Literature Synthesis

Teacher Education Reform Initiatives and Special Education: Convergence, Divergence, and Missed Opportunities

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Teacher education as a field of study has steadily grown since the press for an identifiable knowledge base first appeared in the 1970s. Almost simultaneously, calls for teacher education reform abounded and have, for more than 40 years, existed alongside the development of research in teacher education. Accompanying the earliest stage of research, which occurred from the 1950s to the 1980s (Cochran-Smith & Fries, 2005, 2008), was the advent of a national commitment to educating students with disabilities, which culminated in the 1975 Education for All Handicapped Children Act—now called the Individuals with Disabilities Education Act (IDEA, 2004). However, these longstanding teacher education reform agendas have, for the most part, avoided addressing the issue of how to prepare teachers to work with students with disabilities. Further, the field of special education has not made it a high priority to attend to how developments in teacher education apply to the preparation of both general and special education teachers who work with students with disabilities. Also, perhaps due to its history of having a research base rooted in medicine and psychology (Brownell, Sindelar, Kiely, & Danielson, 2010), special education does not have its own tradition of research in teacher education.

In 1983, the landmark education document *A Nation at Risk* (1983) rattled the teacher education community with its call for fundamental educational reform, and several major teacher education reform reports and proposals appeared subsequent to its publication. Occasional discussion regarding the absence of special education in these reform reports appeared in the literature (e.g., Pugach, 1987; Pugach & Sapon-Shevin, 1987; Sapon-Shevin, 1990), but, in general, the distance has been wide. In one of the only analyses to compare major teacher education reform proposals that appeared between 1986 and 1998, Valli and Rennert-Ariev (2000) examined components of nine reform reports in relation to components suggested in the two reports of the National Commission on Teaching and America's Future (NCTAF, 1996, 1997). Their findings

revealed a low level of agreement across reports about preparing teachers to work with students with disabilities. In contrast, they identified high levels of agreement across reform proposals for issues such as the importance of disciplinary knowledge and the development of performance assessments. Since the Valli and Rennert-Ariev (2000) study, there have been no reviews of teacher education reforms that feature special education as a consideration—especially not as a major consideration.

We aimed to address this gap. Our goal was to offer teacher education practitioners, policymakers, and teacher education researchers new perspectives on teacher education reform in terms of its implications for the current and urgent press for teacher education efforts—wherever they may take place—to prepare all teachers to effectively work with students with disabilities. For this analysis, we closely looked at teacher education reform documents to identify where there have been implicit connections—typically not acted upon—between the preparation of general and special education teachers for working with students with disabilities. We expanded on Valli and Rennert-Ariev's (2000) work by starting with reforms that occurred prior to 1983 and also by including reform efforts that have been promulgated from within special education.

We framed the historical analysis of major reform initiatives in teacher education in terms of convergence, divergence, and missed opportunities between general and special teacher education. In so doing, we first examined the influence of these reforms on general and special education teacher preparation, and then we focused on the ways in which these two fields intersect around reform initiatives. We considered this approach important for several reasons. First, reform initiatives have served to produce change in national and state policies (e.g., national accreditation and state requirement for licensure), all of which play significant roles in the content and process of teacher preparation across general and special education. Next, the historical trajectories of teacher

preparation in general and special education have substantially differed, and the extent to which the fields intersect around reform initiatives is not fully understood. Understanding these intersections offers great potential for guiding today's redesign of teacher preparation to meet the goal of inclusive education. Finally, we used this historical analysis as a departure point, anchored within the unprecedented scrutiny that teacher education is now experiencing, to offer a set of five recommendations to consider in preparing the next generation of general and special education teachers who will carry out their roles in schools where inclusive practice is the norm. We viewed the current turbulent times in which teacher education finds itself as an opportunity for general and special education to engage in robust, collaborative program restructuring in ways that have often been missed. Because this document includes many acronyms, we created a listing of the acronyms and their meanings (see Appendix A).

Guiding Assumptions

Three assumptions guided how we approached and discussed teacher education reforms, the intersections between general and special education, and recommendations for the collaborative reform of teacher preparation. These assumptions, which help clarify the relationship between policy, practice, and research are that (a) both general and special education teachers are responsible for teaching students with disabilities, (b) both research on the preparation of teachers and research on teaching influence teacher education reform, and (c) the preparation of teachers occurs along a continuum that extends from the pre-service years into experienced teaching.

Both General and Special Education Teachers Are Responsible for Teaching Students With Disabilities

The expectation for shared responsibility between general and special education teachers has been part of the discourse in public education and teacher education since IDEA was first

implemented in 1975. The most recent data reported by the federally funded Technical Assistance Coordination Center (TACC, 2011) indicate that in 2011, 94.9% of students with disabilities, ages 6 to 21, received their instruction in general education classrooms for some portion of the school day. Further, 61% of students in special education spent 80% or more of their time in general education classrooms. As such, the general education teacher is most often the teacher of record for students with disabilities and may be solely responsible for the instruction of all students in the classroom. Regardless of whether general education teachers have primary responsibility for these students or whether they collaboratively work with special education teachers, their preparation for working with students with disabilities is as essential as the preparation of special education teachers—especially when about 80% of general education teachers report feeling challenged or very challenged in addressing the needs of the diversity of students in their classrooms (MetLife Foundation, 2013) and report that it is important to share responsibility among teachers for student achievement (MetLife Foundation, 2010). Clearly, the roles of both general and special education teachers have changed in relation to teaching students with disabilities, and teacher education programs must address these changing roles.

Teacher Education Reform Is Influenced by Both Research on the Preparation of Teachers and Research on Teaching

The short history of the research base that supports how teacher education is carried out underscores the relatively short history of teacher education as a profession. The improvement of teacher education, however, is not dependent on teacher education research alone. It is also intimately tied to research on teaching, which informs what all teachers must be able to do while instructing students and, in addition, what special education teachers must be able to instructionally do to support students with disabilities with access the general education curriculum. In addition,

special education teachers must have knowledge of the academic curriculum as well as the instructional strategies that students with more significant disabilities may need. Therefore, the second assumption guiding this paper is that to achieve teacher education reform that takes into account the needs of all students, including those with disabilities, teacher educators and policymakers must draw on the full complement of research—both in teacher education and teaching—that informs preparation programs.

General educators have primarily conducted research on teacher education; a smaller number of special educators have engaged in conducting such research. Both general and special education have strong traditions of research on teaching, but the two have historically diverged in how research on classroom instruction has been conceptualized and investigated and often in the language used to describe classroom instruction. Although research on instruction has begun to converge as teams of general and special educators work more closely in the content areas (e.g., Minnesota Center for Reading Research, http://www.cehd.umn.edu/reading), special education has historically focused on interventions and strategies directed toward groups of students with disabilities and rarely on part of general education's research agenda. Because the research traditions of the two fields have not often intersected, it is critical in rethinking teacher education to bring together in substantive and continual ways these communities of different research bases and traditions in teaching and teacher education.

The Preparation of Teachers Occurs Along a Continuum That Extends From the Pre-Service Years Into Experienced Teaching

The reciprocal improvement of candidates for teacher education and the experienced teachers who serve as their mentors and guides are equally important for the redesign of teacher education. Research demonstrates that teacher learning takes place at all stages of a career, from

when novice teachers begin their preparation into and throughout their advanced years of teaching. This progression occurs along a continuum in three stages, from pre-service preparation to induction/mentoring to continuing professional development (PD; e.g., McDiarmid & Clevenger-Bright, 2008; Wise, 1995; Wise & Leibbrand, 2001). Therefore, the third guiding assumption of this paper is the critical role that teacher educators play in partnership with pre-K-12 schools, specifically in relationship to practicing teachers' participation in teacher education as an opportunity for their ongoing PD and learning—an opportunity that can take place as part of the teacher education process. In other words, as teacher educators work to create new approaches to clinical preparation to support preparing teachers for working with students with disabilities, engaging practicing teachers from general and special education in the complex and high-level activity of preparing novices becomes a critical opportunity for their own advanced learning. Rather than viewing the preparation of new teachers as just the purview of teacher education, this approach makes the redesign of teacher education critical across the careers of all teachers.

Identifying and Organizing Reforms in Teacher Education

With these assumptions in mind, we analyzed major teacher education reform efforts to shed light on what they mean for the current and pressing efforts to redesign general and special teacher education in light of the persistent low levels of achievement of students with disabilities. For this analysis, we defined *teacher education reform* as a movement or initiative intended to improve the preparation of teachers; the reform itself, or the components comprising the reform initiative, have and continue to be studied and analyzed in teacher education literature. To identify a preliminary list of key teacher education reforms, we first scanned the following major teacher education handbooks and handbook-like publications:

- The three handbooks of research on teacher education, produced by the Association of Teacher Educators (ATE) and authored by Houston, Haberman, and Sikula, (1990); Sikula, Buttery, and Guyton (1996); and Cochran-Smith, Feiman-Nemser, McIntyre, and Demers (2008).
- *The Teacher Educator's Handbook: Building a Knowledge Base for the Preparation of Teacher*, the American Association of Colleges of Teacher Education (AACTE) handbook edited by Murray (1996).
- The American Educational Research Association (AERA)-produced teacher education study panel report edited by Cochran-Smith and Zeichner (2005).
- *Preparing Teachers for a Changing World*, Darling-Hammond and Bransford's (2005) publication about defining what teachers should know and be able to do.

We added two initiatives to this list of reforms—the Dean's Grants Projects (DGPs) and 325T projects, which were both funded by the U.S. Department of Education, Office of Special Education Programs (OSEP). We judged these to be teacher education reforms that were initiated from within special education.

Two criteria guided our more extensive search of the literature to determine whether a movement/initiative would be included as a major reform and whether it had a major impact on teacher education. We considered an initiative to be a reform if it was documented and regularly identified in major literature sources (e.g., handbooks, special issues of journals) in teacher education. We defined evidence of the impact of a reform, as well as its lasting influence, as demonstrated by the large quantity of related research reviewed and reported in the literature and related policies that grew from the reform.

Establishing Initiatives as Major Reforms

In addition to drawing on major teacher education handbooks as the primary sources to document the existence of major reforms, we also searched databases and journals in both general and special education, including ERIC, Google Scholar, and the following journals: *American Educational Research Journal*, *American Journal of Education*, *Education Policy Analysis Archives*, *Educational Administration Quarterly*, *Educational Evaluation and Policy Analysis*, *Educational Horizons*, *Educational Researcher*, *The Elementary School Journal*, *Harvard Educational Review*, *International Journal of Educational Management*, *Intervention in School and Clinic*, *Journal of Special Education*, *Journal of Teacher Education*, *Leadership and Policy in Schools*, *Peabody Journal of Education*, *Review of Educational Research*, *Review of Research in Education*, *Teacher Education and Practice*, *Teacher Education and Special Education*, *Teacher Education Quarterly*, *The Teacher Educator*, *Teachers College Record*, *Teachers and Teaching*, *Teaching and Teacher Education*, *Theory into Practice*, *and Urban Education*. Additionally, we searched ancestry resources and websites of professional organizations (e.g., American Association of Colleges for Teacher Education [AACTE]) and selected universities where reform initiatives may have been or are currently located.

Evidence of the Impact of Reforms

To judge the impact of a teacher education reform, we considered both the quantity of research focused on components comprising the reform (e.g., university and school partnerships) as well as policies enacted at state levels (e.g., state requirements for clinical preparation in teacher education) and national levels (e.g., multicultural education standard included by the National Council for Accreditation of Teacher Education [NCATE], now the Council for the Accreditation of Educator Preparation [CAEP]) that appeared to be derived from or influenced by the reform

initiative. For the components that comprised a reform, we restricted our search to reviews of research on these topics, using the ERIC and EBSCOHost databases, and we used Google Scholar to locate resources beyond those acquired through electronic and journal hand searches. We used the following major terms used in the search: *teacher education reform*, *special education teacher education reform*, *No Child Left Behind* (NCLB), *highly qualified teacher* (HQT), *induction*, *professional development* (PD), *evidence-based practices* (EBPs), *accountability*, *traditional certification*, *alternative certification*, *dual certification*, *teacher quality*, *response to intervention* (RtI), *mentoring*, *mentor-based induction*, *Teachers for a New Era* (TNE), *325T program*, *Dean's Grant Projects*, *content knowledge*, *pedagogical content knowledge*, *clinical practices*, *partnerships with schools*, *university partnerships*, *faculty collaboration*, *collaboration models*, *multicultural teacher education*, *the Holmes Group*, and *Regular Education Initiative* (REI). We conducted hand searches of the following journals in general and special education: *Exceptional Children*, *Harvard Educational Review*, *Journal of Teacher Education*, *Remedial and Special Education*, *Review of Educational Research*, *Teacher Education and Special Education*, *Teachers College Record*, and *Teaching and Teacher Education*. Although the existence of the research reviews does not necessarily demonstrate the quality of the research we conducted, it does indicate our level of research activity and, particularly, the extent to which we seriously examined the quantity and quality of research in an area of teacher education. We used these same sources as primary references to document the linkages between research activity and policies that grew from or alongside this activity.

This work revealed numerous references to stages, or phases, in teacher education reform, often aligned within a specific decade and beginning in the 1970s when there was a press to identify a common core of knowledge and skills that all teachers need in order to enter the profession. A

second, highly active stage of reform took place in the 1980s, with groups issuing numerous reports to challenge the field as well as initiating reform activities. A growing focus on accountability expectations in teacher education marked the third stage in the 1990s, and the 2000s were firmly rooted in these accountability expectations. Appendix B, which is organized by stages, summarizes the reform movements/initiatives by (a) name, (b) major components comprising the movement, (c) whether general or special education initiated the reform, and (d) documentation for establishing the movement or initiative as a major reform and the evidence of its impact. Although key initiatives are situated within a specific decade, the development and continuation of a reform may persist into subsequent decades; evidence of the impact of a reform initiative and publications reflecting work accomplished in a particular decade may appear in a later one.

The Influence of Major Reform Initiatives on Restructuring Teacher Preparation: Connections Between General and Special Education

For this section, we described major reform movements and initiatives by stages, and we discussed missed and potential opportunities for intersections between general and special education. To provide an understanding of teacher education reforms during a time period, whether the reforms were broad based or specialized, we began each section with a general description of the reform movements, and then we illustrated the evidence for establishing an initiative as a reform and the impact of these reforms on research and teacher education policy.

Stage 1: The Need for a Knowledge Base (1970-1979)

During the 1970s, the field of teacher education was still in the early stages of its development. Firmly establishing this emerging field as a profession required a knowledge base, broadly defined as “that body of knowledge that people should possess and ultimately be able to apply in order to begin teaching” (Gardner, 1989, p. xi). Although a core beginning teacher

knowledge base should be common to all teacher education programs, the knowledge base understandably changes and grows over time as research accumulates. The knowledge-base movement, broad in its base and predominantly emanating from general teacher education scholars, yielded compendia of knowledge and skills for use by teacher preparation programs. As the knowledge base grew and expanded, these compilations (e.g., Gideonse, 1989; D. C. Smith, 1983) were published in subsequent time periods. Special educator Maynard Reynolds (1989) edited one such book and focused on the core knowledge and skills every beginning teacher needs. He included a chapter devoted to students with disabilities that addressed not only students in special education, but also students in poverty, migrant children, bilingual children, and abused and neglected children; this chapter represented an early understanding of the range of student diversity for which teachers would need to be prepared.

As these knowledge base compendia were assembled, research on teacher education grew and began to support specific components of the knowledge base. Reviews of available research reflecting this activity began to appear following the 1970s in journals (e.g., Koehler, 1985); reports (e.g., Allen, 2003); and handbooks (e.g., Houston et al., 1990), providing evidence of the impact of an identifiable knowledge base. The growing number of state policies requiring mandated skills as part of certification and/or state teacher education program approval also demonstrated impact (McDiarmid & Clevenger-Bright, 2008). In addition, NCATE, the only body for national accreditation of teacher education at the time, periodically revised its standards to include knowledge and skills comprising the most current knowledge base (Christensen, 1996; Tom & Valli, 1990).

Although special education as a field was not an active part of these earliest attempts in general education to define a knowledge base for teacher education, OSEP, then the Bureau of

Education for the Handicapped, launched the DGPs in 1974; these teacher education reform projects aimed at supporting the pre-service preparation of general education teachers to work with students with disabilities. DGPs, lasting until 1982, were awarded to a total of 260 pre-service programs in 45 states (Pugach, Blanton, Mickelson, & Kleinhammer-Tramill, 2013). This activity may have been influential in the inclusion of a standard on special education in revisions to NCATE standards in 1982 (Lilly, 1983). State policies were also likely influenced as states began to mandate courses in special education for all teachers (Patton & Braithwaite, 1980).

Intersection of general and special education. Few overt intersections between reform in general and special teacher education received acknowledgement or appeared during this time. However, the work of DGPs marked one often overlooked turning point in teacher education as these projects began to pull some special educators into early work with the general education pre-service curriculum and their general education teacher education counterparts (Pugach et al., 2013). The grants were directly awarded to deans, most of whom did not have special education backgrounds, and some overlap occurred between general and special education because special educators were often called upon to support the work of dean's offices. Further, as part of the ongoing DGP activities, lists of competencies appropriate for general education teachers to master for teaching students with disabilities were often developed as part of individual projects, reflecting the work of local teams of general and special educators and shared through the national technical assistance (TA) project for DGPs—the National Support Systems Project (Pugach et al., 2013).

Simultaneously, however, just as starting to define a knowledge base was prominent in general teacher education, special education teacher education curricula remained largely independent of general education and primarily drew on lists of their own competencies (York & Reynolds, 1996), most often made available by the Council for Exceptional Children (CEC).

Related, Maynard Reynolds, who played a major role in trying to create linkages between general and special educators in teacher education, led the TA arm of DGPs (Pugach et al., 2013). Reynolds' work with DGPs foreshadowed the development of standards, rather than competencies, in relationship to preparing all teachers to work with students with disabilities (Pugach, 2005).

Not until the next decade was the need for a formal knowledge base for teacher education in special education identified. For example, Reynolds (1990) proposed a knowledge base for special education programs in the first *Handbook of Research on Teacher Education,* but consistent with his earlier work on DGPs, he noted that "it is surely not unique to the teaching of handicapped students" (p. 426). This suggested that some level of shared knowledge base was desirable. In the second *Handbook of Research on Teacher Education,* York and Reynolds (1996) pointed to a special issue of *Teacher Education and Special Education* in 1992 (vol. 15[2]) as an early instance of a focus on the issue of a knowledge base. That same year, Reynolds, Wang, and Walberg (1992) concluded that there were similarities in the knowledge bases of general and special education, noting that preparation "could be done mainly in a single or combined program" (p. 6). Despite this early interest in establishing a knowledge base with a strong shared component, the competency approach within special education dominated, diminishing potential interest in a shared knowledge base as Reynolds and his colleagues had suggested, effectively making them outliers in their views and limiting the potential for shared work on a common knowledge base at that time. Nevertheless, Reynolds was a commanding voice in speaking about the overlap between the knowledge bases in general and special teacher education, and in 1989, he edited a book (Reynolds, 1989) sponsored by AACTE about the beginning teacher knowledge base for all teachers. His pioneering efforts, coupled with opportunities for collaboration provided through 8 years of funded DGPs, were

missed opportunities because professionals in each field continued to pursue different priorities and developed discourses and practices independent of one another.

Another source of divergence took place with respect to a social justice agenda for teacher education. Cochran-Smith and Fries (2005) argued that social justice only began to be a major agenda for teacher education in the 1990s. Within special education, however, the initial push in the 1970s for a free, appropriate public education for students with disabilities was viewed as a social justice commitment to the redistribution of resources to achieve equity (North, 2008) but was limited to a concern for students with disabilities that did not substantially intersect with the full spectrum of social justice concerns across multiple social markers of identity. During this early period, some of the discourse about preparing general education teachers for their work with students with disabilities emanating from DGPs explicitly reflected a concern with the larger civil rights agenda (e.g., Corrigan, 1978; E. M. Kennedy, 1978). However, special education as an equity issue appeared to be viewed separately from the larger social justice agenda that would emerge in general teacher education, and this early isolation seemed consistent with the division between fields that was set as a pattern. The missed opportunity to consistently explore the relationship among social justice, diversity, and special education has continued (Pugach, Blanton, & Florian, 2012).

What else may have accounted for the absence of greater interaction across pre-service general and special education at this stage of reform? Special education, as a new player with substantial clout after IDEA in 1975, was credited with a strong advocacy focus during these initial modern reform efforts, which may have been one reason for missed opportunities between general and special education because efforts were focused on establishing special education as a modern field in and of itself—albeit in the context of a commitment to inclusive practice. The absence of

greater interaction at the start seemed to lay the groundwork that persists today for a division between general and special teacher education. Further, despite their focus on the preparation of general education teachers, DGPs were mainly perceived as special education reform projects (Pugach et al., 2013). Finally, although practices such as state requirements for a course in special education for novice general education teachers began to take hold during this early stage of reform (Patton & Braithwaite, 1980, 1990) and were appropriately viewed as progress, they did not lead to collaboration across components in general and special education programs.

Stage 2: The Rapid Expansion of Reform in Teacher Education (1980-1989)

The release of *A Nation at Risk* (1983), although not a teacher education reform document, triggered what many would call the highest level of reform activity in the history of teacher education (Sikula, 1990). Subsequent to this report, numerous groups (e.g., national foundations, education deans) assembled and produced reports and recommendations for addressing the challenges of teacher education reform. Two broad-based movements dominated teacher education reform during the 1980s: standards-based teacher education and multicultural education. Additionally, several new teacher education groups were created and with initiatives that were more specialized in scope (e.g., partnerships between teacher preparation programs and pre-K-12 schools).

Growing from the prior years of work to define a knowledge base, the standards-based movement was firmly set in motion when the Carnegie Task Force on Teaching as a Profession (1986) recommended rigorous national standards for teachers (McDiarmid & Clevenger-Bright, 2008), resulting in the development of the National Board for Professional Teaching Standards (NBPTS) in 1987. Only in the next stage of reform, in 1992, were standards for beginning teachers developed by the Council of Chief State School Officers (CCSSO) through its landmark project, the

Interstate New Teacher Assessment and Support Consortium (INTASC). Together, these two projects, derived from the expanding knowledge-base work already underway in the prior period, began to set expectations for what beginning and accomplished teachers should know and be able to do at these stages of their careers.

The impact of national teacher education standards quickly played out in state policy as some states supported practicing teachers to become national board certified through NBPTS, and some states later modeled the state's standards for teacher education program approval on the INTASC standards (Gollnick, 2008). Concurrently, NCATE's standards were revised in the 1980s. In addition, several specialty professional organizations, such as the National Council of Teachers of Mathematics (NCTM), were early participants in the activity to develop standards for those professional fields (McDiarmid & Clevenger-Bright, 2008). As the standards-based movement grew, the ways standards were defined and used expanded, with differences by type (e.g., content, performance); purpose (e.g., accreditation, recruitment); and the role these expectations could play (e.g., political; Roth, 1996). Although the CEC produced books of organized knowledge and skills for the profession (Heller & Ridenhour, 1983), these were extensive listings of competencies rather than the broader-based standards being developed in teacher education (Blanton, 1992; York & Reynolds, 1996). Only much later, in 2001, did the CEC standards revision process include an explicit alignment with the INTASC standards (CEC, 2001).

The multiple movements that began in the 1950s and 1960s placed pressure on the education community to ensure that teachers develop the knowledge, skills, and dispositions to teach diverse learners in schools (Grant & Agosto, 2008; Howard & Aleman, 2008). Further, teacher educators were faced with the task of preparing predominately White teachers for an increasingly diverse group of students; culturally diverse students were becoming a majority in

many regions of the country, especially in the nation's largest public school districts (Villegas, 2008). From this pressure, the multicultural education movement emerged in the 1980s and was instrumental in expanding the knowledge base for teachers—and the standards derived from them—to "recognize the important roles that race, culture, language, gender, and class currently play in the United States" (Howard & Aleman, 2008, pp. 163-164). The research and historical reviews in teacher education handbooks and the multiple reviews of research on multicultural education that we identified (e.g., Banks, 1995, 2004; Hollins & Torres Guzman, 2005) evidence the impact of multicultural education reforms. At the turn of the decade, in 1979, NCATE included a multicultural standard and emphasized cultural diversity (Gollnick, 2008; Hidalgo, Chavez-Chavez, & Ramege, 1996; Villegas, 2008).

Also in the 1980s, a number of groups assembled to support specialized teacher education reform agendas, chief among them the National Network for Educational Renewal (NNER), the Holmes Group, Project 30 Alliance, The Renaissance Group (TRG), and the Carnegie Task Force on Teaching as a Profession. Although each group pressed for its own reform issues, as shown in Appendix B, two themes stood out across four of the groups (i.e., NNER, the Holmes Group, Project 30 Alliance, and TRG) as contributing to improved teacher preparation: (a) university and school partnerships and (b) collaboration with arts and sciences faculty and subject-matter knowledge. Reports also addressed admission standards (e.g., NNER); technology (e.g., TRG); induction (e.g., Carnegie Forum on Education and the Economy); and accountability (e.g., TRG). Collaboration with arts and sciences faculty and the growing emphasis on subject-matter knowledge represented the initiation of a durable period of concern for teachers to possess strong knowledge of the subjects they teach (McDiarmid & Clevenger-Bright, 2008). However, groups primarily concerned with issues such as subject-matter knowledge (e.g., Project 30 Alliance) or reform in

general (e.g., TRG), in response to the multicultural movement, also raised issues about the importance of helping teachers develop cultural perspectives and the importance of field placements that provided experiences with diverse students. In addition, the Holmes Group and the Carnegie Task Force on Teaching as a Profession addressed the question of whether teachers' preparation should occur in 5-year programs or at the graduate level; this question represented a concern expressed in earlier reports such as *Educating a Profession* in 1976 (as cited in Arends & Winitzky, 1996).

Intersection of general and special education. This phase of teacher education reform is characterized less by intersections and more by missteps and missed opportunities in terms of the relationship between general and special pre-service education emanating from reform documents, agendas, and actions. For example, although standards documents included reference to working with diverse student populations, which many assume included students with disabilities, explicit connections to special education were infrequently drawn. This likely helped maintain the traditional division between general and special education. Next, although the field of multicultural education was emerging, special education as a marker of student diversity was rarely explicitly viewed in practice as a major area of interest across teacher education programs. Although multicultural authors such as Sleeter and Grant (1988) anticipated this issue and included disability as a fundamental issue in the first edition of *Making Choices for Multicultural Education*, in practice, discussions about special education were typically limited to the problem of overrepresentation of students of color in special education. Although this issue clearly needed—and still needs—to be foregrounded, it did not substitute for a more integrated view of the relationship between student diversity and special education across the pre-service curriculum, and it set a pattern of separation that still needs attention today (Pugach et al., 2012).

The emergence of the multicultural education movement in the 1980s, with its emphasis on equity and social justice, provided what may have been an opportune time for general and special education teacher educators to coalesce around a common priority—equity in education. Multicultural teacher educators and special educators in teacher education had the opportunity to come together to influence the larger standards movement and provide leadership for addressing the rapidly changing and multifaceted landscape of diversity in pre-K-12 schools. Likely because each field was still growing and emerging, however, this potential joint opportunity was minimized. Artiles and Trent (1997) argued that the isolation of special educators prevented them from benefiting from the emerging knowledge base in general education, especially regarding multicultural education.

When specialty reform groups like Project 30 Alliance took on the question of the role of the arts and sciences in teacher preparation, projects were primarily focused on the preparation of general education teachers. The issue of arts and sciences preparation for special education teachers did not become a prominent issue until much later, when the 2004 reauthorization of IDEA aligned with the HQT mandate associated with NCLB. Finally, when substantial university and school partnership reform efforts were implemented through professional development schools (PDSs) as conceptualized by the Holmes Group (1986), considerations for how PDSs related to the preparation of special education teachers were not well developed (Yssel, Koch, & Merbler, 2002). In some instances, special educators felt the need to develop their own PDS sites, further cementing the distance between reforms in the two fields. Nevertheless, in very small numbers, some teacher education programs eventually did develop joint PDS ventures (Epanchin & Wooley-Brown, 1993; Paul, Duchnowski, & Danforth, 1993), but that did not appear to be the norm.

Also during this time period, a substantial special section of an issue of the journal *Exceptional Children* was devoted to the absence of special education in the early reform reports and proposals (Hagerty & Abramson, 1987; Lilly, 1987; Pugach & Sapon-Shevin, 1987; Sapon-Shevin, 1987), providing multiple analyses of existing convergences, major challenges, and what was needed to move forward in a related fashion. In addition, within the Holmes Group, a group of special educators actively involved in that reform effort raised concerns about the absence of explicit attention to special education within the Holmes Group's proposals (Sapon-Shevin, 1990). Also at that time, Pugach (1988) argued that in maintaining the structural division, the very existence of special education for students with mild disabilities may serve as a deterrent to developing a shared agenda of teacher education reform. Although the NNER began during this stage during 1986, it was not until 2002 that a publication emanating from the NNER (G. J. Smith & Edelen-Smith, 2002) addressed issues of the relationship between teacher education reform in general and special education.

Within special education itself, however, the development of REI (Will, 1986) did set in motion a conversation about the relationship between general and special education that had implications for teacher education reform. This proposal, prepared by Madeleine Will, then assistant secretary for the Office of Special Education and Rehabilitative Services (OSERS), focused on the need for including students with disabilities in general education classrooms as special education policy. REI led to a flood of debates in special education, pitting those who supported the initiative against those who saw it as harming services for students with disabilities. Although initially focused on practice in pre-K-12 schools, this initiative quickly led to debates within special education teacher education, as evidenced by CEC's Teacher Education Division (TED) putting forth a position statement about the impact of REI on teacher education (CEC,

1986); numerous articles published in special education journals (e.g., Stainback & Stainback, 1987) and general education journals (e.g., Hinders, 1995; Swartz, Hidalgo, & Hays, 1992); and at least one examination of the extent to which REI influenced personnel preparation proposals submitted by special educators (e.g., Korinek & Laycock, 1988). However, these discussions were primarily internal to special education and were largely separate from discussions regarding the reform of teacher education in general. Clearly, the question of where students with disabilities would be educated would continue to have serious implications for the preparation of teachers—despite the fact that reforms in general teacher education did not explicitly take up this issue.

In general, special educators seemed absent from the table in playing any major role in these specialized reform groups that came together around large issues like university and school partnerships and subject-matter knowledge. Special education seemed largely untouched by these conversations at their inception in the 1980s, and although there were overlaps in terms of the emerging presence of multicultural education and the issue of equity for students with disabilities, a strong partnership never emerged between general and special education.

Stage 3: The Turn to Accountability in Teacher Education (1990-1999)

The accountability movement in teacher education was operationalized early in the 1990s as a result of many states implementing student and teacher standards and the challenge of how to measure the attainment of these standards. In addition, the first beginning teacher standards from INTASC appeared in 1992, further supporting a framework for accountability in teacher education. A second national accreditation body for teacher education, the Teacher Education Accreditation Council (TEAC), also emerged during this period and exclusively focused on output standards (Wilson & Youngs, 2005).

The move to a focus on accountability for both pre-K-12 schools and teacher education programs emerged full force as a result of amendments to the Elementary and Secondary Education Act (ESEA) in 1994 and amendments to the Higher Education Act (HEA) in 1992 and 1998 (Imig & Imig, 2008; Wilson & Youngs, 2005). Through ESEA and HEA, the federal government made it clear that states would use student-outcome data to evaluate teacher performance. Also, published reports showed that states implementing reform initiatives that focused on teacher quality (e.g., rigorous teacher education requirements focused on both a content major and pedagogy) produced the highest student achievement (e.g., Darling-Hammond, 1999). The 1997 reauthorization of IDEA emphasized access to the general education curriculum for students with disabilities, foreshadowing the growing pressure on teacher education regarding teachers' content knowledge and, increasingly, their pedagogical content knowledge (Ball & Forzani, 2009; Shulman, 1986).

Two competing agendas—regulation and deregulation (Cochran-Smith, 2001; Cochran-Smith & Fries, 2005)—accompanied the push for accountability. As federal regulations on teacher education and subsequent regulations in states grew as a result of ESEA, HEA, and the 2004 reauthorization of IDEA, traditional teacher education programs faced a number of external controls detailing what professionals should include in programs and how they must report the impact of their graduates' teaching on students' achievement. This regulation agenda affected many programs—general and special education alike—and although teacher education's accountability expectations were clear for reporting data on the program's impact on K-12 student learning, how these data would apply to students with disabilities was unclear during this period. However, the regulatory groundwork was laid as a result of IDEA's 1997 revisions requiring students with disabilities to have access to the general education curriculum and expanded with the 2004

reauthorization of IDEA and its focus on special education teachers, alongside general education teachers, needing to demonstrate content knowledge.

As regulations grew tighter on traditional teacher education programs, the concurrent agenda to deregulate the teacher education enterprise was taking place. Cochran-Smith (2001) and Cochran-Smith and Fries (2005) described the deregulation agenda as growing from a concern that weak teacher education programs and certification requirements kept too many people from the profession. This deregulation agenda applied across general and special education, leading to the development of alternative certification programs for both.

In the 1990s, like in the 1980s, new groups assembled to focus on teacher education reform and push key interests in teacher education; these groups continued to produce reports to define their goals. One of the most influential, the NCTAF, continued the press for high standards and suggested that all teacher preparation programs obtain national accreditation. NCTAF's two main reports, *What Matters Most: Teaching for America's Future* (1996) and *Doing What Matters Most: Investing in Quality Teaching* (1997), also suggested building teacher preparation for arts and sciences degrees. One significant impact of the NCTAF reports is that they summarized empirical evidence for the importance of teachers in their students' achievement, adding to the strongly emerging emphasis in federal laws to connect teacher performance to student outcomes (Cochran-Smith, 2005).

Two additional initiatives during this stage, the Urban Network for the Improvement of Teacher Education (UNITE) and the BellSouth Initiative, emphasized and expanded ongoing reforms initiated by prior groups (e.g., UNITE's focus on university and school partnerships) and reforms not yet receiving specialized focus (e.g., BellSouth's emphasis on teachers' technology use). As a network of urban schools and colleges of education, UNITE underscored the need to

embrace close university and pre-K-12 school partnerships to reform teacher preparation, specifically in urban and inner-city communities (Howey, 1996, 1999). Universities in the UNITE network closely worked with local school districts to demonstrate the importance of such partnerships in the recruitment and retention of teachers for urban settings. The BellSouth Foundation was the first to showcase technology as critical to the reform of teacher education for future generations.

Intersection of general and special education. With accountability for student learning at the forefront of reform considerations during this stage, there was a great deal of potential to draw on special education. For example, special education had a long history of using curriculum-based assessments to measure student progress as evidence of teachers' instructional effectiveness (Deno, 2003). The history of curriculum-based measurement was, in many ways, a natural fit for collaboration between general and special pre-service education. This was especially relevant considering that these skills were routinely included in and viewed as important for the preparation of teachers in special education (Greenwood & Maheady, 1997). However, this link was not made a part of reform activity, perhaps because few general teacher education faculty members were aware of the depth of curriculum-based assessment practice within pre-service special education. However, a shared agenda was not developed, despite the prominent focus on the need for teachers to engage in monitoring student progress, which was likely a function of how deep the separation was between the two.

Collaboration among professionals also appeared as important in both INTASC and NBPTS (Pugach, 2005). Further, a review of selected literature on teacher education related to successful teacher education reform noted collaboration among both universities and schools and general and special education pre-service programs (Lindsey & Strawderman, 1995). However, despite its

relevance across the board in terms of how school professionals interact and how school professionals interact with families, there seemed to be special relevance in these documents for preparing general and special education teachers to work together.

The importance of collaboration between general and special educators was extensively documented within special education during the 1990s (e.g., Pugach, 1992; Sindelar, Pugach, Griffin, & Seidl, 1995; Winn & Blanton, 1997) related to both practice and teacher preparation. As part of a series on special education in an era of school reform, Hardman, McDonald, and Welch (1998) noted:

> The reality is that neither general nor special education alone has the capacity to respond to the growing diversity in the schools that includes students with disabilities, children from diverse backgrounds, and students who are at risk of school failure. Collaboration is a key to raising expectations and increasing the performance of all students. (p. 10)

Collaboration across general and special teacher education became a focus for CEC's TED during this stage, when the organization implemented a strand (i.e., *The Forum*) in its annual conference for discussions related to how developments in general teacher education could connect with teacher education in special education. At the same time, a book edited by Blanton, Griffin, Winn, and Pugach (1997), *Teacher Education in Transition: Collaborative Programs to Prepare General and Special Educators*, described the development of several early university-level adopters of collaborative teacher education, geographically spread across the United States, in the context of the larger reform agenda in teacher education. General and special educators in teacher education co-authored many of these chapters and illustrated how such relationships could evolve, although some may have moved forward because a handful of states required a general education license before awarding a special education license. Despite the tentative movement toward some form of joint

practice, the distance between an organic rethinking of teacher education and starting to put together isolated aspects of programs was still wide, and it was already many years into modern teacher education reform that these fledgling developments first began taking hold. The modal practice for including special education continued to be the requirement of a course in special education for general education teacher candidates (Voltz, 2003).

Despite the efforts on the part of teacher educators in both general and special education, these activities did not reflect a mutually informed or mutually beneficial effort. For example, the urban focus of UNITE provided an important opportunity to interrogate the relationship between urban multicultural teacher educators and urban special educators and the overrepresentation of students of color in special education, but UNITE did not reflect that kind of activity. Special educators displayed a high value for collaboration, but with the exception of a small number of early adopters noted above, most of the dialogue took place within special education even when individual programs were making progress across pre-service general and special education and when small-scale efforts were developed.

Missed opportunities between general and special educators in the early stages of the accountability movement in the 1990s were perhaps the larger missteps that occurred given the extent to which special education had placed a priority on measuring student progress and implementing assessment courses in teacher education. As previously noted, however, general teacher education professionals may have been largely unaware of special education's extensive literature base on curriculum-based measurement and, in general, the emphasis on measuring student progress and including it as an essential component of pre-service preparation. Similarly, general education teacher educators may have been unaware of how extensive the conversations were within special education regarding collaboration with colleagues in general education.

Although special educators may have published occasional articles in general teacher education outlets, most publications by special educators relating to collaborative teacher preparation efforts were restricted to special education journals and reports.

Stage 4: The Deep Rooting of Accountability in Teacher Education (2000-present)

The accountability movement for teacher education reform developed strong roots in the 2000s. With federal requirements leading the way, the importance of linking teacher education to pre-K-12 student outcomes became less of a debate among teacher educators and policymakers and more of an implementation challenge. While heading into the 2000s, NCATE released *NCATE 2000*, a revision that predominantly focused on teacher education outcomes and required programs seeking national accreditation to report assessment data relating to program improvement and candidate performance (Gollnick, 2008). The stakes for teacher education accountability have continued to grow higher as more recent federal requirements (i.e., American Recovery and Reinvestment Act [ARRA] of 2009) mandated that the evaluation of teacher education programs must include assessments showing how well a teacher education program's graduates improve achievement for the students they teach (D. D. Smith, Robb, West, & Tyler, 2010).

Although debates may have subsided about whether teacher education programs should be accountable for the achievement of students taught by their graduates, how to accomplish this is still being debated. With the growth of large-scale databases in school districts and states, value-added models to make links between pre-K-12 students and teacher preparation programs are receiving attention in general and special education (Blanton, McLeskey, & Hernandez, in press; Gansle, Noell, & Burns, 2012). Although these models are, in part, being used to evaluate teacher education programs in some states, other measures (e.g., graduates' job placement and job retention, satisfaction surveys of employers and graduates, performance assessments) are also being

used or considered (Nelson, 2012; Pianta, 2012). The shift to an accountability framework in teacher education is moving forward with required national performance assessments; one such measure, the edTPA (http://edtpa.aacte.org/), is being piloted in about 25 states and the District of Columbia.

Formed in 2001, TNE, one highly visible national reform effort in teacher education, largely focused on three reform goals: (a) how to best gather evidence of teacher effectiveness using value-added models, (b) how to improve teacher education as a clinically taught profession, and (c) how to involve arts and sciences faculty and make teacher education a university-wide endeavor and commitment. These three TNE principles echoed reform focuses of prior stages as well as the accountability emphasis in Stage 4. TNE was based on the assumption that teacher education belongs in the university, counter to the deregulation agenda that began during Stage 3 and continues today.

Probably the most defining externally imposed reform movement for teacher education in the 2000s came with the 2001 revisions of ESEA, or NCLB. Not only did NCLB focus on student and teacher accountability, but it also defined teacher quality through its HQT provisions (i.e., hold a bachelor's degree, hold state certification, and demonstrate knowledge of subject-matter content), strengthening the deregulation agenda Cochran-Smith (2001) and Cochran-Smith and Fries (2005) suggested. Given the ongoing teacher shortages reported in targeted teaching areas, including special education (Billingsley, 2011), greater numbers of alternative routes to certification evolved in general education (Wilson, 2008) and special education (Rosenberg & Sindelar, 2005) and have sent contradictory messages of regulation on the one hand for traditional teacher preparation and deregulation on the other.

Subsequent to the 2004 IDEA clarification that extended HQT requirements to special education teachers, the 325T program, a reform initiated from within special education, was implemented in 2007 to enhance special education teacher quality by ensuring that graduates meet HQT requirements. In 2010, the call for 325T proposals included a new competitive priority for dual certification, which seemed to send a message that general and special education should engage in greater collaborative program reform, building on the efforts of early adopters of collaborative, dual-certification programs that Blanton and colleagues (1997) illustrated. An alternative interpretation, however, may have been that dual certification, rather than engaging in deep reform across general and special education that was possible under a dual-certification model, was an efficient means toward the acquisition of HQT (Pugach et al., 2013). Nevertheless, some programs may have used the 325T funding as a way to engage in serious collaboration among general and special educators and serious joint program redesign. To date, however, only limited data about the outcomes of these 325T programs are available.

Intersection of general and special education. Once the accountability agenda was in place and it was clear that it equally applied to general and special education, the door opened for serious collaboration regarding how pre-service programs could address challenges together. Further, this development provided a unique opportunity to establish partnerships between the arts and sciences and teacher education, a topic that first appeared in contemporary reform activity with the advent of Project 30 Alliance. The organizational culture in most universities, however, often kept general and special education more divided than together. For example, significant reform efforts such as TNE did not, by design, include special education faculty members as major players (although projects at some institutions did include them) at the same time that arts and sciences faculty and deans were required to be major players.

Early in this stage, an effort to begin making explicit connections between general and special education took place regarding one major teacher education accountability tool—the INTASC standards. Through a project funded by OSEP, a companion document to the original INTASC standards was developed and published in 2001 to delineate the relationship between the INTASC standards and their meaning for general and special education teachers with respect to teaching students with disabilities. Within special education, the default was to focus on internally produced standards documents. In general education, the existence of the 2001 INTASC document did not seem to be widely known, nor was it widely used; one explanation may be that the field was not ready to have that conversation at such an explicit level.

During this stage, OSEP launched three large, federally funded projects focused on teacher education reform related to special education. The Center for Improving Teacher Quality (CTQ), housed at CCSSO beginning in 2002, brought together higher education and state-level leaders from general and special education to consider how to redesign teacher education across general and special education. From this project, a focus on multiple structures for dual certification emerged to help states and institutions of higher education (IHEs) consider what reforming teacher education may mean across the two; this included a set of rubrics to guide the redesign of teacher education (Blanton & Pugach, 2007). Two other projects more specifically focused on special education teacher education. The Center for Personnel Preparation in Special Education (COPSSE) focused on compiling the research literature in special education teacher education (Sindelar, Brownell, & Billingsley, 2010), and the National Center to Inform Policy and Practice in Special Education Professional Development (NCIPP) focused on collaboration and induction practices for special education teachers. Although there may have been connections to practices in general teacher education, these two latter efforts were limited in scope to special education.

As other current reform efforts continue (e.g., restructuring clinical preparation as proposed by the 2010 NCATE Blue Ribbon Panel report), the intention is clearly to prepare all teachers to work with students with disabilities as well as with students who are English language learners. Early on in reforms, though, and certainly in standards documents as previously noted, the intent always seemed to be inclusive of all students. In this fourth stage of teacher education reform, the same inclusive intent is communicated. The difference is that under NCLB, the achievement of specific groups of students is under a microscope. It remains to be seen whether such intent can be translated into new, responsive teacher education practice.

Bringing the Historical Lessons Forward:

Challenges for Policymakers and Practitioners and a Cause for Cautious Optimism

We have used the lens of a historical look at teacher education reform to examine the convergence, divergence, and missed opportunities between general and special teacher education. Probing the history of teacher education reform provides teacher educators, policymakers, and researchers opportunities to more fully understand the influences on teacher education in its short evolution as a field as well as to identify the trajectories of general and special education within this history. Understanding this shifting, growing research activity and teacher education practices can provide perspective to help guide teacher educators and policymakers for building on what has been learned and especially for avoiding the missed opportunities of the past, focusing instead on the potential for convergence.

Although there is little doubt that the two fields seem to converge around the overarching goal of preparing novice teachers to work with the diversity of students in pre-K-12 classrooms, when examined in the context of modern teacher education reform, general and special educators have typically kept a distance from one another. Perhaps, as previously noted, this is a result of

different histories (e.g., special education's roots in medicine and psychology); different priorities (e.g., special education's equity emphasis in the early stages of teacher education reform while general education pursues other priorities such as a knowledge base); and the different discourses and practices at work in each field as a result of being at different stages during teacher education's growth as a field. On this latter point, for example, general and special teacher educators have typically published in separate journals and attended separate conferences, and, in general, both teacher educators and policymakers have tended to talk among themselves more than with their respective general or special education colleagues.

Despite the history of missed opportunities, we are cautiously optimistic about the future of this teacher education relationship and reform. We believe there are four reasons that point to new levels of potential convergence for effectively bringing together general education and special education teacher educators on behalf of students with disabilities.

First, despite the pronounced shortcomings of NCLB, problems with the achievement of students with disabilities are now public knowledge. Although underlying disagreements may exist regarding who is more responsible for this state of affairs (i.e., is it because general education has failed to sufficiently differentiate instruction, or is it because special education has not provided effective, specialized instruction?), there is common agreement that improving the school achievement of students with disabilities is a high priority. Although there is not always agreement about how to solve this problem and how to best measure student learning progress, there is agreement that every teacher must be prepared to meet not only the philosophical goal of working with students with disabilities, but also the practical goal of improving their learning as measured by whatever indicators of learning are adopted.

Second, multiple reforms in teacher education and practice in pre-K-12 education are making related and/or parallel demands on both general and special educators. For example, like their general education counterparts, today special education teachers must be prepared in the academic content areas. Although these pre-service teachers in the past usually had reading as part of their preparation and perhaps some limited preparation for teaching mathematics, they are now expected to master all of the content areas they are responsible for teaching. Although this requirement can be met in different ways, some of which require much less collaboration between arts and sciences and education than others (i.e., passing content examinations), the promise of early attention to this issue with reforms like Project 30 Alliance; TNE; and, to some extent, the 325T special education pre-service projects opened the door for both building these relationships and shining a light on how both general and special pre-service education must link to academic content preparation. Similarly, at a time when the general education curriculum is of central importance to special education, the current implementation of the Common Core State Standards (CCSS) is putting pressure on all teachers to shift their curriculum and instruction practices and for general and special education pre-service candidates to be prepared to work together within the framework of the CCSS. Finally, regarding reforms at the pre-K-12 levels, multitiered models such as RtI pressure both general and special education teachers to ask and answer the question about what constitutes appropriate Tier 1 practice and consider the relationship between what occurs in Tiers 2 and 3 and what occurs in the general education classroom.

Third, there is beginning to be greater movement around connecting scholars in social justice, diversity, and multicultural education across general and special education. Scholars with special education backgrounds, for example, are building connections across Division G of the AERA (i.e., the Social Context of Education). Scholars in social justice and multicultural teacher

education are participating in more direct dialogue about special education (e.g., Cochran-Smith & Dudley-Marling, 2012; Irvine, 2012; Rueda & Stillman, 2012) in an attempt to identify and locate commonalities that were not previously acknowledged or perhaps not well understood. These conversations are meant to move beyond the necessary, continuing discourse about disproportionality. Instead, they are meant to represent a recognition that discourse on disproportionality is not sufficient to answer the much more complex questions about the place of disability in the larger context of diversity in the schools (Seidl & Pugach, 2009) and especially the challenge of the intersection of disability with other social markers of diversity (D. J. Connor, 2009).

Finally, there is growing support for the idea that special education teachers should be required to have certification in general education, generally referred to as *dual certification*. The program structures in which dual certification takes place can substantially differ, from discrete traditional programs to merged programs in which all graduates earn both licenses to programs in which special education builds upon a redesigned base of general pre-service preparation or integrated programs (Blanton & Pugach, 2007, 2011). There is longstanding historical precedent for special education teachers to be skilled in general education first (F. P. Connor, 1976). In contemporary, post-1975 practice, early calls for this approach to certification were made (Pugach, 1988) and recently revisited (Brownell et al., 2010). Further, today, there are several models for doing this (e.g., Oyler, 2011) that can be viewed as building on an earlier tradition of such collaborative teacher education programs (Blanton et al., 1997). Dual certification was also promulgated in the 325T grants (Pugach et al., 2013). Although not all dual-certification programs manage the transition to being a shared enterprise and remaining discrete more than connected (Young, 2011), in the current context of reform, dual certification, thoughtfully constructed and

implemented, opens the door for a viable path to more serious levels of a shared reform agenda than ever before.

Recommendations

With these convergences serving as a cautious cause for optimism, we built on the lessons of the past to offer five recommendations for a new practice of teacher education that facilitates setting a joint-action agenda for restructuring teacher education for both general and special teacher education to prepare pre-service teachers for their work with students with disabilities. Given the relatively chaotic state of education and the current challenges to teacher education, it is a critical time for teacher educators to take a proactive stance in redesigning and reforming its practice. For each recommendation, we first provided a brief summary of how teacher education reform initiatives historically contributed to identifying the recommendation, and, second, we delineated action steps targeted to accomplishing the recommendation for the purpose of simultaneously redesigning teacher preparation in general and special education for inclusive practices in schools. For an expanded set of action steps and for further explanations of key terms used in the recommendations (e.g., depth of knowledge), refer to Blanton and Pugach (2007).

1. **General education teacher education programs should be redesigned to (a) address the diversity of students making up classrooms in today's United States schools and (b) meet the most current standards of the profession, to include grounding content and delivery in the research knowledge base of general and special education.** Recommendation 1 expands on similar standards of state and national groups in its emphasis on using the research knowledge bases of both general and special education. Historically, this recommendation's roots began in the 1970s during the press for a knowledge base for teacher education and has continued to evolve through the influence

of DGPs, multicultural education and standards-based reform movements, and specialized reform efforts such as the Arts and Sciences/Teacher Education Collaborative (ASTEC) and the Bell South Initiative. Building on this history, restructuring general education programs will require today's teacher educators and policymakers to do the following:

(a) Use a framework for addressing the multiple diversities of every student, including students with disabilities, in an integrated manner cognizant of the intersection of diversities.

(b) Specify what constitutes special education knowledge in relationship to curriculum and instruction in the academic content areas (i.e., the special education knowledge base general education teachers need).

2. **Special education teacher education programs should (a) be built on a redesigned general education base and be of sufficient length to provide adequate depth of knowledge in the general and special education areas offered and (b) meet the most current standards of the profession, to include grounding content and delivery in the research knowledge base of general and special education.**

Recommendation 2 also expands on similar standards of state and national groups in its emphasis on using the research knowledge bases of both general and special education. Historically, this recommendation is derived from the accountability in teacher education movement of the 1990s and 2000s and the increasing expectation for students with disabilities to have access to, and achieve in, the general education curriculum. In addition, three reform groups (i.e., the Holmes Group, Carnegie Forum on Education and the Economy, and NCTAF) highlighted the issue of ensuring that teacher

preparation programs have sufficient curriculum space to address the knowledge base of the profession. Regardless of whether teacher educators and policymakers choose to offer special education at the initial or advanced licensure levels, today's policy context demands they do the following:

(a) Identify what constitutes the redesign of the base general education pre-service curriculum as a fundamental reform activity in relationship to meeting the needs of students with disabilities. Only with this reform in place can the redesign of special education effectively take place because raising the bar for general education has implications for where the preparation of special educators begins.

(b) Ensure that programs devote sufficient curriculum space (i.e., depth of preparation via courses and experiences) for novice special educators to learn both the general education base and the depth of knowledge (specified in standards) for teaching in areas of special education for which graduates are being prepared.

3. **Teacher education programs in general and special teacher education should be a collaborative enterprise among the faculty in general and special education as well as in the arts and sciences.**

Recommendation 3 emanates from the historical focus on education as a collaborative enterprise, both between education and the arts and sciences (e.g., ASTEC, Project 30 Alliance, NNER, TRG, NCTAF, TNE, 325T program) and between general and special education as emphasized by the 325T program. If the collaborative redesign of teacher education is to be sustained, teacher educators and policymakers must do the following:

(a) Capitalize on the research strengths of both general and special education by including what has been learned (e.g., evidence-based instructional practices for

students with disabilities in special education, teacher education curriculum in general education).

(b) Ensure that the leadership of teacher education programs provides the scaffolds to move past the historical division between general and special education and helps professionals redefine their expertise in relationship to one another rather than in opposition to one another.

(c) Examine state teacher licensure structures to determine the extent to which current structures support collaborative teacher education program redesign in general and special education for the goal of inclusive practices in schools.

4. **Teacher education programs in general and special education should be anchored in practice and partnership with schools to ensure that graduates understand (a) the realities of teachers' future work experiences relating to students with disabilities and (b) that preparation occurs along a continuum from pre-service preparation through ongoing development of expertise.**

Recommendation 4 is historically anchored in the work of the many reform groups that have promoted university and school partnerships as a central component of pre-service teacher preparation (i.e., NNER, the Holmes Group, TRG, UNITE, NCTAF, and TNE). Many of these same groups (i.e., Carnegie Forum on Education and the Economy, UNITE, NCTAF, and TNE) promoted partnerships beyond the pre-service years to highlight the importance of supporting graduates through the early years of teaching (i.e., induction); the role that such partnerships play in the continuing PD of teachers; and, in particular, the reciprocal improvement of teaching and teacher education. The

actions associated with this recommendation for teacher educators and policymakers include the following:

(a) Embed clinical experiences throughout programs to support novice general and special education teachers in understanding their roles in relation to the complex, intersectional diversity of learners in classrooms as they develop an understanding of their collaborative roles in schools.

(b) Examine the quality of the experienced teachers with whom novice general and special education teachers work to ensure ongoing experiences in schools with teachers who are modeling inclusive education.

5. **General and special education teacher education programs should be grounded in evidence and informed by multiple indicators of quality by (a) calling on specific criteria in the selection of candidates for teacher preparation and (b) using multiple indicators for monitoring candidate performance, including impact on pre-K-12 learning for all students—students with disabilities included—and for measuring the quality of the program overall.**

Recommendation 5 is historically derived from multiple initiatives that focused on evidence in teacher education (i.e., TNE and TRG and the accountability in teacher education movement that was established beginning in the 1990s). The NCLB Act, with its emphasis on all school children, including those with disabilities, amplified the emphasis on pre-K-12 student learning and served as one lever for general and special education to more closely work on indicators measuring their candidates' performances in programs. One teacher education reform initiative (i.e., NNER) pursued the need for stronger criteria in the selection of teacher candidates, a topic that has been examined in

research. To focus on the interconnectedness of general and special education, teacher educators and policymakers must do the following:

(a) Examine indicators for monitoring candidate performance to ensure that disability is considered as one of several intersecting markers of identity for a student with a disability and not as an isolated marker of identity that is privileged over others.

(b) Use a shared performance assessment base for general and special education programs to ensure that both general and special education novice teachers demonstrate content and pedagogical content knowledge and success in supporting students with disabilities to learn and achieve in schools and use additional specialized assessments for those who specialize in special education reflecting special expertise built on the common performance assessment.

In making these recommendations, we must clarify that the redesign of general and special education programs applies to all programs that prepare teachers. This means applying the same high expectations to the different pathways that are sanctioned to offer teacher preparation (e.g., face to face, online, longer or shorter routes) and regardless of the location of the program (e.g., university-based location, school-district-based location, non-profit or for-profit locations). Although it is understood that one size does not fit all, it is also understood that what we know and learn about the quality of teachers and the expectations for preparing them must apply to all programs.

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Appendix A

Acronyms and Full Names

Acronyms	Full Names
AACTE	American Association of Colleges of Teacher Education
AERA	American Educational Research Association
ARRA	American Recovery and Reinvestment Act
ASTEC	Arts and Sciences/Teacher Education Collaborative
ATE	Association of Teacher Educators
CAEP	Council for the Accreditation of Educator Preparation
CCSS	Common Core State Standards
CCSSO	Council of Chief State School Officers
CEC	Council for Exceptional Children
COPSSE	Center for Personnel Preparation in Special Education
CTQ	Center for Improving Teacher Quality
DGP	Dean's Grants Projects
EBP	evidence-based practices
ESEA	Elementary and Secondary Education Act
HEA	Higher Education Act
HQT	highly qualified teacher
IDEA	Individuals with Disabilities Education Act
IHE	institutions of higher education
INTASC	Interstate New Teacher Assessment and Support Consortium
NBPTS	National Board for Professional Teaching Standards
NCATE	National Council for Accreditation of Teacher Education
NCIPP	National Center to Inform Policy and Practice in Special Education Professional Development
NCLB	No Child Left Behind
NCTAF	National Commission on Teaching and America's Future
NCTM	National Council of Teachers of Mathematics
NNER	National Network for Educational Renewal
OSEP	Office of Special Education Programs
OSERS	Office of Special Education and Rehabilitative Services
PD	professional development
PDS	professional development schools
REI	Regular Education Initiative
RtI	response to intervention
TA	technical assistance
TACC	Technical Assistance Coordination Center
TEAC	Teacher Education Accreditation Council
TED	Teacher Education Division
TNE	Teachers for a New Era
TRG	The Renaissance Group
UNITE	Urban Network for the Improvement of Teacher Education

Appendix B

Teacher Education Reform in General and Special Education

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
Stage 1: The Need for a Knowledge Base (1970-1979)	Knowledge Base for Teacher Education	*A common body or core of knowledge and skills beginning teachers need; an identified knowledge base	X		**Establishing Initiative as a Reform** Three publications of *Handbook of Research on Teacher Education* (Houston et al., 1990; Sikula et al., 1996; Cochran-Smith et al., 2008); compendia of the knowledge base for teachers (Darling-Hammond & Bransford, 2005; Gideonse, 1989; Reynolds, 1989; D. C. Smith, 1983) **Evidence of Impact** Research Reviews: American Educational Research Association (AERA)-produced study panel report (Cochran-Smith & Zeichner, 2005); three publications of *Handbook of Research on Teacher Education* (Houston et al., 1990; Sikula et al., 1996; Cochran-Smith et al., 2008); Allen, 2003; Koehler, 1985; National Research Council (NRC) report, 2010; Offer & Pedder, 2011; Wilson et al., 2002 Policy: States mandated skills beginning teachers need (McDiarmid & Clevenger-Bright, 2008); 1987 revision of National Council for Accreditation of

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
					Teacher Education (NCATE) standards (Tom & Valli, 1990)
	Dean's Grant Projects (DGP,1974)	*Knowledge and skills for general education teachers working with students with disabilities		X	**Establishing Initiative as a Reform** Kleinhammer-Tramill, 2003; Kleinhammer-Tramill & Fiore, 2003; Kleinhammer-Tramill et al., 2008; Pugach, 2005; Pugach et al., 2013 **Evidence of Impact** Research Reviews: Pugach, 2005; Pugach et al., 2013 Policy: States required teacher preparation programs to include courses in special education for all teachers (Pugach et al., 2013); 1982 revision of NCATE standards (2.1.2 on special education; Heller & Ridenhour, 1983)

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
Stage 2: The Rapid Expansion of Reform in Teacher Education (1980-1989)	Standards-Based Teacher Education	*Standards for teacher education programs	X		**Establishing Initiative as a Reform** Interstate New Teacher Assessment and Support Consortium (INTASC, 1992); National Board for Professional Teaching Standards (NBPTS, founded in 1987); professional association standards (e.g., Bradley, 1993; *Journal of Teacher Education*, 2002, vol. 52(3), special issue on standards-based reform; McDiarmid & Clevenger-Bright, 2008; National Council on Teachers of Mathematics [NCTM], 1989) **Evidence of Impact** Research Reviews: McDiarmid & Clevenger-Bright, 2008; Roth & Pipho, 1990 Policy: States developed standards for teachers (McDiarmid & Clevenger-Bright, 2008); later, some states modeled INTASC standards for the state's program approval process (Gollnick, 2008); NCATE focused on standards in multiple revisions

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
	Multicultural Education	*Knowledge and skills to teach diverse learners	X		**Establishing Initiative as a Reform** Three publications of *Handbook of Research on Teacher Education* (Houston et al., 1990; Sikula et al., 1996; Cochran-Smith et al., 2008); handbooks on multicultural education (Banks, 1995, 2004); Sleeter & Grant, 1987; Wiedeman 2002 **Evidence of Impact** Research Reviews: Bennett, 2001; Cochran-Smith et al., 2004; chapters in two publications of *Handbook of Research on Teacher Education* (Houston et al., 1990; Cochran-Smith et al., 2008); Hollins & Torres Guzman, 2005 (diversity); McAllister & Irvine, 2000; Webb-Johnson et al.,1998; Weiner, 2000 Policy: 1982 revisions of NCATE on multicultural components (Hidalgo et al., 1996)
	National Network for Educational Renewal (NNER, 1986)	*University and school partnerships; strong clinical training *Strong admission requirements to teacher education	X		**Establishing Initiative as a Reform** Darling-Hammond & Bransford, 2005; Goodlad, 1993; Goodlad, 1994; http://www.nnerpartnerships.org/ **Evidence of Impact**

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
		*Faculty collaboration across education and arts and sciences			Research Reviews: Clift & Brady, 2005 (field experiences and professional development schools [PDS]); National Conference on Research in Teacher Education final report, 1991 (clinical experiences); M. M. Kennedy et al., 2008 (admissions and selectivity); NRC report, 2010 (field experiences and selectivity of candidates) Policy: NCATE (admission to teacher education in standards)
	The Holmes Group/Holmes Partnership (mid-1980s)	*University/school partnerships (PDS); strong clinical training *Structures of teacher education (e.g., length, level [undergraduate or graduate/graduate is recommended], context) *Subject-matter preparation	X		**Establishing Initiative as a Reform** Reports: Ashton & Crocker, 1987; Bush, 1987; Darling-Hammond & Bransford, 2005; *Handbook of Research on Teacher Education* (Houston et al., 1990); Murray, 1996; Shulman, 1987; 11 featured articles in *Teachers College Record*, 1987, vol. 88(3); *Tomorrow's Schools of Education*, 1996; *Tomorrow's Teachers*, 1986; Zeichner & Conklin, 2005 **Evidence of Impact** Research Reviews: Book, 1996 (PDS research); Clift & Brady, 2005 (field experiences and PDS research); NRC report, 2010 (field experiences); Stallings & Kowalski, 1990; Teitel, 2004 (PDS research); Zeichner & Conklin, 2005 (teacher education structures)

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
					Policy: NCATE standards (multiple field experiences)
	Arts and Sciences Teacher Education Collaborative (ASTEC), Project 30 Alliance (1988)	*Collaboration across faculty in education and arts and sciences *Subject-matter knowledge *Pedagogical content knowledge *Cultural perspectives	X		**Establishing Initiative as a Reform** Darling-Hammond & Bransford 2005; Murray & Fallon, 1989 **Evidence of Impact** Research Reviews: Floden & Meniketti, 2005 (subject matter and foundations); NRC report, 2010 Policy: No Child Left Behind (NCLB), 2001
	The Renaissance Group (TRG, 1989)	*Accountability for teacher education *School partnerships *Field experience in diverse settings *Collaboration across faculty in education and arts and sciences *Technology	X		**Establishing Initiative as a Reform** American Association of State Colleges and Universities (AASCU) newsletter, 2007 (focus on teacher education accountability/Teacher Quality (TQ) Grant; TRG annual report, 2003; TRG journal, 1996, vol. 1(1); TRG newsletter, 2005; TRG Teacher Work Sample Consortium (focus on performance assessment in teacher preparation, http://www.wku.edu/rtwsc/) **Evidence of Impact** Research Reviews: see other sections for same components Policy: State requirements for technology

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
					in teacher education; NCATE (evidence); NCATE (technology standard/indicator)
	Carnegie Forum on Education and the Economy (1986) Carnegie Task Force on Teaching as a Profession	*Structures more than a 4-year degree in arts and sciences with fifth year for teaching a subject-matter focus *Induction Note: Called for national certification for teachers: National Board for Professional Teaching Standards (NBPTS)	X		**Establishing Initiative as a Reform** Darling-Hammond & Bransford 2005; Goodlad 1993; Huling-Austin 1990; Murray 1996; *A Nation Prepared: Teachers for the 21st Century* (Ashton & Crocker, 1987); NRC report, 2010 **Evidence of Impact** Research Reviews: Billingsley, 2004; Huling-Austin, 1990 (induction); Strong, 2005 (induction); Wang et al., 2008 (induction); Whisnant et al., 2005 (induction); Zeichner & Conklin, 2005 (structures)
Stage 3: The Turn to Accountability in Teacher Education (1990-99)	Accountability in Teacher Education	*Evidence of teacher education impact on pre-K-12 learners	X	X	**Establishing Initiative as a Reform** Cochran-Smith, 2005; Crowe, 2011; Henry et al., 2012 **Evidence of Impact** Research Reviews: Henry et al., 2012; M. M. Kennedy et al., 2008 (value added); Wilson & Youngs, 2005 (accountability) Policy: Higher Education Act (HEA) requirements of 1998 (Earley & Schneider, 1996); McDiarmid & Clevenger-Bright, 2008; Teacher Quality Partnership (TQP)

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
					program added under Title II of HEA in 2008; Wilson & Youngs, 2005; move to performance standards, Teacher Education Accreditation Council (TEAC) and NCATE (Cochran-Smith, 2005)
	Urban Network for the Improvement of Teacher Education (UNITE, 1993)	*University and school partnerships *Connection to communities *Classroom and school communities *Seamless move to induction	X		**Establishing Initiative as a Reform** Howey, 1996, 1999 **Evidence of Impact** Research Reviews: Fideler & Haselkorn, 1999 (induction); see the Holmes Group for PDS reviews, Wang et al., 2008
	BellSouth Initiative (1997)	*Technology use *Diversity	X		**Establishing Initiative as a Reform** ReCreating Colleges of Teacher Education (Wisniewski, 2000) **Evidence of Impact** Research Reviews: Brooks & Kopp, 1990; Lawless & Pellegrino, 2007; Willis & Mehlinger, 1996 Policy: State standards for technology (McDiarmid & Clevenger-Bright, 2008); NCATE (technology standard/indicator)
	National Commission on Teaching and America's Future (NCTAF, 1996)	*High standards needed to obtain national accreditation	X		**Establishing Initiative as a Reform** Reports: Darling-Hammond & Bransford, 2005; *Doing What Matters Most: Investing in Quality Teaching* (NCTAF, 1997); three featured articles in *Teachers College*

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
		*Education as a postbaccalaureate after an arts and sciences degree *PDS *Induction (skilled mentoring)			*Record*, 2000, vol. 102(1); Wenglinsky, 2000; "*What Matters Most: Teaching for America's Future*" (NCTAF, 1996) **Evidence of Impact** Research Reviews: Darling-Hammond, 1999 (extended programs); Zeichner & Conklin, 2005
Stage 4: The Deep Rooting of Accountability in Teacher Education (2000-present)	NCLB (2001)	*Highly qualified teacher (HQT) content knowledge *Evidence *Teacher equity	X		**Establishing Initiative as a Reform** Cochran-Smith, 2002; Darling-Hammond & Baratz-Snowden, 2007; Darling-Hammond & Sykes, 2003 **Evidence of Impact** Research Reviews: Darling-Hammond & Youngs, 2002 Policy: Race to the Top (RTTT); NCATE, 2000; Council for the Accreditation of Educator Preparation (CAEP)
	Teachers for a New Era (TNE, 2001)	*Evidence in teacher education *Arts and sciences involvement (subject-matter and pedagogical content knowledge) *Clinical practice (partnerships with schools); induction	X		**Establishing Initiative as a Reform** AASCU Newsletter, 2007 (focus on evidence); Cochran-Smith, 2005 **Evidence of Impact** Research Reviews: Kirby et al., 2004 (TNE generally); Rand report, 2006 (TNE generally) Policy: NCATE's (2010) Blue Ribbon Panel

Stage	Reform[i] and Key Components*		GE (Gen Ed Initiated)	SE (SPED Initiated)	Role of Evidence: Establishing an Initiative as a Reform[ii] Evidence of Impact[iii]
	325T Program (2007)	*HQT content knowledge *Dual certification *Faculty collaboration between general and special education		X	**Evidence of Impact** Research Reviews: Blanton et al., 2014

[i] A movement or specific initiative intended to improve the preparation of teachers; the reform itself, or the components comprising the reform initiative, have and continue to be studied and analyzed in teacher education literature.
[ii] An initiative or movement is established as a reform if it was documented in and regularly identified in major teacher education literature sources (e.g., handbooks, special issues of journals).
[iii] The evidence of the impact of a reform and its lasting influence is demonstrated by the large quantity of related research reviewed and reported in the literature and related policies that grew from the reform.