The top-down model is a student-to-text model, where the student brings his or her background knowledge to the text to construct meaning. Teachers who postulated this model deem the construct of meaning as primary to the instructional process. They focus the majority of reading and language arts instructional time on meaning-making activities in the areas of reading, writing, speaking, and listening. The bottom-up model is a text-to-reader model, where the student must get meaning from the syntactic, semantic, and structural organization of the text. Teachers who practice a bottom-up model place a focus on students decoding letters and words before they are able to construct meaning from text selections. The interactive model sets forth a framework, which indicates that the process of reading is initiated through the integration of constructing meaning by simultaneously decoding letters and words.

The study indicated that the bottom-up theoretical model espoused by teachers translates into instructional practices that require the teacher to become a technician (i.e., using the science of instruction in a systematic manner). The top-down theoretical model translates into instructional practices that require the teacher to be a professional, which in turn necessitates that teachers have the ability and knowledge base to adapt to shifts within the instructional situation. Teachers who espouse the top-down model seem to select among a variety of alternatives and strategies within their reading instruction. They also encourage and teach their students how to choose among alternatives within the reading process. Finally, the top-down theoretical model translates

into teachers acquiring natural knowledge and skills that help them become instructional decision-makers.

Reading Coursework Requirements for Middle and High School Content Area Teachers: A United States Survey (Romine, McKenna, & Robinson, 1996). For many decades, middle school and high school content-area teachers have needed to deal directly with reading problems facing their students. However, these teachers have not necessarily received the type of in-depth reading instruction to equip them for this daunting task.

This survey analyzed the status of course requirements in reading for teachers seeking certification at the middle or high school levels for all 50 state departments of education and the District of Columbia. The years analyzed are 1973, 1983, and 1994; the 1994 data has a 100-percent response rate. The certification officers were asked the following questions:

- How many courses in developmental reading instruction are required for certification as a middle school teacher?
- How many courses in content-area reading are required for certification as a middle school teacher?
- How many courses in developmental reading instruction are required for certification as a high school teacher?
- How many course in content-area reading are required for certification as a high school teacher?

The study indicated an increase in the number of U.S. middle and secondary teachers exposed to content literacy techniques and methodologies. The number of states requiring at least one content reading course for certification increased.

The study revealed that a total of 37 states, plus the District of Columbia, reported at least one course in reading for middle and/or high school certification in one or more content subjects. The study stressed the need to realize that adding coursework to certification requirements for middle and high school teachers will not solve the problem of how to effectively transfer knowledge, skills, and pedagogical techniques into practice. The courses should be supplemented with ongoing, practical, instructional professional development that encourages the continuous implementation of the knowledge learned from coursework and classroom practice.

Teaching Experiences

Practical Teaching Experience in Reading for Preservice Teachers (Miller & Rand, 1978). This study analyzed three different types of practicum teaching experiences that students had to take after completing two reading methods courses. The three types of teaching experiences were as follows:

- Assignment with a classroom teacher to implement knowledge and skills learned from the two reading methods courses.

- Assignment with a special reading teacher to implement knowledge and skills learned from the two reading methods courses.

- Assignment with a university reading center tutorial program to implement knowledge and skills learned from the two reading methods courses.

Students were individually assigned to one type of practicum teaching experience. All the students, however, had the same academic experience, which included lectures, group discussions, assigned readings, audiovisual presentations, and the examination of reading materials. Each practicum was 22 hours.

The analysis focused on two key questions:

- Do preservice teachers assigned to different practicum teaching experiences differ in their knowledge and skills concerning the teaching of reading?

- Do preservice teachers assigned to different practicum teaching experiences differ in their attitude toward their preservice experience and toward the teaching of reading?

The study indicated that preservice teachers assigned to a special reading teacher for the practicum scored higher on a comprehensive content-based end-of-semester examination than did the preservice teachers assigned to a classroom teacher or the university lab. The preservice teachers assigned to a special reading teacher also scored the highest on the end-of-semester attitudinal questionnaire, which was designed to ascertain the preservice teachers' attitude concerning the type of practicum they encountered. Preservice teachers involved in the practicum with a classroom teacher scored the lowest both on the end-of-semester content-based comprehensive examination and the end-of-semester attitudinal questionnaire.

The study revealed that preservice teachers assigned to special reading teachers had the advantage of teaching with highly trained specialists in diagnostic procedures. These reading teachers also taught reading with a comprehensive skill set related to the psychology of reading and the overall reading development of children. The reading teachers had more time with their preservice teachers than the classroom teachers due to their flexible schedules. The university lab experience did not offer a realistic classroom setting for the preservice teachers to practice. Due to the time factor and the flexible schedules, reading teachers had a greater opportunity to provide consistent support in reviewing the preservice teachers' lesson plans and instructional practice. The reading teachers' flexible time schedules also allowed them time to make constructive suggestions to their preservice teachers concerning modifying and improving instruction for the class as a whole and for the individual needs of students.

Effects of An Alternative Approach for Teaching Preservice Teachers How to Teach Strategic Reasoning: Two Illustrative Cases (Herrmann & Sarracino, 1992). This study analyzed a method for training or coaching preservice teachers to effectively teach strategic reasoning to students. Instructing teachers to teach strategic reasoning is critical to the process of developing students who are strategic readers. This process cannot happen within a short *snapshot* type of training, which carries preservice teachers through a rote form of implementing specific

instructional models and techniques. The purpose of this study was to explore changes in preservice teachers' conceptual understandings and theoretical perspectives about the teaching of strategic reading and the types of instructional actions that could be implemented in strategy instruction and reasoning.

This study was conducted in a yearlong course designed specifically for this purpose. The course design emphasized reflective inquiry and practice related to different controversial theories that were influencing the reading field, such as skill-based learning, cognition, metacognition, and the whole language philosophy. In analyzing how to instruct preservice teachers to become teachers of strategic reasoning, the study provided the preservice teachers with teaching and learning opportunities that enabled them to construct new conceptual understandings through dialectical discourse, authentic literacy teaching experiences, and collegiality and collaboration. To carry out these teaching and learning experiences, the study had four phases:

Phase I. Guided discussions were conducted for each theory after the preservice teachers read articles from professional journals and viewed videotaped lessons. The guided discussions focused on the level in which instruction was accomplished as it related to the theory under investigation. Attitudes and process outcomes also were analyzed.

Phase II. The preservice teachers tutored in an after-school tutoring program for students in Grades 1-9 who were experiencing reading and writing difficulties. The preservice teachers were paired together, and a graduate student was assigned as team leader and mentor. Each group had eight to ten students.

Phase III. The preservice teachers' tutoring experience continued with discussions and ongoing formative evaluation concerning of the process of teaching students how to become strategic readers.

Phase IV. A detailed analysis of explicit teaching concerning teaching strategic reasoning was reviewed, with discovery learning being continuous, and misconceptions were clarified.

The study revealed that the preservice teachers did not learn how to teach strategic reasoning at the level the researchers anticipated. Yet the preservice teachers learned something of equal value. They learned how to strategically think about literacy teaching from a variety of theoretical perspectives (i.e., skill-based learning, cognition, metacognition, and the whole language philosophy).

Diagnostic Training

Preparing Preservice Teachers for Remedial Instruction: Teaching Problem Solving and Use of Content and Pedagogical Knowledge (Risko, Yount, & McAllister, 1991). This study analyzed how methods courses, microteaching, and other preteaching experiences often do not equip preservice teachers with problem-solving strategies to reflect on the many complexities of teaching and assessing students. Its primary focus was to help preservice teachers learn how to increase their diagnostic-analysis abilities as they tried to meet the needs of individual students and improve whole-class instruction.

The study was conducted in an undergraduate course, Remedial Reading and Practicum, which was required for both elementary and special education majors. Across all class sessions, the instructor and students examined video-based cases. Three cases were used to explore authentic classrooms and Title I situations. Each case contained a variety of naturally occurring classroom events, such as teacher-student interactions, teacher questioning, and students' participation in reading and writing activities. The preservice teachers carefully analyzed and diagnosed factors that contributed to the complexity of reading difficulties.

Related text materials supplemented the video cases. Other important information (e.g., children's assessment protocols, teachers' lesson plans, and samples of students' writings) also was reviewed for each case to provide a detailed diagnostic study of each student's reading abilities and difficulties. The viewing of diagnostic video cases provided the professor and preservice teachers with opportunities to reexamine scenes and cases for a variety of purposes to access information that was difficult to describe in written or verbal accounts (e.g., teachers' and students' nonverbal cues).

The study demonstrates that video-based cases can enhance preservice teachers' ability to actively participate in a variety of in-depth analyses of various topics, such as text structure, comprehension, the relationship between decoding and comprehension, schema theory, and diagnostic and corrective instruction procedures. The study clearly reveals that learning to teach through an enriched, problem-solving process enhances preservice teachers' ability to transfer theory into practice. The video-based case experiences also helped preservice teachers acquire mental models of authentic classes, enabling them to think flexibly and to understand the details of classroom events.

Preservice Teachers' Schemata for a Diagnostic Framework in Reading (Shefelbine & Shiel, 1990). The purpose of this study was to examine a schema-based diagnostic framework model, which used four key factors involved in the reading process:

- Levels of word identification (letter names, phonics, and structural analysis)
- Fluency
- Background knowledge
- Comprehension development and skills

The framework was studied to ascertain its impact on increasing preservice teachers' diagnostic skills. The study carefully examined preservice teachers' understanding of reading knowledge and instruction. It also examined their understanding of the diagnostic framework concerning how effectively they made classroom-level decisions about students' instructional needs in reading.

The classroom instruction across the study consisted of lectures, discussion, demonstrations, and peer practice sections. The diagnostic framework was presented in the form of case studies. The principal components of the diagnostic framework were systematically and repeatedly examined throughout the study. In addition to the case analyzes, the preservice teachers evaluated audiotapes of students' reading and answering questions. They also observed and taught reading and other subjects within an elementary school four days a week. In addition, the preservice

teachers attended their university diagnostic course once a week for 2½ hours during a 15-week semester.

This study revealed that the amount of quality reflective and engaged time offered to preservice teachers could enhance their understanding of the reading process—as well as their ability to properly diagnose and provide corrective instruction for students. Finally, the study revealed that preservice teachers were more successful on some components of the framework than on others (for example, the fluency mean was 4.75, the comprehension development and skills mean was 3.28, the background knowledge mean was 2.77, and the word identification mean was 2.51). This finding indicates the need for further detailed support for preservice teachers within this area of study.

Recommendations

The following recommendations provide critical insights for enhancing preservice teacher education programs.

Recommendation 1

Teacher education programs need to align their curriculum and methods courses for K-12 teacher preparation to teacher national and state standards, student state standards, and state departments of education requirements for certification and licensure.

Action Plan

Conduct a yearly program-effectiveness evaluation within teacher education programs to ascertain the alignment process and effectiveness. Title II of the Higher Education Act, the Interstate New Teacher Assessment and Support Consortium, the National Council for Accreditation of Teacher Education, the National Board for Professional Teaching Standards, the International Reading Association, and the National Council of Teachers of English can help with the process of ensuring alignment with teacher education programs and state departments of education requirements.

Recommendation 2

Preservice teachers in K-12 teacher-preparation programs who are seeking certification or licensure need to have a sound understanding of theoretical reading principles, child development, and the relationship of these two areas to the implementation of practical teaching experiences.

Action Plan

Redesign methods courses to include a strong theory-to-practice component, which will provide preservice teachers with the opportunity to gain a knowledge base of a wide variety of theoretical principles. Preservice teachers also should have quality time—as individuals and with their peers—to reflectively plan meaningful instruction around these theoretical principles. The teaching and learning experiences within methods courses also can be used as training and preparation for increasing the clinical experience and evaluation process of preservice teacher education to an interactive, ongoing, formative process. In this process, preservice teachers have an active role as the primary evaluator in their teaching and learning process. Preservice teachers also should be thoroughly coached and mentored in the process of self-evaluation and evaluating their peers.

Recommendation 3

Reading educators need to systematically analyze and empirically test what works best in preservice teacher education in the field of reading. They can develop a database of the process and levels of effectiveness concerning what works best. The database should include the evaluation process of schools of education, levels of alignment, enrollments in reading and

language arts programs, elements that contribute to the success of their program, and elements that contribute to the program's limitations.

Action Plan

Conduct rigorous and multidimensional program evaluations for schools of education. The evaluations should have strong methods of triangulation. Faculty can conduct action research in reading methods classes to learn valuable lessons for improving teacher quality. Twice a year schools of education can conduct a pretest and posttest survey on preservice teachers' knowledge, skills, and perceptions concerning teaching and learning for children in the area of reading and language arts. These surveys would provide the teacher education program with a database of yearly progression that could be shared within a larger database of schools of education or preservice teacher-education programs in reading or language arts. The synthesis of research studies provided within this paper provides insights concerning the valuable information that is ascertained through teacher preparation research and evaluation within a given reading course.

Recommendation 4

To meet the needs of a diverse society, universities need to recruit high-quality minority preservice teachers. These preservice teachers represent and understand the cultural context of students from cultural and linguistically diverse backgrounds.

Action Plan

Use current models of recruiting minority preservice teachers as a guide for implementing the recruitment of highly qualified minority teachers. (Refer to "Recruitment of Minority Teachers" on page 3.)

Recommendation 5

Teacher education programs need to work closely with state departments of education to align what preservice teachers learn and are required to know within teacher education programs, and what they are actually required to know and are tested on for certification and licensure.

Action Plan

Reevaluate the teacher preparation program to ascertain areas of missing links within the program concerning the alignment of what is offered and what is actually required of the preservice teacher for testing at the state level. The programs at the elementary level should match with state departments of education concerning preservice teachers demonstrating a strong knowledge base in phonetics, vocabulary, fluency, reading comprehension, and assessment.

The programs at the secondary level should match with state departments of education concerning preservice teachers demonstrating a strong knowledge base in the teaching of content-area reading and instructional strategies for integration and content mastery.

Conclusion

A sound teacher-education program in the teaching of reading is a major ingredient in effective schooling. Teachers and parents agree that if a child does not learn to read well, many opportunities will be lost to him or her. To ensure high-quality reading instruction in the schools, teacher educators need to provide balanced reading programs that will thoroughly equip preservice teachers with the ability to teach all children to read and become literate citizens. Unfortunately, there is no simple formula or one right way for providing comprehensive, well-balanced teacher-education programs. Although the task is complex, detailed, and arduous, it certainly is not impossible. The major stakeholders will need to come together to reflect upon the necessary steps that will ensure the right balance within teacher education programs. This process entails an analysis of the major factors that affect teacher education, such as enhancing preservice teachers' knowledge, skills, creativity, flexibility, and ability to transfer their learning to practical teaching experiences in an effort to increase students' literacy development.

In today's educational system, teachers are held accountable for the performance, progress, and overall academic success of their students. To hold teachers to this high level of responsibility, teacher education programs, alternative routes to certification, state departments of education, policymakers, district superintendents, school administrators, beginning teacher induction programs, and even the preservice and inservice teachers themselves must all have an active part in ensuring a high level of teacher quality. Establishing a system of effective alignment will result in teacher quality in preservice teacher education and transfer to high-quality inservice teacher practice. Before teachers can be held to a high level of standards and accountability, they must be equipped with identifiable knowledge, skills, and competencies that will enable them to meet the challenging, complex, and diverse needs of their students.

Teacher education programs that are balanced in their scope will be better equipped to prepare preservice teachers for the complexities of educating students in the 21st century. In addition, these programs should have a set of standards that are aligned to national and state standards for teachers and state standards for students. Teacher education programs also would add value by clearly delineating their programs' effectiveness and evaluation (i.e., what works—factors that affect teacher education, such as preservice teachers' knowledge, skills, perceptions, creativity, flexibility, and ability to transfer their learning to practical teaching experiences in an effort to increase students' literacy development).

Finally, in looking forward to ameliorating and supporting teacher education programs in the preparation of teachers charged with a number of critical issues (e.g., student achievement, achievement gaps, cultural and linguistic diversity, assessment, accountability, teaching in high-poverty underserved areas, inadequate professional development, and possible curriculum misalignments), it is imperative that preservice teacher education programs take the lead in the teacher quality agenda. They can accomplish this goal by ensuring a balance between what is offered to preservice teachers and what is required of them to gain access into the teaching force.

Hoffman and Pearson (2000) provide insight concerning the reading research and practice agenda that preservice teacher education should consider in preparing teachers to meet the needs

of all students in the 21st century. This insight includes teacher education program effectiveness, what we know about training teachers of reading, and how we should teach or train teachers of reading.

By providing empirical research to answer questions related to preservice teacher education in the field, the educational community will realize that developing effective teachers is a multidimensional, ongoing, and engaging process. The core component of teacher education is the search for effective ways to produce high-quality teachers who have acquired the necessary knowledge and skills needed to help all students.

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Appendix A: National Council of Teachers of English (NCTE) Standards and Matrix from *Initial Programs for Middle/Junior High and Senior High School English Language Arts Teaching*

The following Standards and Matrix have been reproduced from Initial Programs for Middle/Junior High and Senior High School English Language Arts Teaching *with permission from the National Council of Teachers of English. The document can be accessed online at* ***www.ncte.org/ncate/matrix.html***

STANDARDS AND MATRIX
1.0 Structure of the Basic Program **The institution establishes a specific curriculum for preservice English language arts teachers; as a result, the candidate will**
1.1 complete a specific language arts course of study;
1.2 gain knowledge and skills through on-campus and field experiences designed to promote knowledge of theory and practice in English language arts;
1.3 experience modeling of effective pedagogy and attitudes by college/university faculty in both English and education, and by middle/junior high and senior high school supervising teachers.
2.0 Attitudes for English Language Arts **Through modeling, advisement, instruction, related experiences, and assessment, the program promotes and strengthens professional attitudes needed by English language arts teachers; as a result, the candidate will**
2.1 demonstrate a respect for the worth and contributions of all learners;
2.2 use the English language arts to help students become familiar with their own and others' cultures;
2.3 engage in reflective practice and pursue continued professional growth and collaboration with colleagues;
2.4 help students develop lifelong habits of critical thinking and judgment;
2.5 take informed stands on issues of professional concern;

STANDARDS AND MATRIX
2.6 recognize the impact that culture, societal events and issues have on teachers, students, the English language arts curriculum, and education in general;
2.7 promote the arts and humanities in the daily lives of students.
3.0 Knowledge of English Language Arts **The program prepares English language arts teachers who are knowledgeable about language, literature, oral, visual, and written literacy, print and non-print media, technology, and research theory and findings.**
3.1 The program prepares the candidate with knowledge and understanding of the English language; as a result, the candidate will
3.1.1 show an understanding of language acquisition and development;
3.1.2 demonstrate how reading, writing, speaking, listening, viewing, and thinking are interrelated;
3.1.3 recognize the impact of cultural, economic, political, and social environments upon language;
3.1.4 show a respect for and an understanding of diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles;
3.1.5 show an understanding of the evolution of the English language and the historical influences on its various forms;
3.1.6 demonstrate an understanding of English grammars;
3.1.7 demonstrate an understanding of semantics, syntax, morphology, and phonology;
3.1.8 show the various purposes for which language is used.
3.2 The program prepares the candidate in the practices of oral, visual, and written literacy; as a result, the candidate will

STANDARDS AND MATRIX
3.2.1 demonstrate the influence of language and visual images on thinking and composing;
3.2.2 use writing, speaking and observing as major forms of inquiry, reflection, and expression;
3.2.3 use the processes of composing to create various forms of oral, visual, and written literacy;
3.2.4 use writing, visual images, and speaking for a variety of purposes and audiences;
3.2.5 apply knowledge of language structure and conventions to creating and critiquing print and non-print texts.
3.3 The program prepares the candidate with knowledge and understanding of reading processes; as a result, the candidate will
3.3.1 demonstrate how to respond to and interpret what is read in different ways;
3.3.2 demonstrate how to discover and create meaning from texts;
3.3.3 use a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts.
3.4 The program prepares the candidate with knowledge and understanding of different composing processes; as a result, the candidate will
3.4.1 use a wide range of writing strategies to generate meaning and to clarify understanding;
3.4.2 produce different forms of written discourse;
3.4.3 demonstrate how written discourse can influence thought and action.
3.5 The program prepares the candidate with knowledge and understanding of an extensive range of literature; as a result, the candidate will

STANDARDS AND MATRIX
3.5.1 show knowledge of a broad historical and contemporary spectrum of United States, British, and world literatures, including:
3.5.1.1 works from a range of cultures;
3.5.1.2 works from a range of genres;
3.5.1.3 works by female authors;
3.5.1.4 works by authors of color;
3.5.1.5 works written specifically for older children and young adults;
3.5.1.6 works of literary theory and criticism.
3.6 The program prepares the candidate with knowledge and understanding of the range and influence of print and non-print media and technology in contemporary culture; as a result, the candidate will
3.6.1 recognize the influence of media on culture and on people's actions and communication;
3.6.2 construct meaning from media and non-print texts;
3.6.3 display an understanding of the role of technology in communication.
3.7 The program prepares the candidate with knowledge and understanding of research theory and findings in English language arts; as a result, the candidate will
3.7.1 use major sources of research and theory (i.e., books, periodicals, reports, proceedings of professional conferences, videotapes, electronic and non-electronic data bases) to understand the relationship between research and practice;
3.7.2 use teacher-researcher models of classroom inquiry;

STANDARDS AND MATRIX
4.0 Pedagogy for English Language Arts **The program enables the candidate to acquire and demonstrate the dispositions and capacities needed to integrate knowledge of English language arts, students, teaching, and practice; as a result, the candidate will**
4.1 examine, evaluate, and select resources, such as textbooks, other print materials, video, film, recordings, and software which support the teaching of English language arts;
4.2 design instruction to meet the needs of all students and provide for students' continuous progress and success;
4.3 organize classroom environments and learning experiences that promote effective whole class, small group, and individual work;
4.4 develop interdisciplinary teaching strategies and materials;
4.5 create learning environments which promote respect for and support of individual differences of ethnicity, race, language, culture, gender, and ability;
4.6 incorporate technology and print/non-print media into instruction;
4.7 engage students in discussion for the purposes of interpreting and evaluating ideas presented through oral, written, or visual forms;
4.8 encourage students to respond critically to different media and communications technologies;
4.9 use instruction that promotes understanding of varied uses and purposes for language in communication;
4.10 engage students in making meaning of texts through personal response;
4.11 provide students with appropriate reading strategies that permit access to and understanding of a wide range of print and non-print texts;
4.12 use assessment as an integral part of instruction and learning.

STANDARDS AND MATRIX
4.12.1 develop and use a variety of formal and informal assessment activities and instruments to evaluate processes and products;
4.12.2 employ a variety of means to interpret and report assessment methods and results to students, administrators, parents, and other audiences.
5.0 Field-Based Experiences in English Language Arts **The program requires field-based experiences which have clearly defined roles and expectations for student teachers, cooperating teachers, and college or university supervisors; as a result, the candidate will**
5.1 participate throughout the teacher education program in a sequence of field experiences in English language arts classrooms with certified/licensed, experienced teachers;
5.2 spend at least ten weeks demonstrating the use of effective pedagogy during student-teaching in English language arts classrooms mentored by certified/licensed, experienced teachers and university/college supervisors; as a result, the candidate will
5.2.1 respond to systematic evaluation in order to meet expectations and responsibilities for the student-teaching experience;
5.2.2 participate in professional organizations, conferences, and inservice workshops to continue professional growth;
5.2.3 submit a student-teaching portfolio that provides documentation of reflective practices and teaching/learning processes.

Appendix B: International Reading Association (IRA) Standards for Specialized Reading Professionals

KNOWLEDGE AND BELIEFS ABOUT READING	
1.0	**THEORETICAL BASE**
The reading professional will:	
1.1	recognize that reading should be taught as a process;
1.2	understand, respect, and value cultural, linguistic, and ethnic diversity;
1.3	recognize the importance of literacy for personal and social growth;
1.4	recognize that literacy can be a means for transmitting moral and cultural values;
1.5	perceive reading as the process of constructing meaning through the interaction of the reader's existing knowledge, the information suggested by the written language, and the context of the reading situation;
1.6	understand the major theories of language development, cognition, and learning; and
1.7	understand the impact of physical, perceptual, emotional, social, cultural, environmental, and intellectual factors on learning, language development, and reading acquisition.
2.0	**KNOWLEDGE BASE**
The reading professional will:	
2.1	understand that written language is a symbolic system;
2.2	understand the interrelation of language and literacy acquisition;
2.3	understand principles of new language acquisition;
2.4	understand phonemic, morphemic, semantic, syntactic, and pragmatic systems of language and their relation to the reading and writing process;
2.5	understand the interrelation of reading and writing, and listening and speaking;
2.6	understand that students need opportunities to integrate their use of literacy through reading, writing, listening, speaking, viewing, and representing visually;
2.7	understand emergent literacy and the experiences that support it;
2.8	understand the role of metacognition in reading and writing, and listening and speaking;
2.9	understand how contextual factors in the school can influence student learning and reading (e.g., grouping procedures, school programs, and assessment);
2.10	know past and present literacy leaders contributed to the knowledge base;
2.11	know relevant reading research from general education and how it has influenced literacy education;
2.12	know classic and contemporary children's and young adults' literature, and easy-reading fiction and nonfiction for adults, at appropriate levels;
2.13	recognize the importance of giving learners opportunities in all aspects of literacy (e.g., as readers, writers, thinkers, reactors, or responders); and
2.14	understand that goals, instruction, and assessment should be aligned.

3.0	**INDIVIDUAL DIFFERENCES**
The reading professional will:	
3.1	recognize how differences among learners influence their literacy development;
3.2	understand, respect, and value cultural, linguistic, and ethnic diversity;
3.3	understand that spelling is developmental and is based on students' knowledge of the phonological system and of the letter names, their judgments of phonetic similarities and differences, and their ability to abstract phonetic information from letter names;
3.4	recognize the importance of creating programs to address the strengths and needs of individual learners; and
3.5	know federal, state, and local programs designed to help students with reading and writing problems.
4.0	**READING DIFFICULTIES**
The reading professional will:	
4.1	understand the nature and multiple causes of reading and writing difficulties;
4.2	know principles for diagnosing reading difficulties;
4.3	be well-versed on individualized and group instructional interventions targeted toward those students in greatest need or at low proficiency levels; and
4.4	know the instructional implications of research in special education, psychology, and other fields that deal with the treatment of students with reading and learning difficulties.
INSTRUCTION AND ASSESSMENT	
5.0	**CREATING A LITERATE ENVIRONMENT**
The reading professional will be able to:	
5.1	create a literate environment that fosters interest and growth in all aspects of literacy;
5.2	use texts and trade books to stimulate interest, promote reading growth, foster appreciation for the written word, and increase the motivation of learners to read widely and independently for information, pleasure, and personal growth;
5.3	model and discuss reading and writing as valuable, lifelong activities;
5.4	provide opportunities for learners to select from a variety of written materials, to read extended texts, and to read for many authentic purposes;
5.5	provide opportunities for creative and personal responses to literature, including storytelling;
5.6	promote the integration of language arts in all content areas;
5.7	use instructional and information technologies to support literacy learning; and
5.8	implement effective strategies to include parents as partners in the literacy development of their children.
6.0	**WORD IDENTIFICATION, VOCABULARY, AND SPELLING**
The reading professional will be able to:	
6.1	teach students to monitor their own word identification through the use of syntax,

	semantic, and graphophonemic relations;
6.2	use phonics to teach students to use their knowledge of letter/sound correspondence to identify sounds in the construction of meaning;
6.3	teach students to use context to identify and define unfamiliar words;
6.4	guide students to refine their spelling knowledge through reading and writing;
6.5	teach students to recognize and use various spelling patterns in the English language as an aid to word identification; and
6.6	employ effective techniques and strategies for the ongoing development of independent vocabulary acquisition.
7.0	**COMPREHENSION**
The reading professional will be able to:	
7.1	provide direct instruction and model when and how to use multiple comprehension strategies, including retelling;
7.2	model questioning strategies;
7.3	teach students to connect prior knowledge with new information;
7.4	teach students strategies for monitoring their own comprehension;
7.5	ensure that students can use various aspects of text to gain comprehension, including conventions of written English, text structure and genres, figurative language, and intertextual links; and
7.6	ensure that students gain understanding of the meaning and importance of the conventions of standard written English (e.g., punctuation or usage).
8.0	**STUDY STRATEGIES**
The reading professional will be able to:	
8.1	Provide opportunities to locate and use a variety of print, nonprint, and electronic reference sources;
8.2	teach students to vary reading rate according to the purpose(s) and difficulty of the material;
8.3	teach students effective time-management strategies;
8.4	teach students strategies to organize and remember information; and
8.5	teach test-taking strategies.
9.0	**WRITING**
The reading professional will be able to:	
9.1	teach students planning strategies most appropriate for particular kinds of writing;
9.2	teach students to draft, revise, and edit their writing; and
9.3	teach students the conventions of standard written English needed to edit their compositions.
10.0	**ASSESSMENT**
The reading professional will be able to:	
10.1	develop and conduct assessments that involve multiple indicators of learner progress; and

10.2 administer and use information from norm-referenced tests, criterion-referenced tests, formal and informal inventories, constructed response measures, portfolio-based assessments, student self-evaluations, work/performance samples, observations, anecdotal records, journals, and other indicators of student progress to inform instruction and learning.
ORGANIZING AND ENHANCING A READING PROGRAM
11.0 COMMUNICATING INFORMATION ABOUT READING
The reading professional will be able to:
11.1 communicate with students about their strengths, areas for improvement, and ways to achieve improvement;
11.2 communicate with allied professionals and paraprofessionals in assessing student achievement and planning instruction;
11.3 involve parents in cooperative efforts and programs to support students' reading and writing development;
11.4 communicate information about literacy and data to administrators, staff members, school board members, policymakers, the media, parents, and the community; and
11.5 interpret research findings related to the improvement of instruction and communicate these to colleagues and the wider community.
12.0 CURRICULUM DEVELOPMENT
The reading professional will be able to:
12.1 initiate and participate in ongoing curriculum development and evaluation;
12.2 adapt instruction to meet the needs of different learners to accomplish different purposes;
12.3 supervise, coordinate, and support all services associated with literacy programs (e.g., needs assessment, program development, budgeting and evaluation, and grant and proposal writing);
12.4 select and evaluate instructional materials for literacy, including those that are technology-based;
12.5 use multiple indicators to determine effectiveness of the literacy curriculum;
12.6 plan and implement programs designed to help students improve their reading and writing including those supported by federal, state, and local funding; and
12.7 help develop individual educational plans for students with severe learning problems related to literacy.
13.0 PROFESSIONAL DEVELOPMENT
The reading professional will be able to:
13.1 participate in professional development programs;
13.2 initiate, implement, and evaluate professional development programs;
13.3 provide professional development experiences that help emphasize the dynamic interaction among prior knowledge, experience, and the school context as well as among other aspects of reading development;

13.4 provide professional development experiences that are sensitive to school constraints (e.g., class size or limited resources);
13.5 use multiple indicators to judge professional growth; and
13.6 model ethical professional behavior.
14.0 RESEARCH
The reading professional will be able to:
14.1 apply research for improved literacy;
14.2 conduct research with a range of methodologies (e.g., ethnographic, descriptive, experimental, or historical); and
14.3 promote and facilitate teacher- and classroom-based research.
15.0 SUPERVISION OF PARAPROFESSIONALS
The reading professional will be able to:
15.1 plan lessons for paraprofessionals;
15.2 observe and evaluate paraprofessionals interacting with children and provide feedback to them on their performance;
15.3 provide professional development and training for paraprofessionals; and
15.4 provide emotional and academic support for paraprofessionals.
16.0 PROFESSIONALISM
The reading professional will be able to:
16.1 pursue knowledge of literacy by reading professional journals and publications; and participating in conferences and other professional activities;
16.2 reflect on one's practice to improve instruction and other services to students;
16.3 interact with and participate in decision making with teachers, teacher educators, theoreticians, and researchers;
16.4 support and participate in efforts to improve the reading profession by being an advocate for licensing and certification;
16.5 participate in local, state, national, and international professional organizations whose mission is the improvement of literacy;
16.6 promote collegiality with other literacy professionals through regular conversations, discussions, and consultations about learners, literacy theory, and assessment and instruction;
16.7 write for publication; and
16.8 make presentations at local, state, regional, and national meetings and conferences.

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