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Special Education Teacher Quality and Preparation: Exposing Foundations, Constructing a New Model

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ABSTRACT: *The authors trace changes in conceptions of special education teacher quality and preparation in response to developments in special education research, policy, and practice. This developmental arc is a backdrop for understanding contemporary special education practice and charting future directions for preparing special education teachers. Federal policy, and recent research on teaching and learning, and the response-to-intervention (RTI) movement require a shift in thinking about how to prepare quality special education teachers and the expertise they need to be effective. To function effectively in RTI and fulfill federal highly qualified teacher requirements, special education teachers must master an increasingly complex knowledge base and sophisticated repertoire of instructional practices. The authors contend that preservice preparation is inadequate for this purpose and that preparation for special education teaching should build upon an existing knowledge base and demonstrated competence in classroom practice.*

Special education teacher preparation has evolved over the past 150 years, since special education teachers were first prepared in residential settings. Shifting perspectives on disabilities, effective practice, and providing services to students with disabilities has led to changes in how special education is conceptualized and organized, and, consequently, how special education preparation programs are structured. Today, special education teacher preparation has lost focus, and there is enormous heterogeneity among programs (Goe, 2006). Redefining *special education teacher preparation* is difficult, especially when the need to do so occurs as serious questions are being raised about the effectiveness of teacher education generally, and when, for students with disabilities, *successful*

teaching has been redefined to mean satisfactory progress in the general education curriculum. These changes occur against a backdrop of high-stakes assessments, rigorous academic standards, and individualized accountability—and persistent shortages of highly qualified special education teachers. Clearly, special education teacher educators must rethink what makes a quality special education teacher, and that process should be informed by the field's history and by the trends in policy, service delivery, and research that have shaped special education and teacher education practice. This in turn will enable the creation of a framework for redesigning teacher education to fit the current educational context.

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Special education teacher preparation has evolved from specialized, clinical preparation in residential facilities into an enterprise that now lacks clear conceptual boundaries. In discussing these conceptual shifts, we will discuss key trends and ways teacher quality and preparation have been linked. Advances in research on teaching and learning have raised serious questions about special education teacher quality and conceptual models for organizing teacher preparation. Current research provides some guidance for ways that special education teacher preparation might be reconceptualized to better prepare teachers to meet the needs of students with disabilities. There are, however, barriers that will need to be overcome, as the field reshapes itself both to meet the challenges of contemporary education and to move toward a clear self-definition that solidifies the professional status of teachers.

MAJOR TRENDS IN PREPARING SPECIAL EDUCATION TEACHERS

The first teacher preparation programs in special education emerged in residential facilities and were directed by pioneering clinicians such as Seguin, Gallaudet, and Itard (Connor, 1976). With the advent of compulsory education and demands to improve the quality of public education, the preparation of special education teachers gradually moved away from these residential settings to teachers' colleges. By the 1960s and early 1970s, a series of public laws designed to increase the provision of high-quality educational services to students with disabilities produced an era of explosive growth in special education teacher education. These early programs were predominantly categorical in focus and, as such, were designed for the purpose of training individuals to teach students with specific disabilities. This categorical orientation dominated special education teacher education well into the 1970s, but by the early 1980s it gave way to a noncategorical approach. Proponents of this approach viewed the learning and behavioral needs of students with disabilities on a continuum of severity and questioned the relevance of disability categories to effective planning, instruction, and behavior management. In the 1990s, the push to educate students with disabilities in general education classrooms prompted further reconsideration of special education teachers' roles. Because collaboration figured more prominently in inclusive service delivery than it did when students with disabilities were educated in resource rooms or self-contained classrooms, it became an essential feature of special education teacher preparation. As more students with disabilities were included in general education classrooms, teacher educators designed and implemented programs in which classroom teachers and special education teachers were prepared together.

Today, special education teacher preparation is once again in transition. IDEA has mandated that students with disabilities have access to the general education curriculum. The No Child Left Behind Act of 2001 (NCLB) has mandated that schools are accountable for the performance of these students on assessments aligned with the general education curriculum. In addition to

knowing how disability-related problems can derail learning and how research-based strategies can be implemented to intervene, special education teachers must be highly qualified in the core content areas they teach (20 U.S.C. § 6319[a]). Yet, conversations about special education teacher preparation have not focused on the knowledge and skills needed to execute content area instruction for students with disabilities, but rather on traditional views of effective special education practice: knowledge of effective interventions, assessment, and collaboration. The current emphasis on access to the general education curriculum and the need for special education teachers who can facilitate access have raised questions about what "high-quality" special education teachers do and how they are prepared to do it. Teacher educators and researchers are once again afforded an opportunity to consider how teacher education can be redesigned best to improve professional preparation.

MAJOR HISTORICAL CONTEXTS IN SPECIAL EDUCATION

Shifts in the orientation of special education teacher preparation programs result from changing views of the profession and the nature of teacher quality. These views have been shaped over time by several influences, including: (a) beliefs and assumptions about teachers, teaching, learning, and disability; (b) political pressures emanating from educational policy, the provision of educational services, and general education's ability to respond to the needs of students with disabilities; and (c) research about the nature of disability, the efficacy of special education service delivery, and instruction. Over the years, special education teacher education has been conceptualized differently, as a result of differing influences, affecting implicit teacher quality assumptions. Special education teacher preparation can be divided into the categorical, noncategorical, and integrated eras—each with its prevailing political contexts, findings from research, and assumptions about teacher quality. What are the current understandings of teaching and learning of students with disabilities? How might special education teacher quality in the three main historical eras be rethought in light of emerging research on disability, the development of expertise, and intervention? Our discussion of these topics will focus on students with high-incidence disabilities and their teachers.

Categorical Era

During the categorical era of special education teacher preparation, teachers were prepared to serve students with specific disabilities. This era began long before the Education for All Handicapped Children Act (EHA) was signed into law in 1975. In fact, Mackie and Dunn (1954) reported that, by 1952, 122 institutions of higher education provided special education training, and some programs had been in existence for many years. Many of these programs were first established in training schools and other clinical settings devoted to serving clients with specific disabilities; as a result, many early programs focused on preparing personnel to serve children with speech and hearing impairments, mental retardation, and deafness. The categorical view was advanced by legislation that provided funding to universities for teacher preparation based on specific disability areas. Further, early conceptualizations of disability were based in medicine and psychology and served as a foundation for research.

Political Context. In the late 1950s and 1960s, federal legislation, case law, and the service delivery systems that were established to educate students with disabilities played an important role in establishing both the need for special education teachers and their preparation to serve students with disabilities based on a categorical designation. The Education of Mentally Retarded Children Act of 1958 provided support for leadership preparation in special education to enhance the capacity of colleges and universities to train special education teachers; 3 years later, the Teachers of the Deaf Act of 1961 authorized the first federal funding for teacher preparation. Subsequent legislation substantially increased funding levels (Kleinhammer-Tramill, 2003). By the 1970s, the Bureau of Education for the Handicapped (BEH) provided significant support to a large number of teacher preparation programs across the country, and most of this training was organized by

disability category. Also, states typically certified teachers by the disability category of the students they taught. Personnel supply-and-demand data collected by BEH also reflected the categorical nature of thinking in this period: These data were collected from states using the student disability categories specified in the law. According to Birch and Reynolds (1982), during the 1960s and 1970s the number of disability categories expanded, leading to an increase in the number of discrete categorical training programs in colleges and universities across the country.

Meanwhile, the civil rights movement and subsequent case law established for students with disabilities the right to an education, thereby creating enormous demand for personnel to serve them. In *Brown v. Board of Education* (1954), the U.S. Supreme Court ruled the "separate but equal" principle unconstitutional (as it related to minority students), opening the legal door for parents of students with disabilities to insist that their children be provided equal educational opportunity. Later, a second landmark case, *Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania* (1972), established that the state could not deny education to a child with a disability because he or she was determined to be uneducable or because the child was not toilet trained. A year later, the passage of EHA ensured that all students with disabilities would have access to a free and appropriate public education, specially designed to meet their needs.

In response to EHA mandates, many students with disabilities entered public schools for the first time, but few schools were well prepared to meet their diverse needs. Curriculum was organized by grade level (Stainback & Stainback, 1991), teachers taught mainly in isolation (Lortie, 1975), and students whose needs exceeded the reach of classroom teachers' knowledge and skill were referred to special education. Serving students in separate placements and limiting enrollments heightened demand for special education teachers. BEH began collecting data in 1977–1978 using E. Deno's (1970) Cascade Model to define placements, and required states to report both student and teacher data by disability category. (Even today, student data are reported by disability category, although teachers are not.) Special education placements were often categorically determined; for example, students with mild mental retardation were commonly served in separate, self-contained classrooms in regular schools.

Research on Disability. Research during this era followed two tracks. One body of research, founded mostly in conceptions of disability as an organic disorder, clearly reinforced a categorical view of disability. This research examined how processing deficits believed to underlie a child's disability could be remediated. Logic held that if the processes contributing to a student's impairment could be identified, then special education teachers could remediate with interventions specifically designed to address deficits. The aptitude-by-treatment-interaction (ATI) approach assessed abilities or aptitudes, guiding development of interventions, which were expected to be differentially effective. A well-known example of ATI involved assessment with the Illinois Test of Psycholinguistic Ability (ITPA). ITPA tapped perceptual motor and auditory verbal abilities, and training was often directed to the remediation of deficiencies in ability profiles. Remediation also was expected to improve academic learning. Similarly, in diagnostic-prescriptive teaching, then the predominant approach to teaching students with learning disabilities, teachers assessed perceptual motor or psycholinguistic abilities thought to underlie academic learning (Arter & Jenkins, 1979). Students' strengths and weaknesses then guided the development of instructional plans, designed either to remediate underlying deficiencies or modify academic instruction so as to capitalize on strengths (or avoid weaknesses).

At about the same time, a parallel line of research emerged that was influenced strongly by behavioral psychology. Behavioral thinking and approaches in special education focused on learning outcomes and direct instructional approaches to address skill deficits. As early as the late 1950s, behaviorists successfully applied principles established in experiments with laboratory animals to applied settings, where the techniques came to be known as *behavior modification* and *applied behavior analysis* (Semmel, Semmel, & Morrisey, 1976). These behavioral techniques were used with students with both emotional disabilities and cognitive impairments in the homes and centers where

they resided, and at the schools they attended. The techniques that behaviorists developed were successful, and they became the source of considerable professional optimism about how best to deal with children and adults with challenging behaviors and cognitive impairments.

Assumptions About Teacher Quality. Categorical approaches to services and research were based on assumptions that effective special education teachers had knowledge of the characteristics of students with specific disabilities, including assessments and interventions. Teachers diagnosed processing deficits, and prescribed, implemented, and assessed a course of treatment. These implicit assumptions of teacher quality were apparent in the structuring of preparation programs as well as licensure and certification programs. Teachers were licensed in areas such as mentally handicapped, learning disabilities, and emotionally handicapped. In their preparation programs, teachers took generic special education coursework (e.g., special education law), and more disability-specific coursework (e.g., characteristics of students with mental retardation, methods for teaching students with mental retardation, and assessment of students with mental retardation).

Ultimately, researchers' failure to validate assumptions underlying diagnostic-prescriptive teaching led to its abandonment. In 1973, Ysseldyke called into question the utility of the ATI paradigm as an approach to individualizing instruction for students with disabilities. Later, Hammill and Larsen (1978) concluded from a review of 38 studies that most of the abilities assessed by ITPA were not amenable to educational intervention. Further, Arter and Jenkins (1979) argued that tests of processing disorders underlying learning disabilities lacked adequate reliability and validity, and prescriptive teaching approaches based on ability profiles were unsuccessful in either remediating deficiencies or improving academic learning. In contrast, research on effective instruction and classroom management brought renewed optimism and focus to the field. In these research pursuits, behaviorists were joined by educational psychologists operating within a process-product framework. Ultimately, the power and generality of behavioral techniques and teaching strategies generated through process-product research undermined categorical thinking, contributing to the rise of a noncategorical era.

Noncategorical Era

Scholarship in the behavioral and process-product traditions produced an increasingly sophisticated repertoire of effective strategies for teachers. These practices seemed robust to disability classifications, reinforcing ethical concerns that Hobbs (1975) and others had expressed about the impropriety of separating children on the basis of labels alone. Also, a new conception of effective teaching was emerging in general education research, and teacher education grew increasingly competency-based. Together, these forces propelled the field toward a noncategorical orientation toward public school service delivery and special education teacher preparation programs (Christoplos & Valletutti, 1972; Reynolds, 1979).

Political Context. Although the federal government continued investing substantially in special education teacher preparation, shortages of fully qualified special education teachers persisted. In response, states moved increasingly toward noncategorical or cross-categorical licensure structures (Birch & Reynolds, 1982; Geiger, Crutchfield, & Mainzer, 2003) that provided schools greater flexibility in hiring. Special education teachers were commonly assigned students with various disability classifications, and a small body of research emerged to illustrate considerable overlap among children with different disability classifications on instructionally relevant variables (e.g., Hallahan & Kauffman, 1977). Teacher education responded to these policies and practices by abandoning what Connor (1976) referred to as "the folly of clear-cut single disability emphasis" (p. 375). Even the Council for Exceptional Children, which in 1966 had promulgated categorical standards for special education professionals, succumbed to pressure from the field for noncategorical standards, adopted a decade later (Birch & Reynolds, 1982).

Research on Intervention and Teaching. Behavioral research gained momentum in the 1970s, and methods derived from this tradition (e.g., specifying behavioral objectives and systematic data collection), became mainstays of special education practice and teacher preparation. Special

educators (e.g., S. L. Deno & Mirkin, 1977; Haring & Fargo, 1969) emphasized assessing the impact of teaching and management approaches on measures of children's behavior. For example, Haring and Fargo asserted that student performance could be "observed, counted, and analyzed" and changes in student behavior due to intervention could be measured to provide "continuous, structured evaluation of the teacher's performance" over time (p. 158).

The idea that teaching impact could be observed reliably as changes in student performance is a cornerstone of curriculum-based measurement (CBM)—and of precision teaching before it. In CBM, decisions to adjust teaching (or management) strategies are based on student performance data collected frequently (S. L. Deno, Marston, & Tindal, 1986). The idea is remarkably simple: CBM provides a thermometer with which academic illness—and recovery—can be detected. In CBM, as well as diagnostic-prescriptive teaching, teachers use assessment data for decision making. However, rather than drawing upon assessments to predict successful interventions (as diagnostic-prescriptive teachers had), CBM teachers use assessments to validate the effectiveness of interventions. In its pragmatism, CBM surely added to the optimism of the times. Although it offered no specific remedy for academic or behavioral difficulties, CBM provided teachers a means for testing their ideas about how best to intervene with particular children. Successful approaches could be culled from those found wanting, and the performance of individual students could be understood relative to the performance of their classmates.

At the same time, findings from research on effective teaching provided descriptions of what competent special and general education teachers did. Educational psychologists such as Brophy, Good, and Stallings (Brophy, 1979; Good & Grouws, 1979; Stallings, 1980) analyzed teacher behavior—parsing it into discrete categories and measuring its frequency or duration, then relating what teachers did to what their students learned. Like behaviorists, process-product researchers maintained a positivistic worldview; like behavioral research, process-product research findings proved to be a source of optimism to practitioners. Ultimately, from this large and complex body of scholarship, the construct of academic learning time (ALT; i.e., time spent actively engaged in tasks that students complete with high success) arose, as did a strategy for improving student outcomes (i.e., increasing ALT). Within this paradigm, good teaching was teacher-directed, crisply paced, and rich in opportunities for students to respond. The teacher's role was an active one, and good teachers were highly skilled practitioners who orchestrated lessons.

Building on principles of behaviorism and instruction derived from process-product research, Englemann, Carnine, and others at the University of Oregon developed the Direct Instruction (DI) curriculum. Direct Instruction Systems for Teaching Arithmetic and Reading (DISTAR; Bereiter & Engelmann, 1966) and Corrective Reading (Engelmann, Hanner, & Johnson, 2002), curricula designed for students having difficulty learning to read, were thought to apply to all children regardless of disability classification or degree of reading impairment. Further, these could be used in classrooms with no formal assessment beyond determining students' instructional level. DISTAR and Corrective Reading represented a distinct departure from the past. They were explicitly scripted, down to the details of what teachers were to say and when (e.g., how to signal student responses and how to correct errors). Although DI curriculum developers believed scripted lessons increased the likelihood of intervention fidelity, many teachers felt that scripting minimized teachers' decision making and so objected to it.

Thus, special education's reliance on formal assessment was eclipsed by beliefs that information about intervention effectiveness was more important than information about the specific nature of a student's disability. The precise, individualized focus of prescriptive teaching gave way to instructional and management principles so powerful as to render individual prescription unnecessary. Remediation, for years linked to underlying perceptual motor or psycholinguistic skills, took on a curricular focus about which disability classifications or other assessments of ability offered little insight. Finally, principles of effective design gave rise to curricula intended to minimize the probability of failure. Thus, in the 1970s and 1980s, if special education lost focus with the de-

cline of the diagnostic-prescriptive teaching model, it quickly regained it through the identification of powerful, generic instructional and management skills and the development of carefully designed curricula.

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Assumptions About Teacher Quality. In the noncategorical era, effective teaching required mastery of generic instructional and classroom management skills. Effective teachers took an active role in their classrooms and directed instruction, infusing it with an abundance of opportunities for students to respond. Effective teachers understood the importance of keeping students actively engaged, keeping lessons crisply paced, and giving clear instructions with reliable, academically focused feedback. They planned curriculum—or placed students within the curriculum—so that students would respond correctly a high percentage of the time. They managed classrooms by rewarding positive behavior and withholding reinforcement after misbehavior. They used more sophisticated behavioral techniques like time-out, differential reinforcement, and planned ignoring. They also used student performance data on meaningful, curriculum-based tasks to make judgments about the effectiveness of their teaching and management. They relied on data and were disposed to change what they were doing when they indicated the need. Although this prototype of the active, skillful, and informed decision maker seems to stand in contrast to the teacher's role in DISTAR (Bereiter & Engelmann, 1966) and Corrective Reading (Engelmann, Hanner, & Johnson, 2002), what DI teachers were scripted to do and say was derived from the same set of principles.

During this era, driven by the need (when seeking BEH training grants, at least) for identifying competencies that teachers were to learn, competency-based teacher education (CBTE) became standard practice. As a result, the process of preparing teachers came to involve identifying competencies, providing opportunities for practice and mastery, and providing feedback and differential reinforcement. Often, teaching and management skills were taught in isolation and combined into more complex repertoires in field settings. This mechanical, positivistic view of teaching and learning to teach led to dissatisfaction among teacher educators and, ultimately, to abandonment of CBTE in favor of more cognitive approaches.

Era of Integrated Preparation

In the 1990s, in response to Office of Special Education and Rehabilitative Services Assistant Secretary Madeleine Will's (1986) call for shared responsibility in educating students with learning problems, schools placed more and more students with disabilities in general education classrooms. Later in the decade, however, concern about the degree to which students with disabilities were being accommodated successfully in general education environments and confusion about the roles and responsibilities of general and special education teachers prompted calls for teacher education reform. One element of reform involved preparing special and general educators together (Pugach, 1987). Proponents of integrated programs focused initially on preparing teachers to meet assumptions about teacher quality derived in the main from the rationale for inclusion, most particularly the assumption that effective teachers in both general and special education were willing and able to collaborate. A second impetus for reform was a growing dissatisfaction with positivism and what came to be regarded as an oversimplified, mechanistic representation of good teaching. This element of reform thrust teacher cognition into the conversation about teacher quality for the first time.

Research on Special Education Efficacy. For decades, researchers (Dunn, 1968; Klingner, Vaughn, Hughes, Schumm, & Elbaum, 1998; Marston, 1987) endeavored but failed to establish

the efficacy of separate classes for students with disabilities. Early on, working from the premise that separate class placement did not improve outcomes for students with mental retardation, Dunn advocated the abolition of special classes and disability labels. On the other hand, resource-room placement proved more effective than general education placements (and self-contained classes), for students with learning disabilities (Carlberg & Kavale, 1980; Sindelar & Deno, 1978). These findings were open to interpretation and frequently—and heatedly—debated during this era. The failure of research to establish indisputable and conclusive evidence of the efficacy of special education placements changed the nature of the argument from an empirical one to one with a moral and ethical foundation. Thus, if children did not benefit from special education placements, how could separating them from their classmates be justified?

Political Context. Full inclusion advocates argued for educating all students in the general education classroom for all or most of the school day (e.g., Lipsky & Gartner, 1997; Stainback & Stainback, 1991), even though others argued for need-based placement along a continuum of services. Scholars such as Fuchs and Fuchs (1994), Kauffman (1993), and Kavale and Forness (2000) posited that many students with disabilities could not be successfully educated in general education classes, particularly when many classroom teachers seemed unmotivated and ill-prepared for the task. They also argued that the needs of individual children were the foremost consideration in placement rather than the idea that the general education placement is the most desirable for all. Yet, in their rhetoric and ideology, full inclusion advocates captured something of the spirit of the times. Moral concerns combined with concerns about special education's efficacy served to solidify support for inclusion.

Advocates for people with severe disabilities, primarily concerned with normalization (Fuchs & Fuchs, 1994), saw inclusion as a moral obligation, necessary for improving attitudes towards persons with disabilities (Snell, 1991) and the social competence of these individuals (Gartner & Lipsky, 1987). Others concerned about the chronic overrepresentation of ethnic minorities in special education saw placement in special education as a dead end for these students (Artiles & Trent, 1994; MacMillan & Reschly, 1998). The idea of special education as a separate system fell out of favor, despite protestations that general education was ill-prepared to educate most students with disabilities. By 1993, almost every state had adopted inclusive policies (Webb, 1994), and both general and special education teachers began adapting to changing expectations about their roles.

Assumptions About Teacher Quality. The inclusive movement required general and special education teachers to retool in order to adjust to their new roles in schools. In the 1970s and 1980s, classroom teachers were expected to refer students whose learning difficulties they were unable to resolve. In special education, preparation often focused on preparing teachers to work in self-contained or resource settings. As a result, all teachers were ill-prepared for the collaborative role they were to play. The belief that both general and special education teachers needed to be prepared differently became widespread, and evidence to support it emerged. Baker and Zigmond (1990); Zigmond and Baker (1990); and McIntosh, Vaughn, Schumm, Haager, and Lee (1993) found that general education teachers paid little attention to individual learning differences, were reluctant to make instructional adaptations, and were unable to improve the academic achievement of students with disabilities. Special educators felt displaced, and many did not have the requisite skills to conduct effective consultation or collaboration.

The effective general education teacher in the inclusive context was knowledgeable about curriculum and methods for classroom instruction, motivated to work with included students, capable of differentiating instruction, and willing to collaborate. Assumptions about special education teacher quality were rooted in the ideology undergirding inclusion itself but were influenced as well by constructivist notions of effective teaching. Thus, the accomplished special educator brought knowledge of assessments and academic and behavioral interventions to the collaborative process. Like their general education counterparts, they also were thinkers and decision makers, disposed to solve problems and test ideas by gathering pertinent information. The complementary roles of

classroom teachers and special educators provided impetus to the movement to educate them together.

In response to these assumptions about teacher quality, *integrated teacher preparation*, first described in the literature in 1984 (Feden & Clabaugh, 1986), emerged in many forms (Blanton, Griffin, Winn, & Pugach, 1997). In its simplest form, integration entailed preparing both prospective general and special education teachers in the same program, although programs ran the gamut from requiring general education teachers to take a course or two in special education—often a state requirement—to requiring all prospective teachers to prepare for dual certification (Kearney & Durand, 1992). It is not surprising that most programs emphasized preparing special and general educators to collaborate; in fact, even in separate special education programs, a focus on collaboration emerged.

The increased emphasis on collaborative skills was an element in a larger agenda of teacher education reform, spurred by the seminal work of Englert, Tarrant, and Mariage (1992). Englert et al. introduced constructivist principles (e.g., instruction should be embedded in meaningful and purposive contexts) into the evaluation of special education trainees. In addition to ratings on traditional teaching competencies, Englert et al. assessed meaningful contexts, classroom dialogues, responsive instruction, and classroom community. The impact of these ideas on special education teacher education was immediate and profound; by 1995, it had become the most frequently cited article ever to appear in *Teacher Education and Special Education* (Tulbert, Sindelar, Correa, & La Porte, 1996).

At about the same time, teacher educators grew disenchanted with positivistic notions of teacher quality and the assumption that effective teaching could be reduced to discrete actions and conveyed to trainees in assembly-line fashion. Interest in alternative epistemologies arose, and concepts of teacher quality were expanded to include "the complexities of teachers' actions and interactions with students and contexts" (Blanton et al., 2003; p. 7). Teachers were recognized to be planners and decision makers, and their thinking and beliefs were thought to shape both what they did in their classrooms and what their students learned. Contemporaneous with the appearance of constructivist thinking in special education, qualitative methods emerged as an alternative to traditional quantitative methods. Qualitative methodologies provided teacher educators a means for addressing important questions that were never amenable to quantitative methods, and to do so without large samples, matched groups, or formal instruments.

THE STATE OF SPECIAL EDUCATION: FROM PAST TO PRESENT

Special education service delivery and classroom practice has evolved in response to policy, research, and school practice. With regard to policy, lawsuits seeking access to education for children with disabilities begat legislation that has had profound impact on special education service delivery. Once the question of access was resolved, the notion of a continuum of services took root. Early on, special education teachers were prepared to work either in self-contained classrooms or resource rooms; subsequently, the movement to include students with disabilities in general education classrooms arose, and, with it, the essential need for general education teachers and special education teachers to collaborate effectively. Now, the notion of inclusion has been extended to include access to the general education curriculum—this too has implications for special education teacher preparation.

From its inception as a field, special education research has focused on intervention. Early work built on findings from behavioral psychologists and educational psychologists who studied effective teaching. Powerful but general instructional and management strategies emerged, and curricula designed from principles of instructional design propelled classroom practice ahead. At the same time, efficacy researchers were unable to establish benefit that accrued to placement in self-contained special education classrooms, and the question of where students with disabilities were to be educated gave way to the question of how. Now, advances in understandings of effective teaching and the advent of sophisticated analytical techniques have changed

the manner in which such questions can be addressed.

In response to these trends in policy and research, teacher preparation evolved from disability-specific programming (nuanced by consideration of who was being served and where) to an approach that emphasized general behavioral principles and procedures for classroom management. With the advent of the inclusion movement, general and special education teachers were expected to collaborate in educating students with disabilities. More recently, federal policy has held schools accountable for the progress of students with disabilities in the general education curriculum. Research has focused again on the questions of assessment and effective instructional intervention, and many schools are organizing service delivery using response-to-intervention (RTI) models. It's clear that policy, research, and practice previously have shaped teacher preparation; the question at hand is how current trends will reshape teacher education in the future.

RECONCEPTUALIZING SPECIAL EDUCATION PREPARATION: THOUGHTS FOR THE FUTURE

Currently, political pressures on teachers and schools to provide high-quality education for all students have intensified as a result of federal mandates and widespread criticism of teachers and their preparation. Improved research on educational innovations, including technological innovations, and growing knowledge about the qualities of effective teachers have only heightened accountability pressures, as researchers have demonstrated that effective innovations and skilled teachers make important contributions to student achievement gains. At the same time, dwindling educational resources, diminishing support for public education, and concerns about looming teacher shortages compound the problem of finding personnel and monetary resources necessary for effective reform. Reconceptualizing the preparation of special education teachers in this context is a perplexing but necessary undertaking.

Political Context

The political context for educating students with disabilities has shifted considerably over the past 3 decades. Initial focus on access to educational opportunity has given way to a focus on equitable outcomes. Now, an expectation exists that students with disabilities meet general education standards. This shift has occurred in part as a response to concerns about American children's poor performance on international assessments and the poor performance of students with disabilities on high-stakes assessments. Politicians and political pundits have leveled harsh criticism at teachers and schools that fail to produce desired results in spite of billions of tax dollars being invested in the enterprise. In the special education community, disappointing longitudinal data on the academic performance of students with disabilities, particularly in high-needs schools, have intensified the public outcry (Ehrlich, Buckley, Midouhas, & Brodesky, 2008; Wagner, Newman, Cameto, & Levine, 2006). Even parents of students with disabilities are demanding that schools and teachers be held accountable for the performance of their children. The overidentification of students with learning disabilities has compounded concerns about the degree to which students are being educated appropriately. Many scholars and policy makers believe that overidentification results in part from schools' failure to employ effective, evidence-based practices. The use of such practices minimizes the misidentification of students as learning disabled by ruling out the possibility of inadequate instruction. Concern over the failure of public schools to produce results has led to an accountability movement in schools that is unparalleled in any other educational era.

In this accountability pressure cooker, schools and teachers have become targets of reform. The availability of strong scientific evidence that effective practices can mitigate if not prevent learning problems and improve outcomes for all students has led to a strong push for teachers to use such practices in their classrooms. In fact, both NCLB and the Individuals With Disabilities Education Improvement Act (IDEA) speak to the need for schools to provide professional development that will enable teachers to use them. More-

over, that IDEA emphasizes the use of "research-based interventions" such as RTI as the preferred method for identifying students with learning disabilities (20 U.S.C. § 1414[b][6][B]) is a reflection of the heightened role that evidence-based practice has taken in schools. RTI has emphasized the importance of teacher accountability for using evidence-based practices in reading and mathematics. In concept, RTI provides students increasingly explicit, intensive, and individually tailored instruction when achievement data suggests they are not making progress (see Fuchs, Fuchs, & Stecker, this issue). Those who require the most intensive intervention are identified as learning disabled. Under this approach, general and special education teachers are required to employ evidence-based assessments and instructional strategies. At present, RTI has been applied mostly to reading during the primary grades, where a preponderance of research evidence for effective intervention and assessment exists. As states step up their capacity to implement RTI, its application to writing and mathematics should follow, as well as its application to content-area instruction in middle and secondary schools.

Research on teachers and teacher education has been used both to ratchet up expectations that students have access to highly qualified teachers, and to discredit formal teacher preparation. Large-scale analyses of student achievement data show that teachers are one of the strongest effects in the educational system (Goldhaber, 2002). Value-added studies of teacher effects demonstrate that the most effective general education teachers can achieve student achievement gains that are as much as 50 percentile points greater than those secured by the weakest teachers (Sanders, 1998). These findings, combined with evidence suggesting that teachers' subject matter knowledge has more impact on student achievement than teacher education courses (Wayne & Young, 2003), have precipitated questions about the value of teacher education. Although these studies were conducted in the general education context, decisions about accountability based on policy makers' interpretations of them may apply to special education teachers as well.

As a result of accountability pressures and research findings pointing out students with disabilities' poor academic progress, IDEA and NCLB have mandated that students with disabilities be included in state assessments and meet annual yearly progress goals. IDEA also requires that students with disabilities have access to general education curriculum and receive individually designed instruction appropriate to their academic and behavioral needs. Both pieces of legislation also require that students with disabilities, particularly at middle and high school levels, have access to teachers who are highly qualified in both special education and the subjects they teach. At minimum, teachers can achieve highly qualified status by having a bachelor's degree and meeting state requirements for licensure in a content area and special education, which in some states simply means passing a state certification exam. Most special education professionals reject such a minimalist approach to preparing special education teachers, arguing that they will have no avenue for mastering the array of evidence-based practices they will need to teach students with disabilities (Rosenberg, Sindelar, & Hardman, 2004).

Research on Teaching and Learning: Implications for Teacher Quality

Rapid advancements in technology and the increasing sophistication and accumulation of research on learning, disability, and teaching have contributed to a knowledge base that holds promise for improving the education of students with disabilities. These advances also demonstrate the sophisticated knowledge and skills teachers must have to educate students with disabilities successfully. Technological innovations (such as digitized text combined with scaffolds to assist comprehension) have enabled teachers to provide students with disabilities access to complex concepts and to engage them in higher order thinking. Technological advances also have helped students with disabilities compensate when performing certain academic tasks. For example, speech-to-print software has become increasingly accurate in its ability to record the human voice and subsequently enable students with significant spelling and writing problems to generate text independently. Universal design for learning (Rose & Meyer, 2006) provides a framework for curriculum design in which these technological innovations may be situated. Such innovations enable

general and special education teachers to provide curricular access while individualizing instruction, making the lofty goals of IDEA attainable.

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In addition to advances in technology, research on learning and disability has grown in volume and sophistication. Researchers in neuropsychology, psychology, educational psychology, and special education are beginning to amass evidence about the brain and how it functions, how brain functioning might influence the information-processing capacity of some students with disabilities, and how intervention can be structured to improve the brain's capacity for processing information. For example, with magnetic resonance imagery, neuroscientists have established that dyslexic students struggle with the fast changing sounds of speech ("Learning to Read," 2008). Moreover, intervention researchers working in concert with medical researchers are demonstrating that the brain functioning of students with dyslexia can change when provided intensive, explicit intervention in understanding how letter patterns and sounds are connected ("Learning to Read," 2008; "Brain Images," 2006). Although such research is more developed in decoding and spelling, research in mathematics also has begun to connect cognitive deficits and intervention strategies. This intervention research harkens back to scholarship undertaken in the categorical era; it represents a second generation of diagnostic/prescriptive research, done now with more sophisticated assessments, more well-established instructional practices, and stronger ties to academic curriculum. Findings from this research suggest that special education teachers need an understanding of how disability presents itself in an academic area and what must be done to intervene in academic processing deficits.

Findings from recent research on the cognitive processes underlying typical academic development demonstrate that students must receive instruction that engages them in deep processing of selected concepts so that discipline-specific information becomes well integrated in memory. As students progress from novice to expert learners, they abandon simple cognitive strategies, such as paraphrasing, and adopt deeper processing strategies, such as analyzing text to determine its credibility (Alexander, 2003). DI and cognitive strategy instruction, routines known to be effective for special education students, cannot be applied universally across disciplines without careful consideration of how knowledge within a specific discipline will be acquired. For example, competent performance in algebra depends on a conceptual understanding of decimals, fractions, and percents; it also depends on efficiency in solving computational problems involving these concepts (National Mathematics Panel, 2008). To assist students with disabilities, teachers understand mathematical concepts and relationships among them and how procedural knowledge can support conceptual knowledge. Otherwise, they cannot diagnose how student understanding and procedural knowledge is breaking down and respond with the more intensive, carefully articulated math instruction that students with disabilities need.

Learners require a well-integrated knowledge base in a particular content area to be considered experts; it is reasonable to assume that expert teachers would also have well-integrated knowledge that allows them to recognize problems in their discipline and retrieve knowledge to solve them (Alexander, Buehl, Sperl, & Fives, 2004). Research over the past decade examining the knowledge and classroom practice of effective teachers suggests that such teachers have domain expertise and are able to demonstrate that expertise during instruction. *Domain expertise* refers to skill in teaching a subject and includes knowledge of how the discipline is structured and how students build knowledge within it. By contrast, some researchers and policy makers have touted the importance of subject matter mastery over domain expertise. However, although the portion of variance that subject matter knowledge contributes to between classroom gains in student

achievement is statistically significant, it also is trivial in magnitude (Goldhaber, 2002). This fact as well as findings from recent research on teacher knowledge and expert teacher practice have led some educational researchers to suggest that the domain expertise teachers possess is tied closely to the task of teaching (Ball, Thames, & Phelps, 2008). Several recent studies in both special and general education (Brownell et al., 2007; Hill et al., 2008) demonstrate linkages between the specialized domain knowledge needed for teaching and teachers' classroom practice in mathematics and reading. Observational studies reveal how effective teachers engage in content-rich instruction that is carefully crafted, well orchestrated, and responsive to students' diverse needs (Haager, Gersten, Baker, & Graves, 2003; Seo, Brownell, Bishop & Dingle, 2008). Through their instruction, these teachers reveal a sophisticated understanding of knowledge needed to teach in a particular content area.

The research on teaching and learning suggests that special education teachers must have well-integrated knowledge bases, including an understanding of (a) content and how to teach it, (b) specific problems that students with disabilities may experience in a particular content area, (c) the role of technology in circumventing learning issues or supporting access to more sophisticated learning, and (d) the role of specific interventions and assessments in providing more intensive, explicit instruction within a broader curricular context. Taken together, several earlier assumptions about teacher quality support a more contemporary view of special education teacher quality and preservice preparation. Teachers will need disability-specific knowledge as they did in the categorical era; however, now they must understand how certain processing deficits affect academic learning. They also must be knowledgeable of evidence-based intervention strategies that address disability-specific needs. Further, their knowledge must fit within the framework of the general education curriculum, requiring collaboration with general education. Unlike we imagined in previous eras, the diagnostic and intervention knowledge of special education teachers must be well integrated with content domain knowledge.

The need for special education teachers to have a well-integrated knowledge base raises questions about how such expertise is developed and what frameworks can guide the reform of special education preparation. Mandates to provide students with disabilities access to the general education curriculum and the simultaneous emergence of the RTI movement provide further impetus for rethinking the roles of general and special education teachers and assumptions about teacher quality and how high-quality teachers are prepared. There are ways to reconceptualize special education preparation to support RTI implementation, with the goal of achieving access to the general education curriculum—while also addressing contextual barriers .

USING AN RTI FRAMEWORK TO RETHINK SPECIAL EDUCATION TEACHER PREPARATION

The RTI movement holds potential to clarify and articulate special and general education teachers' instructional roles. During the integrated era, contributions that general education and special education teachers made to instruction were not well differentiated, in part because the boundaries between their roles had blurred. By contrast, RTI clarifies the roles that special and general education teachers play, and both roles require more sophisticated preparation. RTI, as described by Fuchs, Fuchs, and Stecker (this issue) involves at least three tiers of instruction and intervention. At Tier 1, in addition to teaching the general curriculum, classroom teachers assume responsibility for monitoring student progress, developing and implementing instructional modifications when needed, and assessing the impact of those modifications on student performance. At Tier 2, classroom teachers retain primary responsibility for students who fail to thrive academically. However, at this point, they begin to work with a multidisciplinary team (Marston, Muyskens, Lau, & Canter, 2003) or other professionals (e.g., content-area specialists or special educators), to plan and evaluate more intensive intervention. Although students remain in the general education classroom, instruction is more intensive and monitoring more frequent and precise. Only when teams determine that students are not progressing satisfactorily in spite of Tier 2 accommodations and

modifications are they referred for Tier 3 intervention. At Tier 3, students are provided intensive, explicit instruction to address their unremediated literacy and numeracy needs. Tier 3 instruction involves ongoing assessments and interventions based on those assessments. Many scholars recommend that, at Tier 3, instruction should be the purview of special education and special education teachers (Fuchs & Fuchs, 2006); we concur, as specially designed, individualized instruction is a defining feature of a free and appropriate education for students with disabilities.

RTI's ultimate success hinges not just on general and special education's ability to assign responsibility for who provides instruction at each tier (Denton, Vaughn, & Fletcher, 2003; Marston et al., 2003; Vaughn & Fuchs, 2003) but also on how instruction will be conceptualized at each tier. Although detailed explanations of tiered instruction lie beyond the scope of this article, we provide examples of how tiered literacy instruction might be enacted in elementary and secondary contexts. These illustrations are intended to serve as a foundation for discussing general and special education teachers' roles in an RTI framework and articulating how special education teachers can be prepared for those roles.

In the early elementary grades, research on how assessment and intervention can be used in the prevention of reading disabilities has demonstrated that increasingly explicit and intensive intervention in essential language and reading skills reduces the number of students requiring remedial reading services and mitigates the impact of learning disability. In the case of early reading instruction, then, Tier 1 would involve whole-class reading instruction that incorporates research-based practices focused on the essential components of reading (i.e., phonemic awareness, phonics, vocabulary knowledge, fluency, and comprehension). Tiers 2 and 3 instruction would target specific language deficits in reading and increasingly intensive ways of remediating them, with Tier 3 involving the most intensive instruction and frequent progress monitoring (Fuchs & Fuchs, 2006). Such intensive and responsive instruction requires deep knowledge of language, literacy, and potential processing deficits, and extensive experience with struggling learners.

Describing how tiered instruction operates in the later grades, however, is more challenging. In an article critiquing the feasibility and consequences of applying an RTI framework to content-area instruction, Mastropieri and Scruggs (2005) suggested that educators have not conceptualized what tiered instruction looks like in different content areas and caution that the field is a long way from doing so. Further, they suggest that poorly articulated frameworks for operationalizing tiered instruction do not help schools improve teaching quality. They argue that secondary instruction is fast-paced, lecture-based, and focused on abstract learning, and that it emphasizes memorizing content for high-stakes assessments. As a result, most secondary instruction in general education classrooms is not accessible to students with learning difficulties. Thus, little room is left for differentiating instruction or identifying areas of learning that could be remediated intensively within the general education curricular framework.

Although few would disagree with concerns about secondary instruction and its suitability for RTI, many educators—including school-based professionals already implementing RTI—would argue that the time is right for implementation (Duffy, 2007; Kahn & Mellard, 2008; Samuels, 2009; Shinn, 2008). These educators posit that students' abilities to handle the literacy, language, and mathematics demands posed in content-area instruction are essential for genuine access to the general education curriculum. They assert that schools should move forward now with RTI, using the demands of content-area instruction and struggles that students with high-incidence disabilities experience as a way of describing how RTI works at the secondary level.

As students progress in school, the literacy and language skills they need to profit from content-area instruction change. The language and literacy skills students need to understand narrative texts differ from the skills required for reading and writing in different academic disciplines. For example, comprehension strategy instruction, an approach supported by the National Reading Panel, typically involves teaching students generic strategies, such as making graphic representations of text and summarizing text (National Reading Panel, 2000). Although both are important

generic strategies that enable students to comprehend many genres of academic writing, they are insufficient for fully comprehending academic text. Each academic discipline has its own particular way of communicating ideas. In the area of science, to comprehend the natural world, students must be able to observe, measure, predict, and explain phenomena and relationships among them. Thus, comprehending and writing scientific texts require that students be able to activate prior knowledge, connect it with new knowledge, make predictions, question understandings of ideas being presented, raise questions about data, and summarize what they have learned from texts or experiments (Conley, 2008). By contrast, readers of historical text are less concerned with explaining phenomena and more focused on trying to determine the historical lens of the author and how an author's biases might influence the position he or she took when writing about a historical event or person (Shanahan & Shanahan, 2008). Students with high-incidence disabilities may experience difficulties acquiring the cognitive strategies as well as basic literacy and language skills needed to comprehend texts, and they are likely to struggle with adjusting their strategies to meet the demands of different disciplinary texts.

Deshler and Ehren's Content Area Literacy Continuum (2009) provides one framework for imagining how RTI might be enacted for secondary students with high-incidence disabilities and for conceptualizing the roles that general and special education teachers might play in this framework. At Tier 1, secondary literacy instruction involves well-structured general education instruction that helps students learn the key ideas and concepts of a content area, as well as the relationships between them. Cognitive strategies embedded in instruction help students read and comprehend content-area texts and write in content specific styles. At Tier 2, students who fail to acquire cognitive strategies and to comprehend linguistic features of content area text would receive additional small-group instruction designed to remediate skills in these areas. This instruction would be intensive but of shorter duration and less comprehensive than instruction provided at Tier 3, where students with more persistent and comprehensive language and literacy problems would be provided with intensive, individualized instruction for longer durations. This instruction would likely include intensive cognitive strategy instruction, explicit instruction for understanding the vocabulary and linguistic structures of content area texts, and instruction in basic literacy skills (e.g., fluency and spelling). Tier 3 instruction might also incorporate assistive technology that scaffolds students' abilities to use strategies when reading or writing content area texts.

Although the intricacies of RTI implementation are not well understood at this time, it is clear that successful RTI implementation demands greater teaching expertise (Fuchs & Fuchs, 2006; Gersten & Dimino, 2006) and better preparation for the roles teachers will play at each tier. At Tiers 1 and 2, in addition to providing high-quality instruction in the general education curriculum, general education teachers must have knowledge of evidence-based remedial practices and be amenable to implementing them. Further, general education teachers need a solid grasp of CBM procedures. At Tier 2, special education teachers require solid understanding of the general education curriculum, and all teachers require collaborative skills to engage successfully in the multidisciplinary planning needed for cohesive instruction at this tier. Thus, integrating special and general teacher preparation is once again a top priority, as it was during the integrated era. However, preparation now must help general and special education teachers integrate evidence-based practices into content instruction.

Success at Tier 3 demands specialized expertise. Special education teachers must demonstrate, at minimum, a sophisticated knowledge base that extends beyond that of general education teachers, and this expertise must add value to the general education that students with disabilities receive. Research on expert learners and teachers and research on interventions for students with high-incidence disabilities can serve as a basis for identifying this expertise. Findings from this research strongly suggest that special education teachers will need domain knowledge in areas targeted for Tier 3 instruction as well as knowledge of interventions, technological adaptations, and assessments for high-risk learners. As students with disabilities are likely to need intensive assistance in reading, writing, and mathematics, special education teachers should have sufficient

preparation in these content areas to enable them to teach students in elementary, middle, and high school. They also need to develop an instructional repertoire that integrates domain knowledge with knowledge of intensive interventions and assessments. Moreover, preparation should focus on either the elementary or the secondary level, as content literacy demands change depending on the grade level taught.

To develop such extensive expertise, special education teachers will require preparation in both general and special education. Research evidence has demonstrated that general education teachers with special education preparation are better prepared to meet the literacy and mathematics needs of students with disabilities than teachers who lack it (Feng & Sass, 2009). Feng and Sass also showed that special education teachers with special education preparation produced higher achievement scores for students in reading but not math. We believe that, after entering the field, special education teachers should undertake advanced preparation in special education focused on either elementary or secondary level. This advanced preparation would target knowledge and skills needed to (a) provide direct services to students receiving Tier 3 instruction, and (b) collaborate with general education colleagues to provide Tier 2 instruction. Such expertise is important for two reasons. First, according to the Feng and Sass's preliminary analyses, preparation in special education has a value-added effect on the achievement of students with disabilities. Also, expertise in how to assess, support, and remediate literacy and numeracy skills is essential for providing access to the general education curriculum. If special education teachers do not help students access the general education curriculum, then they fail to add value to their students' education.

STRATEGIES FOR IMPROVING SPECIAL EDUCATION TEACHER QUALITY

To improve special education teacher quality and preparation, policy makers and educators must address longstanding concerns about shortages of special education teachers and the inadequate preparation of general education teachers. Special education teacher shortages continue to be severe, hovering around 10% since the passage of EHA. Licensure strategies have often been designed to remedy quantity issues with little attention paid to the impact on teacher quality. Noncategorical certification and, more recently, the emergence of fast-track, alternative routes to licensure reflect special education's emphasis on addressing shortages (as opposed to improving quality). Although concerns about remedying shortages are well justified, the problem with these licensure strategies is that they fail to articulate and support the concept of unique expertise. Moreover, many general education teachers are unprepared to cope with the diverse needs of students who fail to thrive in response to good classroom instruction. Studies of general education teachers demonstrate that they have difficulty differentiating instruction for students with disabilities and other at-risk learners (Baker & Zigmond, 1995), especially at the secondary level (Mastropieri & Scruggs, 2005).

Attempts to improve teacher quality must meet these two powerful issues head on. There must be reform of general education preparation if Tier 1 and 2 instruction is to be responsive and provide a foundation that special education teachers can build on. Moreover, well designed, effective Tier 2 and 3 instruction will be impossible unless special education teachers, particularly at the secondary level, have the expertise in content, language, literacy, and numeracy to engage in such instruction. To ensure that students with disabilities have access to high-quality teaching in both general and special education, policies and practices needed for supporting the RTI movement need to be integrated with those related to licensure, teacher education, and teacher salaries. The RTI movement must be supported by policy makers through legislation, policies, and public funding for implementation and teacher education. The strong push for RTI to be included in the reauthorization of NCLB (Council for Exceptional Children, 2008) is an example of how policy could be used to broaden support in general education. Many schools across the country are implementing RTI, and this trend is likely to hasten with passage of comprehensive federal legislation.

Public schools, acting alone, will be unsuccessful in responding to these pressures if general

and special education teachers are not prepared for their designated roles. Colleges of education must embrace conceptions of preparing teachers that will ready them for their roles in RTI. Key changes in state teaching standards and licensure policies provide levers for changing the nature of preparation for both general and special education teachers. In light of emerging evidence on the importance of special education preparation for both classroom and special education teachers (Feng & Sass, 2009), states must require dual certification for all beginning teachers, advanced preparation in literacy and numeracy for all special education teachers, and content-area literacy for those working in secondary schools. At a minimum, however, states must implement standards and licensure systems that make clear the knowledge and skills general education teachers will need for teaching students with disabilities and the knowledge and skills special education teachers will need for providing both access to the general education curriculum and more intensive instruction at Tiers 2 and 3. Moreover, what special education teachers need to know to provide Tier 2 and 3 instruction in elementary schools should be differentiated from what they will need for secondary schools.

The licensure system developed by Rhode Island serves as one model for how states might change to support RTI. Core principles from the Interstate New Teacher Assessment and Support Consortium (2001) were used to develop teaching standards for both general and special education teachers that support a systematic and coordinated approach to preparation. These standards, which explicitly address the preparation of general and special education teachers to serve students with disabilities, guide university program approval, initial licensure of beginning teachers, state-mandated induction and mentoring programs, and relicensure of more experienced teachers.

Career ladders can be instituted in concert with licensure systems to ensure that general and special education teachers acquire additional expertise needed for tiered intervention and to guarantee that acquiring more advanced special education expertise is valued. General education teachers with dual certification are better prepared than their peers and, therefore, should be considered for a higher rung on the salary scale. Becoming a special education teacher and assuming responsibility for Tier 3 instruction, however, would be considered another step up the scale, requiring more skill and education than that needed for general education, and ensuring an even larger salary to compensate for this additional expertise. Teachers demonstrating expertise in delivering Tier 1 and 2 instruction could be selected and prepared for this career ladder move and then licensed as master special education teachers.

CONCLUSION

The changes we propose for improving the quality and preparation of special education teachers are lofty and dramatic—and difficult to attain. However, the risks of failing to improve the quality of instruction are unacceptable. The ability of many students with disabilities to access the general education curriculum and make adequate annual yearly progress depends on the skill and motivation of their teachers. Students with disabilities continue to lag well behind their peers. Requiring special education teachers to become highly qualified in the subjects they teach prior to entering the classroom offers less promise as a solution to this problem than recruiting highly qualified general education teachers into special education. Good general education teachers know content and how to teach it, and they are skilled collaborators. They have a framework for understanding and integrating the specialized knowledge they acquire in preparing for RTI and so will be better positioned to meet the needs of students with disabilities. Of course, encouraging general education teachers to become special educators necessitates fundamental reform in school practice, incentives for teachers, and teacher education. Because RTI requires fundamental change in school practice, the time is right for undertaking this ambitious agenda.

The viability of special education as a profession rests on our capacity to be recognized as a legitimate contributor to RTI implementation. Special education teachers must be responsible for providing Tier 3 instruction, as well as collaboratively planning Tier 2 instruction with their

general education colleagues. If special education teachers are not perceived as adding value to the education of students with disabilities in an RTI model, they may be marginalized in schools, and special education would risk losing its identity as a profession. In this sense, special education teacher preparation is at a critical juncture. We can no longer afford to be unclear about who high-quality special education teachers are and how they should be prepared. Our future as a field depends on our capacity to upgrade the quality of teacher preparation and influence policies that govern teacher incentive systems.

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