



Preparing elementary school teachers in the Southeast Region to work with students with disabilities



Institute of Education Sciences
U.S. Department of Education



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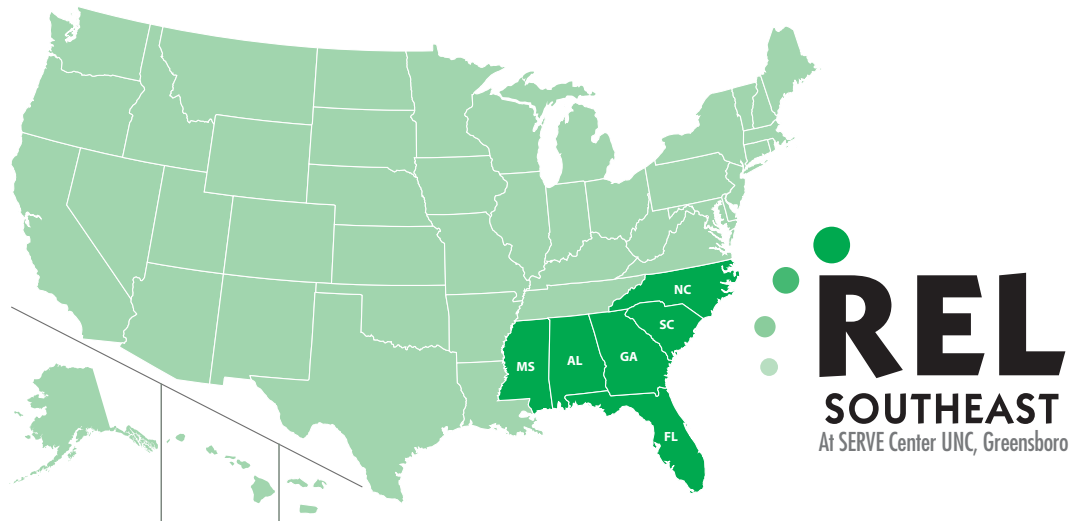
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Preparing elementary school teachers in the Southeast Region to work with students with disabilities

The study examines the extent to which elementary education teacher preparation programs in 36 randomly selected colleges and universities in the six Southeast Region states integrate content related to students with disabilities. Most programs require one disability-focused course, two-thirds incorporate fieldwork related to students with disabilities, and more than half incorporate disability content into their mission statements.

Recently reauthorized federal legislation has increased general educators' responsibilities for educating students with disabilities. Specifically, the No Child Left Behind (NCLB) Act of 2001 requires that all students, including those with disabilities, have access to and achieve in the general curriculum (No Child Left Behind Act 2002). And the Individuals with Disabilities Education Improvement Act of 2004 is renewing emphasis on inclusion and on reducing the disproportionate representation of minority students in special education (Arthaud et al. 2007; Donovan and Cross 2002; Blanton and Pugach 2007; Goe and Cogshall 2007). Teacher preparation in this area will likely enhance the ability of future elementary education teachers to provide instruction to students with disabilities.

This report examines the extent to which content related to students with disabilities is

a part of elementary education teacher preparation programs in the six Southeast Region states (Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina). The report seeks to inform the discussions of state policymakers and teacher preparation leaders as they work to improve teacher quality through better teacher preparation. In the Southeast Region state committees are exploring ways to bolster teacher preparation, and teacher quality initiatives are under way in Alabama, Mississippi, and South Carolina. Identifying the strategies used to integrate disability content into elementary education training can provide important information for renewal efforts by schools, colleges, and departments of education and for state agencies considering changes to licensing structures and program performance standards.

To examine the current status of disability content in teacher preparation programs in the Southeast Region, the study analyzed information from 36 randomly selected institutions, stratified by state, program size, and whether the institution is a historically black college or university. During phase 1 (May–August 2007) the web sites of colleges and universities were searched for information on mission statements, course requirements, course descriptions and syllabi, faculty expertise and credentials, organizational arrangements,

and fieldwork requirements. During phase 2 (August–September 2007) interviews were conducted with the department chairs of six elementary education preparation programs.

The findings show that disability content is integrated into teacher preparation programs through a variety of strategies:

- Pursuing a program mission with disability-focused priorities.
- Requiring disability-focused courses.
- Embedding disability content in other required courses.
- Incorporating disability content into field experiences.
- Aligning mission and coursework requirements.
- Sharing course experiences between general and special education.
- Practicing collaborative program design.

The most prevalent strategy used to integrate disability content is requiring one disability-focused course. The majority of teacher preparation programs in the sample (30 of 35) require one disability-focused course, and about a quarter of programs (9 of 35) require more than one. Another common approach is incorporating fieldwork related to students with disabilities—two-thirds of programs (22 of 35) use this strategy. And more than half of programs (21 of 36) incorporate disability content into their mission statements. A few programs embed disability content into core

courses—and when embedded, such material appears most often in reading courses (13 of 35) and multicultural courses (10 of 26).

Programs with disability-focused priorities in their missions are more likely to incorporate disability content into fieldwork (18 of 21, or 86 percent) than programs that do not include disability in their missions (4 of 15, or 27 percent), a statistically significant difference between the two groups ($p = .000$). However, 17 of 20 programs that include disability in their missions require one or more disability-focused course, about the same proportion (13 of 15) as those that do not include it. Among programs with disability-focused content in their mission, the strategies of requiring multiple disability courses and embedding disability content co-occur—six of the seven college and universities that require more than one disability course also embed disability content into reading coursework. References to disability and diversity are also often found together in teacher preparation program mission statements and core disability courses, yet seldom was the relationship between disability and diversity clearly articulated.

While this was a small sample of programs and the difference did not prove to be statistically significant, the data suggest that small programs may integrate less disability content than large programs do. Small programs have lower average extent of disability integration composite scores (2.7) than do larger programs (3.3). And of the 10 small programs in the sample, only 1 requires more than one disability-focused course, and 7 require only a basic categorical survey course.

Of programs within colleges and universities that have special education programs, shared

courses between general and special education are often required—12 of 17 institutions in the sample share 6–13 courses in the general and special education programs. Offering programs supporting licenses in both general and special education is the least prevalent strategy—4 of 36 institutions offer a program supporting dual licensure, and only 1 institution offers a program that fully merges general and special education.

Based on these findings, this report offers three key points for consideration:

- Disability content is integrated in teacher preparation programs through various approaches and to varying degrees in the Southeast Region.
- In both mission statements and core courses disability is frequently associated with diversity.
- Small teacher preparation programs face particular challenges in integrating disability content.

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The study examines the extent to which elementary education teacher preparation programs in 36 randomly selected colleges and universities in the six Southeast Region states integrate content related to students with disabilities. Most programs require one disability-focused course, two-thirds incorporate fieldwork related to students with disabilities, and more than half incorporate disability content into their mission statements.

WHY THIS STUDY?

This report examines how content related to students with disabilities is integrated into university-based elementary teacher preparation programs in the Southeast Region (Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina).¹ The report is intended for state education policymakers and representatives of teacher preparation programs in institutions, colleges, and departments of education (generally referred to for convenience as colleges and universities or, sometimes, institutions),² focusing on their common interest in advancing teacher preparedness to work with students of varying abilities in the general education classroom.

The No Child Left Behind (NCLB) Act of 2001 requires that all students, including those with disabilities, have access to and achieve in the general curriculum. And the Individuals with Disabilities Education Improvement Act of 2004 has given renewed emphasis to inclusion and to reducing the disproportionate representation of minority students in special education (Arthaud et al. 2007; Donovan and Cross 2002; Blanton and Pugach 2007; Goe and Cogshall 2007). Reflecting the intensifying importance of general educators' responsibilities for teaching students with disabilities, needs assessments from state education leaders in the Southeast Region states have identified interest in both the status of special education, particularly inclusion, and teacher preparation.

In response to federal priorities, state policymakers are promoting specific roles for colleges and universities in better preparing general education teachers for working with students with disabilities. For example, a state policymaker in Mississippi identified several teacher training needs as critical to state efforts to remedy both over- and under-representation of minorities in special education. Many state departments of education, including in each of the six Southeast Region states, are planning or adopting tiered intervention approaches, often referred to as Response to Intervention, to address over-reliance on special

education placement. Response to Intervention provides high-quality instruction and interventions matched to student needs and frequent monitoring of student progress. And it applies student progress data to instructional and other education decisions, such as eligibility for special education services. The potential of such initiatives to reduce special education placements and the disproportionate number of minority students in special education appears promising (Marston 2002; Marston et al. 2003; VanDerHeyden, Witt, and Gilbertson 2007; VanDerHeyden and Witt 2005), but these approaches require special skills.

Preparation of teachers to work with students with disabilities is also part of a larger dialogue about teacher quality and preparation in the Southeast Region states. For example, Mississippi's Blue Ribbon Committee for the Redesign of Teacher Preparation is working on a plan to increase the quality and quantity of teachers in the state by improving teacher preparation and recruitment programs. South Carolina is working to increase the number of highly qualified special education teachers through Project Create, a partnership between the state education agency and colleges and universities that provides tuition and textbooks for teacher candidates in special education. At the national level the Interstate New Teacher Assessment and Support Consortium supports state and other initiatives, such as its Center for Improving Teacher Quality, to achieve consensus on how general educators should work with students with disabilities. This initiative has brought colleges and universities and state policymakers from more than 40 states together to think collaboratively

about teacher preparation programming (Council of Chief State School Officers 2007).

To inform thinking about trends and future directions, these state and national efforts need good descriptive data on the current status of preparing teachers to work with students with disabilities. This report meets that need by describing

the ways in which content related to students with disabilities is integrated into elementary teacher preparation in a sample of teacher preparation programs in the Southeast Region. It addresses two related questions:

1. How do university-based elementary education teacher preparation programs incorporate content relating to students with disabilities?
2. What are the range of approaches, their characteristics, and the prevalence of each approach in a representative sample of university-based programs in the Southeast Region?

To answer these questions, the researchers drew a stratified random sample of university-based teacher preparation programs in the six Southeast Region states using information from course catalogues, syllabi, and related program documents obtained from web sites (see box 1 and appendix A for details of the methodology). Overall, 117 programs met the selection criteria; of these, 36 were included in the sample, based on the proportion of qualifying programs in a state relative to the total number in the region: 7 in Alabama, 5 in Florida, 4 in Georgia, 4 in Mississippi, 9 in North Carolina, and 7 in South Carolina. Data analysis combined thematic and content analysis of qualitative data and tallies and cross-tabulations of quantitative data. In addition, to augment and illustrate the documented strategies, seven interviews were conducted with department chairs of elementary education preparation programs covering approaches to preparing candidates to work with students with disabilities, and field placements with students with disabilities, among other topics.

To examine how this sample of university-based elementary education preparation programs integrated disability content, the study used a conceptual framework based on seven strategies drawn from the literature. These strategies were both prominent in the literature and amenable to data collection from web sites and a small number of interviews:³

To inform thinking about trends and future directions, state and national efforts need good descriptive data on the current status of preparing teachers to work with students with disabilities

BOX 1

Data collection and analysis and study limitations**Data collection and analysis**

The study had two phases (see appendix A for a detailed description of the methodology). In phase 1, conducted May–August 2007, researchers drew a stratified random sample of 36 university-based teacher preparation programs in the six Southeast Region states and analyzed their incorporation of disability content using course catalogues, syllabi, and related program documents obtained from web sites. The criteria for inclusion were programs that award bachelor's degrees (as listed in MacMillan Reference 2006), have an elementary education preparation program (as listed in MacMillan Reference 2006), graduate at least 18 students annually,¹ and have no missing data for number of graduates based on data sources available. Overall, 117 programs met these criteria: 23 in Alabama, 17 in Florida, 13 in Georgia, 12 in Mississippi, 29 in North Carolina, and 23 in South Carolina (see appendix tables A4–A9 for details).

The strata used for sampling were state, program size (small, medium, and large based on number of graduates), and whether the program is part of a historically black college or university. At least one historically black college or university was intentionally sampled per state. The number of programs included per state was based on the proportion of qualifying programs in a state relative to the total number in the region. And the proportion of programs in each size category was

based on their representation within each state. Although the sampling was not based on whether the college or university had a special education department, the sampling automatically included a representative mix of institutions with and without these departments. This became an important consideration in the analysis. Material from each of the 36 programs

was indexed and coded, and interrater reliability checks were conducted. Box tables 1, 2, and 3 show the number and percentage of programs in the sample by state, number of graduates, and whether they have special education degree programs.

Phase 1 included both thematic and content analyses of qualitative data as

TABLE 1

Sample teacher preparation program distribution by state, 2007

State	Number	Percent
Alabama	7	19
Florida	5	14
Georgia	4	11
Mississippi	4	11
North Carolina	9	25
South Carolina	7	20
Total	36	100

Source: Authors' analysis based on application of criteria; data from course catalogues, syllabi, and related program documents obtained from institution web sites.

TABLE 2

Sample program distribution by number of elementary education teacher candidate graduates, 2007

Program size	Number	Percent
Small	10	28
Medium	11	30
Large	15	42
Total	36	100

Note: For details on scaling for program size, see appendix A.

Source: Authors' analysis based on application of criteria; data from course catalogues, syllabi, and related program documents obtained from institution web sites.

TABLE 3

Number of colleges and universities in the sample with and without special education degree programs, 2007

Special education program?	Number	Percent
No	14	39
Yes	22	61
Total	36	100

Source: Authors' analysis based on application of criteria; data from course catalogues, syllabi, and related program documents obtained from institution web sites.

(CONTINUED)

BOX 1 (CONTINUED)

Data collection and analysis and study limitations

well as tallies and cross-tabulations of quantitative data. Two researchers independently reviewed qualitative material and identified consistent themes and categories; differences were reconciled through discussion before finalizing the categories for coding. To help interpret the significance of the findings presented here, 95 percent confidence intervals for percentages reported are presented in table A2 in appendix A.

During phase 2 of data collection, conducted August–September 2007, interviews were held with department chairs of elementary education preparation programs. The interview guide, included in appendix A, covered approaches to preparing elementary education candidates to work with students with disabilities, faculty expertise related to students with disabilities, faculty interaction across general and special education, rationale for shared courses and merged programs across general and special education, relation of disability and diversity in the curriculum, and field placements with students with disabilities. A purposeful subsample of six programs was taken to maximize representation of four factors: presence or absence of a special education department, greater or lesser extent of disability content integration, state representation, and program size based on number of graduates.² Programs with special education programs and comparably higher levels of integration were overselected to maximize the information likely to be generated

from the interviews. Seven interviews were conducted, including two with representatives from one program. Four programs originally selected were replaced because of nonresponses.

Phase 2 data analysis was organized so that findings would augment and illustrate the strategies documented in phase 1. The interview data were intended to enrich depictions of how programs are integrating disability content into elementary education teacher training and were not intended to represent the larger sample of 36 programs. Interview data were also analyzed to verify data collected from web sites.

Study limitations

The sample was limited to elementary education teacher training programs offering traditional bachelor's degrees. To maintain sufficient focus, community colleges, alternative certification programs, inservice programs, and graduate programs were excluded, so the findings likely do not represent the full gamut of approaches to preparing general educators to work with students with disabilities in the Southeast Region. The study relied primarily on data collected from written materials available on web sites. Though the most up-to-date material was collected, there can be no assurance that these materials accurately represent current activities or the entirety of current program activities. Because syllabi were not available for the majority of courses analyzed, course

descriptions were used instead, and these may not fully describe course content. And neither course descriptions nor syllabi may adequately represent what actually happens in courses. Although these are limitations, any bias that occurred is likely to have applied equally across all programs.

Because of the limited number of key informant interviews that could be conducted, informants were selected from programs that appeared to be working in some way to integrate disability-related content. While this maximized certain information, it may have minimized findings about the challenges and attitudes that correspond with less integration of disability content. And finally, although the state policy context can have a strong influence on teacher preparation, this study did not include analysis of this effect.

Note

1. The original proposal set a 25 graduate minimum for inclusion in the sample frame, but the distributions suggested that this might be too stringent a cutoff point, especially in light of the year-to-year variation in number of graduates. The initial proposal also set a minimum size of at least 15 new elementary teacher graduates for the elementary education program, but because these data were available for only two of the six states, this criterion was dropped from the sampling scheme.
2. The original sampling scheme included seven programs, but only six agreed to participate in the required time frame.

- Pursuing a program mission with disability-focused priorities.
- Requiring disability-focused courses.
- Embedding disability content into other required courses.
- Incorporating disability content into field experiences.
- Aligning mission and coursework requirements.
- Sharing course experiences between general and special education.
- Practicing collaborative program design.

Following Pugach (2005), the study also considered how programs approached diversity because of its often close association with disability. In addition, collaboration between general and special education faculty has been identified as

vital to disability content integration (see, for example, Blanton and Pugach 2007; Voltz 2003). And although the study anticipated that such collaboration and disability content integration would be positively associated, data on such collaboration were limited. Table 1 lists the seven strategies and related web site data collected about each.

OVERVIEW OF THE FINDINGS

This report reaches three general conclusions about the approaches that some university-based elementary teacher preparation programs in the Southeast Region are using to prepare teachers to work with students with disabilities.

- *Disability content is integrated in teacher preparation programs through various approaches and to varying degrees in the Southeast Region.* Strategies range from the most prevalent approach of requiring one disability-focused course to a few institutions that

TABLE 1

Alignment of seven strategies for integrating disability content into elementary education teacher preparation programs and data collected, 2007

Strategy	Data collected
Pursuing a program mission with disability-focused priorities	<ul style="list-style-type: none"> • Institution- and program-level disability content in the mission • Institution- and program-level mission relating to diversity and diverse learners
Requiring disability-focused courses	<ul style="list-style-type: none"> • Number and content of required disability courses
Embedding disability content into other required courses (strand approach)	<ul style="list-style-type: none"> • Disability content in required courses in reading, math, diversity, assessment, and methods
Incorporating disability content into field experiences	<ul style="list-style-type: none"> • Disability content referenced in descriptions of field experience requirements
Aligning mission and coursework requirements	<ul style="list-style-type: none"> • Institution- and program-level mission related to students with disabilities • Required disability-focused courses • Disability content in required reading courses
Sharing course experiences between general and special education	<ul style="list-style-type: none"> • Courses required by both general and special education programs when a institution has both
Practicing collaborative program design	<ul style="list-style-type: none"> • Descriptions of programs that provide the option of earning general and special education degrees

Source: Authors' analysis based on literature review and data from course catalogues, syllabi, and related program documents obtained from institution web sites.

offer a program leading to dual licensure in elementary education and special education. The prevalence of each of the seven strategies examined in this report is shown in table 2.

- *In both mission statements and core courses disability is frequently associated with diversity.* Disability and diversity are often closely related in teacher preparation program mission statements and core disability courses. Ten of the programs connect diversity and

disability in their mission statements. Eight programs include diversity in core disability course descriptions. Seldom, however, was the relationship clearly articulated, except when disability was characterized as a category of diversity.

- *Small teacher preparation programs face particular challenges in integrating disability content.* The data suggest that small programs integrate less disability content than

TABLE 2

Percentage of elementary education teacher preparation programs in the sample using each strategy for integrating disability content, 2007

Strategy	Detail	Percent
Pursuing a program mission with disability-focused priorities	Incorporate disability priorities in mission statements	58
	Associate disability with diversity in mission statements	28
Requiring disability-focused courses	Require at least one course ^a	86
	Require more than one course ^a	26
Embedding disability content in other required courses	Embed in reading courses ^a	37
	Embed in math courses ^a	17
	Embed in multicultural courses ^b	38
	Embed in methods courses ^c	23
Incorporating disability content into field experiences	All programs that require field experience ^d	63
	Disability courses across programs that include fieldwork ^e	33
Aligning mission and coursework requirements	Programs with disability in their mission that also require a disability course ^f	85
	Programs with disability in their mission that also embed disability into coursework ^f	50
	Programs with disability in their mission that also require related fieldwork ^g	86
Sharing course experiences between general and special education	Programs that share 6–13 courses ^h	72
Practicing collaborative program design	Programs that offer a dual license	11
	Programs that offer a merged program	3

a. Based on the 35 programs with data on required courses.

b. Based on the 26 programs that require multicultural courses.

c. Based on the 22 programs that require methods courses.

d. Based on the 35 programs that require field experience.

e. Based on the 40 required disability-related courses that incorporate fieldwork.

f. Based on the 20 programs that incorporate disability in their mission and for which data were available on required courses.

g. Based on the 21 programs that incorporate disability in their mission.

h. Based on the 17 programs that share courses between special education and general education departments.

Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites and interviews with key informants.

do medium to large programs (although the finding is not statistically significant at the 5 percent level). Small programs had a lower average composite score for disability integration. In addition, of the 10 small programs in the sample, only 1 requires more than one disability-focused course, and 7 require only a basic categorical survey course.

DETAILED FINDINGS

This section presents the detailed findings on how 36 university-based elementary teacher preparation programs use each of seven strategies to integrate disability content into teacher preparation. The discussion begins by describing the research related to each strategy and how the findings support or extend that research. And because strategies are seldom used individually, the section concludes with a summary analysis of how programs used the strategies in combination.

Pursuing a program mission

In a white paper on preparing future educators to work with students with disabilities commissioned by the American Association of Colleges for Teacher Education, Kozleski, Pugach, and Yinger (2002) identify a shared mission and organizing framework across an institution's preparation programs as key. Referred to as "program coherence," it consists of a conceptual framework, guiding themes, common vision of teaching and learning, and core coursework that cuts across degree programs (Darling-Hammond et al. 2005; Howey 1996). However, there is a lack of empirical studies describing program coherence in programs preparing general educators to work with students with disabilities. Only one study was found that investigated the extent to which disability content is reflected in the mission statements of early childhood programs (not elementary education programs, as was the focus here). In a national survey of 438 programs Chang, Early, and Winton (2005) find that 63 percent of

early childhood education bachelor's degree programs considered early childhood special education preparation to be part of their mission.

A shared conceptual framework is considered a hallmark of current teacher preparation reform efforts, reflecting common goals, beliefs, and values (Darling-Hammond et al. 2005; Howey 1996; Kozleski et al. 2002). Teacher preparation programs can emphasize the goal of preparing teacher candidates to work with students with disabilities by incorporating disability content into their mission or conceptual framework.⁴ To determine the extent to which programs do this, institution- and program-level mission statements and conceptual frameworks were reviewed to identify any reference to "students with disabilities" or its cognates. In the material examined 21 of 36 programs (58 percent) reference "learners with special needs," "exceptionalities," or some variation in their mission, but none refers expressly to "students with disabilities." These findings are consistent with those of Chang, Early, and Winton (2005), who find that 62.6 percent of early childhood preparation programs in their sample included content related to special education and early intervention as part of their primary mission.⁵

Content analysis of the mission data showed that while "inclusion" is referenced in 2 of the 21 mission statements, the expressed belief that "all children" possess a capacity to learn is evident in 5. Ten mission statements, as in the example below, contain reference to disability—in this case "individual needs"—through wording that associates it with diversity:

Candidates should appreciate diversity by demonstrating the belief that all students can learn and be successful through accommodating for individual needs in society.⁶

Teacher preparation programs can emphasize the goal of preparing teacher candidates to work with students with disabilities by incorporating disability content into their mission or conceptual framework

In these mission statements intellectual ability is sometimes listed as one of several categories of learner differences:

Our definition of “all learners” recognizes and embraces the diversity in race, ethnicity, culture, gender, and ability that is present in our society and in any learner population.

Artiles and Trent (1997) and Pugach and Seidl (1998) have criticized equating disability with other categories of diversity because doing so limits the ability to understand the relationship between disability and other forms of diversity. In contrast to this categorical approach, several missions reflect a function-oriented view of diverse learners that focuses on classroom implications rather than categories of students. Two institutions in Georgia, for example, discuss “academically diverse classrooms,” and one associates diversity and “various levels of ability” with instructional adaptations:

We believe that candidates should be able to demonstrate flexibility and strategic planning appropriate to a wide variety of learners. . . . As we prepare our candidates to be adaptive educators, we emphasize that educational settings are becoming increasingly diverse, meaning that educational excellence depends substantially on the educator’s ability to adapt instruction for students who exhibit various levels of ability.

While diversity is not always associated with disability content in program missions in the study sample, what is conceptualized as the relation

between diversity and disability is likely an important consideration because nearly all of the colleges and universities in the sample (31 of 36) reference diversity in their mission.⁷

Missions (14 of 21 with disability content) also tend to connect students with differing abilities or diversities to instruction goals

for teacher candidates, such as “flexibility to adapt instruction” or “to modify instruction.” Relatedly, key skills that are part of tiered interventions like Response to Intervention, such as continuous assessment, are sometimes mentioned:

Achieving outcome goals requires professionals to maintain flexibility in their approaches to teaching and service. They must be able to modify and adapt instruction, service, or interventions, based upon continuous assessment and monitoring of learner and client progress, to achieve positive outcomes among a diversity of populations.

* * *

Program objectives include that candidates will be able to select, organize, and adapt a curriculum in planning instruction, based on knowledge of diverse student needs, including exceptional learners, and gather information to evaluate both students’ learning and the effectiveness of instruction.

While 22 of the colleges and universities in the sample have special education programs, explicit reference in program missions to teacher candidates’ ability to instruct students with disabilities and promote their achievement in the general education curriculum is rare. One program at a small institution in North Carolina is an exception in specifying as one of its objectives for teacher candidates:

To have the knowledge and understanding necessary to become experts at teaching students with disabilities who are progressing through the General Curriculum (K–12).

In explaining the approach taken by their teacher preparation programs, key informants from two of six programs described that having a common mission can bond faculty around shared beliefs, including in prioritizing teacher candidates’ preparedness to work with students with disabilities. One commented: “We have a faculty of very

Explicit reference in program missions to teacher candidates’ ability to instruct students with disabilities and promote their achievement in the general education curriculum is rare

similar beliefs—that’s probably the bottom line—we all strongly believe that all students can learn and that it’s our job to help our [teacher] candidates come to the same belief.” Relatedly, material identified from the web site of one institution in Florida indicates how a shared priority relating to disability content can permeate all aspects of a program throughout its redesign:

Two special task forces worked on refinement of the undergraduate core curriculum common to all of the teacher education programs. The resulting core included five areas of content—instructional planning, classroom management, human development and learning, assessment, and learners with special needs—and a set of competency statements for what candidates in each program were expected to master in each of the five core areas. Core courses were redesigned to address the five areas, and unit goals were consulted in designing common assessment tasks to address the core competencies.

In sum, 58 percent of programs incorporate disability priorities in mission statements, and 28 percent associate disabilities with diversity. Like Chang, Early, and Winton (2005) this study found that more than half of programs reference “learners with disabilities,” “exceptionalities,” or some variation in their mission, though none refers expressly to students with disabilities. In addition, nearly all sample institutions reference diversity in their missions, and this is sometimes associated with disability.

Requiring disability-focused courses

Requiring general education candidates to take one or more disability content courses has been a common way to integrate disability content into teacher preparation programs (Pugach 2005). As of 2003, 15 states required such coursework (Editorial Projects in Education, Inc. 2008). With one exception (Kirk 1998), studies have found these courses to have a positive influence on teacher candidates’ perceived attitudes (deBettencourt 1999; Lambert

et al. 2005; Shippen et al. 2005; Rademacher et al. 1998). But because these studies used pre-post or survey designs and relied on self-reporting of attitude change as outcome measures, evidence of course impact is primarily descriptive, and questions of efficacy remain.

There are no recent studies of the content of required disability-focused courses. A survey by Jones and Messenheimer-Young (1989) conducted nearly 20 years ago of a random sample of 200 colleges and universities identifies two categories of courses: “exceptionalities” (courses focused on such topics as legislation and characteristics of exceptional learners) and “mainstreaming” (courses focused on curriculum modifications and application of instructional strategies). Arguing for a two-course sequence, they contend that both types of courses are needed to adequately prepare teachers for inclusive classrooms.

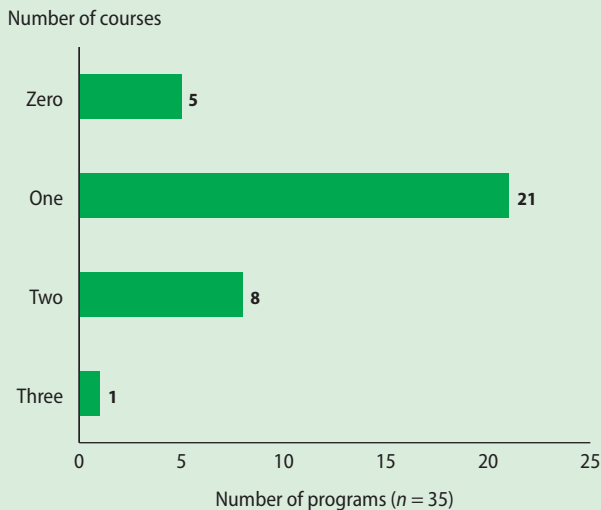
Against this background, program requirements were examined to determine the number and content of disability-focused courses. Courses were identified by sorting through course titles for terms such as “disabilities,” “exceptionalities,” “diverse learners,” “special needs,” “mainstreaming,” and “inclusion.” The focus of the courses was verified by reviewing course descriptions and syllabi. Of the 35 programs with available data,⁸ 30 were found to require at least one disability-focused course. Of the five programs that do not require a disability course, three embed disability material into other content courses (this strategy is discussed in the next section). The number of required disability-focused courses for each program ranges from zero to three (figure 1).

The content of disability-focused courses is wide-ranging, from introductory courses resembling a “disability of the week” approach (Pugach 2005) to

Of the 35 programs with available data, 30 were found to require at least one disability-focused course. Of the five programs that do not require a disability course, three embed disability material into other content courses

FIGURE 1

Number of elementary education teacher preparation programs in sample requiring zero to three disability-focused courses, 2007



Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

courses emphasizing instruction, assessment, and modifications for students with disabilities. From the course descriptions, three major types of disability courses were identified: categorical survey courses, instruction and inclusion courses, and categorical survey plus courses.

Type 1. Categorical survey courses. These courses—such as “Introduction to Special Education” and “The Exceptional Child”—focus on the characteristics and categories of students with disabilities, as well as etiology, legal issues, and available services and resources. They account for 16 of the 40 required disability courses and include descriptive language in their course descriptions or syllabi, such as the following:

An introduction to the psychological and educational characteristics of the major types of exceptionalities, including learning disabilities, mental disabilities, and behavioral/ emotional disabilities. The special needs of individuals with speech, hearing, visual, and physical disabilities will also be covered, as well as special education issues and services.

Type 2. Instruction and inclusion courses. These courses—such as “Teaching Children with Special Needs in the Elementary Classroom” and “Inclusive Teaching for Students with Special Needs”—emphasize the functional implications for teaching and learning, rather than diagnostic categories of disability (which, though sometimes included, are not the primary content or organizing principle of the courses). Although the course descriptions do not mention tiered intervention (such as Response to Intervention), the design and implied philosophy of these courses are strongly aligned with it. Instruction and inclusion courses account for 15 of the 40 required disability courses. Examples of course descriptions include:

This course will examine issues of diversity by concentrating on the educational needs of exceptional and at-risk children through seminars and through a continuation of an individual case study. Candidates will learn how to teach to individualized objectives, provide modifications and accommodations appropriately, and assess the progress of the selected case study child. Additionally candidates will make necessary revisions to the individualized instructional program based on the child's progress.

* * *

The course will focus on strategies for meeting needs of individuals in elementary school classrooms. Students will study alternative methods for dealing with pupil differences that have an impact on academic and social behaviors. Characteristics of children with academic, intellectual, social-emotional, physical, cultural, and language differences will be examined.

Type 3. Categorical survey plus courses. These courses—such as “Characteristics and Instructional Strategies for Students with Disabilities”—are similar in content and title to those of the most basic survey courses of exceptionalities (as described in type 1) but differ by also emphasizing

the instructional implications of learning differences and the general educator's role in working with students with disabilities. Nine of the 40 required courses fall into this category. Examples include the following:

A study of individuals with exceptionalities from the gifted to the profoundly disabled . . . the course will develop a working knowledge of current practices, research, and legal mandates in the field of special education and exceptional children. A specific focus will be placed on inclusive classrooms, managing individuals with disabilities in general education settings, and making adaptations and/or accommodations in order to keep individuals with disabilities in the general education setting.

* * *

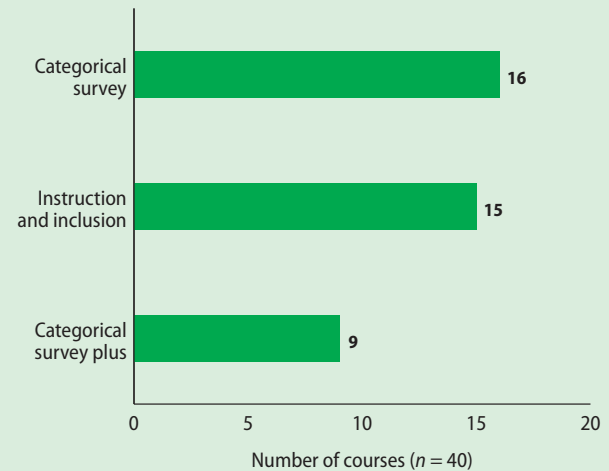
This course is designed to provide the student with an overview of the identification, classification, eligibility, and the unique characteristics of individuals with disabilities who require accommodations and adaptations throughout their life cycle. The course will focus on basic instructional strategies used to teach these individuals. The course includes an analysis of individuals across classification categories as well as an in depth review of all areas of exceptionalities per Georgia House Bill 671.

Of the 40 disability-focused courses required by the sample programs, categorical survey courses (16) and instruction and inclusion courses (15) are almost equally prevalent (figure 2).

Of the 30 programs that require at least one disability content course, the most common type of course required is the categorical survey course (10 programs), followed by the categorical survey plus course (6 programs), and the instruction and inclusion course (5 programs; figure 3). In addition, nine programs require some combination of the three types of courses—with instruction

FIGURE 2

Number of each type of required disability-focused course in elementary education teacher preparation program sample, 2007



Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

and inclusion courses most frequently required in combination with another disability-focused course.

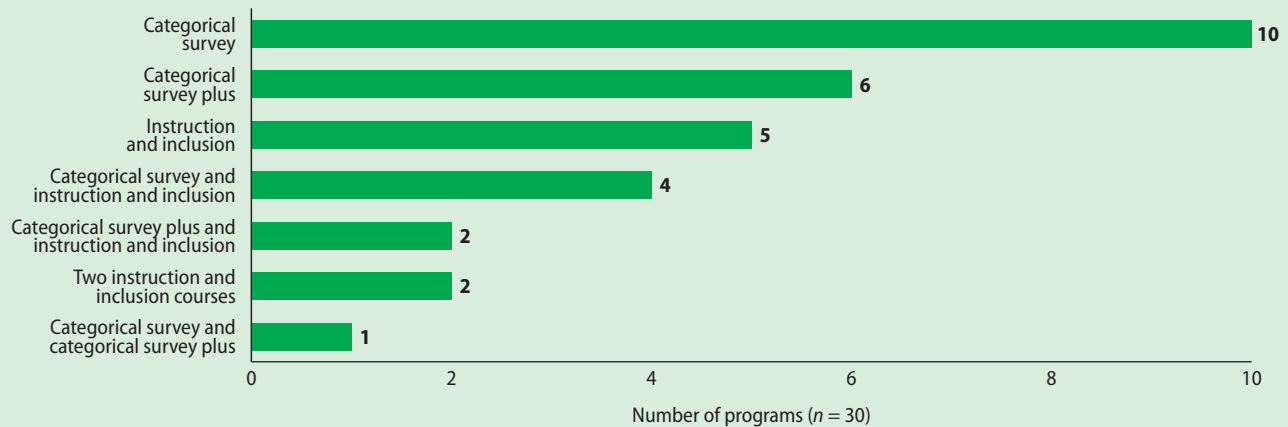
The most common content in these courses are characteristics of exceptional students, field experience, instruction (including differentiated instruction), law and legal issues, the general education setting, and categories of disabilities (figure 4). Collaboration is mentioned only in the descriptions of inclusion and instruction courses, not in descriptions of the other types of disability-focused courses.

Distribution of disability-focused courses. Although both categorical survey and instruction and inclusion courses appear in programs in each of the six Southeast Region states, instruction and inclusion courses are most common in North Carolina (7 of the 9 programs reviewed). North Carolina programs also most consistently require more than one course relating to students with disabilities (5 of the 9 programs). Of the 10 small programs in the sample, only 1 requires more than one disability-focused course, and 7 require only a basic categorical survey course.

FIGURE 3

Number of elementary education teacher preparation programs in sample requiring each type and combination of types of disability-focused courses, 2007

Types of courses or combinations of courses

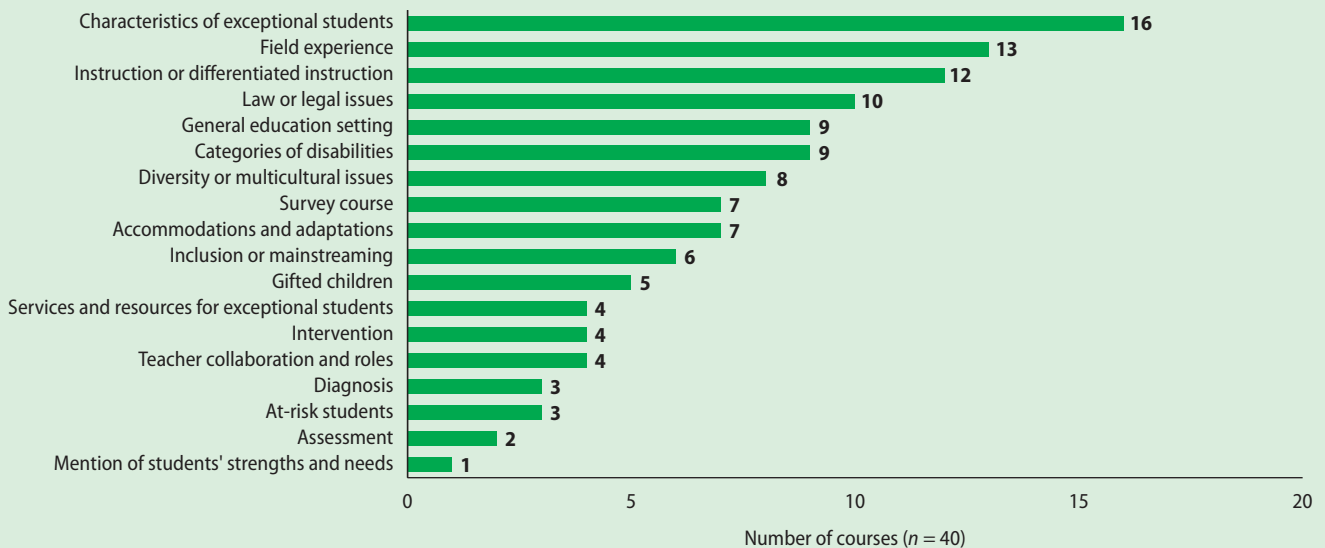


Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

FIGURE 4

Common content in required core disability course in elementary education teacher preparation programs in sample, 2007

Types of courses or combinations of courses



Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

Twenty-three programs across the six states included in this study require one of the two types of categorical survey courses, which are mutually exclusive in program requirements with one exception.⁹ When these courses are required, they are frequently the sole required disability-focused

course—in 10 of the 16 times that categorical survey courses are required and 6 of the 9 times that categorical survey plus courses are required, each is the sole disability-focused course. In contrast, the inclusion and instruction courses are the sole disability-focused course in only 5 of the 15 times

they are required. This type of course is more likely to be required in combination with another disability-focused course (10 of 15 times). The following are examples of how required disability-focused courses are grouped within individual programs:

- “Meeting the Needs of Diverse Learners” (type 3) and “Creating Learning Environments” (type 2).
- “Introduction to Exceptional Children” (type 1) and “The Inclusive Classroom” (type 2).
- “Introduction to Exceptional Children” (type 1), “Characteristics of Students with Mild Disabilities” (type 1), and “Educational Interventions for Students with Mild Disabilities” (type 2).

Also examined was the departmental location of the core disability courses, in particular whether courses are taught in the general elementary or special education departments for the 22 colleges and universities that have both. In total, these 22 institutions require 25 disability-focused courses. Slightly more (15 of 25) are taught in the special education department than in the elementary education department (10 of 25).¹⁰ Sometimes programs require one course that is housed in the elementary education department and another that is in the special education department (4 of the 22 colleges and universities).

Key informants from two of the six programs explained that graduates had provided feedback about wanting more content and experience related to inclusion. Faculty in an Alabama institution responded by creating the course “The Inclusive Classroom,” an addition to the required “Introduction to the Exceptional Child” course.

In sum, nearly all the programs in the sample (86 percent) for which there were no missing data require at least one disability-focused content course, more than the 61 percent found by Chang, Early, and Winton (2005) in their study of early childhood programs. But only 26 percent of

programs in the sample required more than one such course, whereas 43 percent did so in the Chang, Early, and Winton study.

The content of the required disability courses examined was in line with the two types identified by Jones and Messenheimer-Young (1989)—that emphasizing characteristics of exceptional children (exceptionalities) and that emphasizing accommodations and instructional strategies (mainstreaming). A third category blends these two types. Consistent with Jones and Messenheimer-Young, the programs reviewed more frequently require a course emphasizing characteristics of exceptional children than a course emphasizing accommodations and instructional strategies.

Nearly all the programs in the sample (86 percent) for which there were no missing data require at least one disability-focused content course, but only 26 percent of programs in the sample required more than one such course

Embedding disability content in other required courses

Another strategy for integrating disability content into teacher preparation programs is embedding content into other required courses—what Lombardi and Hunka (2001) characterize as the “strand approach.” Two studies of this approach (Lombardi and Hunka 2001; Brigham 1993) use small self-reporting surveys (with 72 and 15 respondents) with teacher candidates at one university program. Both studies find that some candidates and faculty preferred disability-focused courses rather than relying exclusively on the strand approach. The authors conclude that requiring a disability-focused course in conjunction with embedding disability content into other required courses may provide more systematic exposure to the needed content than does either approach alone.

This study examined required reading, math, multicultural and diversity, methods, and evaluation and assessment courses to determine whether they incorporated disability content. The content

of course descriptions was analyzed for references to any disability-related terms in the 35 of the 36 programs with available data. In cases of multiple required courses in an area, the most basic one in the sequence was selected.

Reading methods courses. All 35 of the sample programs require at least one reading course. Slightly more than a third (13) incorporate disability content into the course. The majority of this material covers early detection and diagnosis of reading problems, remediation, and use of various teaching strategies to address the individual needs of diverse learners. In two programs the required reading courses include objectives on adapting and planning instruction for all learners in ways that are highly compatible with Response to Intervention. For example, in one of these reading courses teacher candidates are expected to:

Be responsive to the needs of diverse learners by planning appropriate instruction based on cultural, social, physical, and cognitive differences; and be knowledgeable and able to apply the best practices in literacy across the curriculum to meet the needs of all ability levels of learners.

Less than a sixth of required math courses (6) show evidence of incorporating disability—less than half the number for required reading courses

Math methods courses. All 35 programs in the sample require at least one math course. Less than a sixth of required math courses (6) show evidence of incorporating disability—less than half the number for required reading courses. Although required math courses do not commonly appear to be

embedded with disability-focused content, the six that do focus strongly on inclusion, specifically on modifying instruction and monitoring progress to meet the needs of all learners. Several are also embedded with diversity considerations and fieldwork experience to modify lessons to meet individual needs, as in the following course description:

Teaching strategies appropriate to children with learning difficulties are described.

Individual assessment and analysis of a particular child’s mathematical problems, including teaching to this analysis are developed in case study form. Current research on teaching mathematics to children with special needs is examined. Knowledge of teaching strategies and the assessment/correction process will be applied during field experience.

Although the course described above does not mention Response to Intervention, much of its content is compatible with that approach—specifically, how to gather information about the student, use formal and informal assessment tools, identify resource materials for remedial instruction, and evaluate the effectiveness of the intervention. But whether it is necessary to explicitly connect these practices and Response to Intervention for teacher candidates to effectively prepare them is an open question.

Multicultural and diversity courses. Nearly three-quarters of programs (26 of 35) require a multicultural or diversity course. Ten show evidence of embedded disability content. Roughly half include disability as part of a compilation of categories of diversity, including culture, ethnicity, race, social class, language, and gender. In contrast, other multicultural courses focus on inclusion:

A specific focus will be placed on inclusive classrooms, managing individuals with disabilities in general education settings, and making adaptations and/or accommodations in order to keep individuals with disabilities in the general education setting.

General methods courses. Kozleski, Pugach, and Yinger (2002) argue that requiring a general methods course ensures that teacher candidates are familiar with a range of instructional strategies to accommodate students with and without disabilities in the general education setting. Of the 35 programs in the sample, 22 require a general methods course, including “Student Teaching Methodology Seminar,” “Methods of Conceptual Teaching,” and “Classroom Management, School

Safety, Ethics, Law, and Elementary Methods.” Although 22 of the sample programs require a general methods course, only 5 incorporated disability-focused content and then typically in terms of standards’ requirements for diverse students or classrooms, as illustrated by this excerpt from a course description:

Explores the current knowledge of best practices of a variety of teaching and management strategies and methods deemed appropriate for a diverse elementary classroom setting including [English for speakers of other languages] students and other exceptionalities.

Assessment and evaluation courses. Assessment is increasingly important in elementary education because of state and federal accountability and the expansion of such initiatives as pre-referral processes and Response to Intervention. The National Joint Committee on Learning Disabilities (1997) includes assessment and evaluation among the core competencies necessary for general education teachers of students with learning disabilities, recommending that teachers be familiar with commonly used measures, able to evaluate student performance regularly to adjust instruction, and know how to use formal and informal assessment techniques.

Most programs in the sample (30 of 35) require at least one assessment or evaluation course, such as “Instructional Design and Evaluation” and “Classroom Assessment.” Ten programs require assessment courses specifically on reading or literacy, and for slightly more than half of these, that is the only required assessment class. Four of the five syllabi reviewed for these assessment courses address individual differences, diverse learners, or students with disabilities, such as the following:¹¹

Provide experiences designed to enhance skills in educational testing and measurement, diversity, cooperative learning and collaborative skills, technology skills and the student’s development of reflective techniques

and a positive disposition recognizing individual differences among students, and the growing diversity within the classrooms of today’s schools.

One required assessment course embeds legal requirements for assessing special needs students, and another emphasizes formal and informal diagnostic assessments. This course, part of a North Carolina program, requires teacher candidates to write an essay describing their use of assessment data to modify instruction or to provide supplemental support for students.

Curricular coherence through embedding disability content. Blanton and Pugach (2007) define *curricular coherence* as a connected curriculum in which each course and program experience aligns with and builds on prior work. While the data collected from web sites are not conclusive as to whether programs embedding disability content into core courses are intentionally trying to achieve curricular coherence, key informant interviews suggest that this might be the case. Key informants from three of the six programs indicated that disability content is incorporated throughout the curriculum as a “strand” or “thread.” As one explained:

It’s built into the coursework . . . all of our elementary education content courses always incorporate working with students with disabilities. For example, our Elementary Mathematics Methods class would discuss how to adapt instruction for students with special needs. We choose textbooks that would also do that.

These key informants also indicated that when curriculum and courses are developed through a collaborative teaming process, programs are better positioned to embed disability content into required courses. For example, one key informant

Most programs in the sample (30 of 35) require at least one assessment or evaluation course; ten programs require assessment courses specifically on reading or literacy, and for slightly more than half of these, that is the only required assessment class

described the program design process at her institution in Georgia as involving work groups that develop and continually refine courses:

We always have had work groups related to courses, in which people who are teaching the same course work together to develop a syllabus and key assessments. . . . They also work within a strand. So, if you're teaching a course in the assessment strand, they meet periodically with people who are teaching courses that precede or succeed the course to make sure that everyone understands what the objectives are of each course and make sure that they are tightly connected.

Almost two-thirds of programs in the sample (22 of 35) require fieldwork experience that incorporates disability content; more than half of these (13 of 22) are field components of disability-focused courses

Similarly, a key informant in Mississippi explained that his institution relies on a core team of five, including faculty and practitioners, who work to incorporate disability content throughout the program in both disability-focused and embedded coursework, “We don’t develop courses one course at a time, but it’s a part of the whole program.” In addition,

key informants from two of six programs reported that general and special education faculty review syllabi and provide input. One, representing a program in North Carolina, explained how this review is guided by a shared vision across departments:

The special education course is taught by special education faculty. A couple of representatives from our program area gave feedback. Special education took the lead but we all had input. And the class is built on the notion that all students can learn. The underlying idea is that candidates need the skills to help that to happen. It’s our philosophical basis.

In sum, the strand approach, as characterized by Lombardi and Hunka (2001), was found in 13 teacher preparation programs that embed disability content in at least one required course other

than a disability-focused course. Disability content is most commonly embedded in multicultural (38 percent) and reading (37 percent) courses. The strand approach is most often used in conjunction with one or more required core disability courses rather than in place of them. This is consistent with Lombardi and Hunka (2001), who suggest that if a specific disability course is required, it should support rather than replace a special education course.

Incorporating disability content into field experiences

Providing teacher candidates the opportunity to practice their skills in clinical settings is central to their development as professionals, and experience with different student populations has been argued to be critical to preparing future teachers for success in multiability schools (Kozleski, Pugach, and Yinger 2002). But there seems to be little research on the topic. In a national survey of early childhood teacher preparation programs Chang, Early, and Winton (2005) include questions about required practicum experiences related to working with students with disabilities; they find that nearly three-quarters (73 percent) of bachelor’s degree programs required field experiences with students with disabilities.

This study looked for evidence of field placements involving working with students with disabilities in information about the teacher preparation program and in course descriptions. Overall, almost two-thirds of programs in the sample (22 of 35) require fieldwork experience that incorporates disability content. More than half of these (13 of 22) are field components of disability-focused courses. Fieldwork is also incorporated into other content courses, in particular reading courses, which frequently include both field components and disability content (table 3).

The data on the settings of these field experiences are limited, specifically on whether they are in inclusive classrooms or pull-out special education settings.¹² A few web site descriptions of student teaching, such as the following, make it clear that

TABLE 3

Elementary education teacher preparation programs in sample incorporating disability-related field experience in core courses, 2007

Subject	Number (subset embedding disability content)
Reading	14 (6)
Math	10 (4)
Multicultural and diversity	12 (5)
Methods	5 (1)

Note: Data on reading, math, multicultural and diversity, and methods were missing for one program, so the analysis in this section covers 35 of the 36 programs.

Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

teacher candidates will observe and interact with students with disabilities, but it is less clear how much this interaction parallels actual inclusive teaching responsibilities:

Extensive field experiences and clinical practices are designed to encourage candidates to interact with exceptional students, students from different ethnic, racial, gender, socioeconomic, language, and religious groups. These experiences help candidates confront issues of diversity that affect teaching and student learning and develop strategies for improving student learning and candidates' effectiveness as teachers.

Key informants from four of six programs indicated that teacher candidates work with students with disabilities. However, inclusion experiences are only ensured in one program in Alabama that requires nine days of field experience during which candidates teach lessons demonstrating that they have included all students.

Consistent with Miller and Stayton (2006), the study found little evidence in program descriptions or interviews of coteaching or of placing general and special education teacher candidates in the same schools for these field experiences. One exception is a program in North Carolina that

requires general and special education candidates to take the same practicum course while student teaching. Although coteaching and collaboration between general and special education candidates may occur more often than is evident in program descriptions, lack of evidence is notable given their emphasis in teacher preparation program standards. The National Council for Accreditation of Teacher Education standards, for example, require teacher preparation programs to offer field and clinical experiences for candidates to develop and demonstrate their capacity to help all students learn, including students with exceptionalities, as well as to work collaboratively with other candidates and specialists. The Interstate Teacher Assessment and Support Consortium (2001) standards also emphasize collaboration, particularly between general and special education teachers who share instructional responsibility for students with disabilities (see appendix B for an excerpted list of these standards).

Featured here by name with permission because it is unique in the sample, North Georgia College and State University (NGCSU) has a fully merged general and special elementary education program and requires substantial fieldwork. The key informants interviewed about this program linked the program's effectiveness to its strong fieldwork emphasis. Teacher candidates in the merged NGCSU program spend roughly 900 hours in class. Field placements begin in the junior year, with a three-hour morning placement four days a week and rotations every six weeks into different grade levels in the same school. These rotations continue the first semester of candidates' senior year but in a different school. This is followed by full-time student teaching in either general or special education during the last semester. One school in which candidates work is highly diverse, and placements include both general and special education classrooms. Candidates' field experience in inclusion classrooms depends, however, on how much inclusion occurs in the cooperating schools. Overall, program leaders at NGCSU have found that this arrangement positively affects partner schools' commitment to training teacher

Like embedding disability content into core courses, requiring fieldwork is a way to incorporate disability content into an otherwise full program schedule

candidates: “In an elementary school if you know you’re going to have a person for a year, you invest more time in them.”

Like embedding disability content into core courses, requiring fieldwork is a way to incorporate disability content into an otherwise full program schedule. One key informant explained that since a cap on program hours prevented her program from adding more special education coursework, they embedded the content into field experiences instead:

Working with students with disabilities is integrated through the field experiences. We try to provide natural environments: how children are placed in the classroom, adaptation of lesson plans but still maintaining high expectations. . . . We’re limited a bit by a recent cap on our hours, so we added more to the field experience—that’s where the students begin to deal with the realities of inclusion.

In sum, almost two-thirds (63 percent) of the sample programs require fieldwork experiences that incorporate disability content. This is consistent with the Chang, Early, and Winton (2005) finding that nearly three-quarters of the early childhood bachelor’s degree programs in their sample required practical work with students with disabilities. Most of the disability-related field experiences in the current sample are field components of disability-focused courses. Fieldwork is also incorporated into other content courses, particularly reading courses, which frequently include field components and disability content. Except for one program, there was little evidence of placing general and special education teacher candidates in the same schools for these field experiences.

Aligning mission and coursework requirements

As mentioned, program coherence has been advocated as a way to improve teacher preparation

by forging a common vision and stronger links among courses and between courses and field experiences (Darling-Hammond et al. 2005). As a way of operationalizing program coherence, Chang, Early, and Winton (2005) investigate congruence between the inclusion of disability content in early childhood teacher preparation program mission statements and required disability-focused courses and fieldwork requirements. While a slightly higher percentage of bachelor’s programs with disability content in their missions required disability-focused courses (62.6 percent) than those without disability content in their missions (57.3 percent), the difference was not statistically significant. Chang, Early, and Winton also find that programs with disability content in their missions were more likely to require fieldwork with students with disabilities (79.8 percent) than those without this mission (62.9 percent), and this difference was statistically significant.

More than half the institutions or programs in the sample (21 of 36) incorporate disability content in their mission. Since these mission statements are intended to guide program development, alignment was expected between this priority and program requirements for disability content. Chang, Early, and Winton (2005) find that early childhood teacher preparation programs that referenced students with disabilities in their mission have slightly more disability-related coursework and significantly more disability fieldwork than programs without such reference.

This study examined these issues, as well as the extent of alignment between missions and disability content embedded in other core courses. The 20 programs in the sample that reference students with disabilities in their missions (1 program had missing data that could not be obtained through follow-up contact) were compared with the 15 that do not.

Seventeen of the 20 programs with disability content in their missions require one or more disability-focused course, and 13 of 15 programs that do not include disability content in their

mission do—about the same proportion (table 4). The average number of required disability-focused courses is roughly equivalent in the two groups.

Reading courses were used to gauge the extent of alignment between mission statements and disability content embedded in other core courses because all programs in the sample require a reading course and because reading courses most frequently incorporate disability content. Of programs that embed disability content in required reading courses, 10 of 20 (50 percent) are at colleges and universities that have disability content in their missions, and 3 of 15 (20 percent) are at institutions without this priority.¹³ A significance test (chi-square) found this difference to be not statistically significant ($p = .089$). For programs that both require core disability courses and embed disability content in other courses, figure 5 compares the number of programs with and without disability content in the missions. Among the programs with disability content in their mission, the findings also indicate that requiring multiple disability courses and embedding disability content co-occur: six of the seven colleges and universities that require more than one disability course also embed disability content into reading coursework.

The extent of alignment between disability content in the program mission and required fieldwork experience with students with disabilities was also examined. Chang, Early, and Winton

(2005) find congruence between disability content in missions and related field experiences, with elementary education programs that had disability content in their missions significantly more likely to require a practicum in the area than those that did not. The findings also show congruence between the two strategies of including disability content in missions and requiring fieldwork. For the sample, colleges and universities with a disability-related mission are more likely to require related fieldwork (86 percent) than programs without such a mission (27 percent), a statistically significant difference between the two groups ($p = .000$).

In sum, there was no difference in the presence or amount of disability-focused coursework between colleges and universities that did and those that did not have disability content in their mission statement. Similarly, Chang, Early, and Winton (2005) find no significant difference in disability-focused coursework between early childhood teacher preparation programs that did and did not reference students with disabilities

TABLE 4

Alignment of mission and courses in elementary education teacher preparation programs in sample, 2007

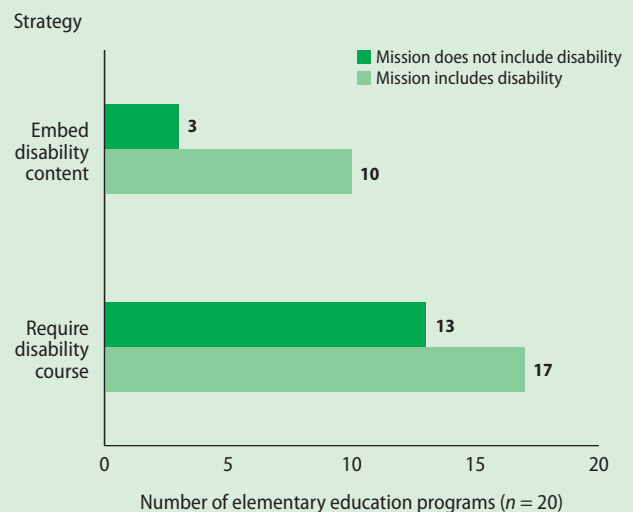
Mission statement incorporates disability?	Average number of required disability courses
Yes ($n = 20$)	1.25 (range: 0–3)
No ($n = 15$)	1.00 (range: 0–2)

Note: The difference in the average number of required disability courses between groups was not significant ($p = .297$) according to an independent sample t-test.

Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

FIGURE 5

Comparison of embedded disability and required disability course strategies used by elementary education teacher preparation programs in sample incorporating and not incorporating disability content in their missions, 2007



Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

There was no difference in the presence or amount of disability-focused coursework between colleges and universities that did and those that did not have disability content in their mission statement

in their mission. But among programs with disability content in their mission the strategies of requiring multiple disability courses and embedding disability content tend to co-occur—six of the seven institutions that require more than one disability course also embed disability content in reading coursework.

The findings on alignment of mission and fieldwork are also consistent with that of Chang, Early, and Winton (2005), who find that programs that have disability content in their missions have significantly more disability fieldwork than programs that do not. This study found a significant difference between the groups—programs with a disability-focused mission are more likely to require related fieldwork (86 percent) than programs without such a mission (27 percent).

Sharing course experiences between general and special education

While some argue that team teaching between general and special educators is important in preparing educators to work with all students, including those with disabilities (Arthaud et al. 2007; Strawderman and Lindsey 1995), there has been little investigation of the prevalence and impact of team teaching and shared courses between general and special education. An exception is Nowacek and Blanton (1996), who compare a team-taught collaborative methods course involving general and special education candidates with a course covering similar content but without team teaching or a special focus on collaboration skills. Their sample of teacher candidates was small, and there were no significant differences between the two groups in attitudes toward or knowledge of working with students with disabilities. But the researchers suggest that the timing of the measurement of outcomes (at the conclusion of the course rather than later in the candidates' career) might have accounted for the lack of differences.

The influence of timing on the measured impact of shared teaching and learning across general and special education is given some credence in results reported by Van Laarhoven et al. (2006). They find that two years after graduation candidates self-reported that opportunity to collaborate across general and special education had been one of the most valuable aspects of the program. The researchers argue that candidates' perceptions of the influence of coteaching and shared coursework might be measurable only after they have been working in schools where collaboration is expected.

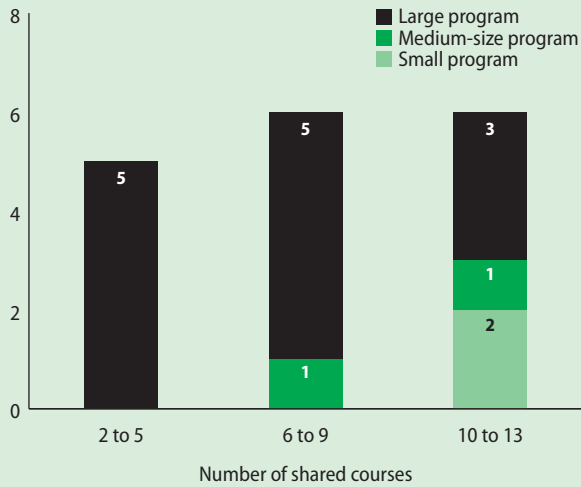
Despite the paucity of research, Blanton and Pugach (2007) contend that requiring the same courses of general and special educators is potentially a way to avoid the disjunction that new teachers can experience when there is little collaboration in their preparation program but substantial expectation of it in schools, where general and special educators are increasingly expected to work effectively together.

For the 22 colleges and universities in the sample with undergraduate special education programs, 17 (77 percent) had no missing data on course requirements for both programs.¹⁴ The professional courses required for general and special education candidates were compared by examining course titles. Programs shared as few as 2 and as many as 13 courses, with 8 the median. And although small institutions, with fewer faculty members, were expected to have relatively more shared courses than larger institutions, this was not entirely the case. Small institutions do share many courses across general and special education programs, but some medium-size and large institutions also do (figure 6).

Two researchers independently examined the 132 course titles and then together determined 10 categories of shared courses into which they sorted the courses (figure 7). (See appendix C for a list of shared courses.) The most commonly shared courses are content courses such as math and reading (43 of 132 courses), followed by general

FIGURE 6
Number of shared general and special education courses by program size and number of elementary education teacher preparation programs in sample, 2007

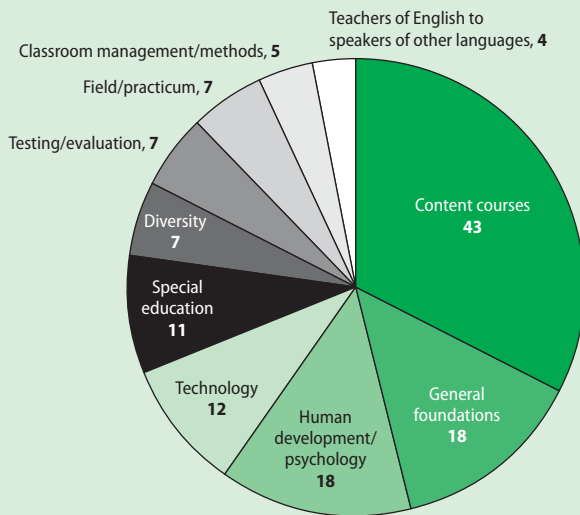
Number of programs (n = 17)



Note: The sample is the 17 of the 22 programs for which there were no missing data.

Source: Authors' analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

FIGURE 7
Distribution of number and types of shared courses in elementary education teacher preparation programs in sample, 2007



Note: The sample consists of 132 course titles.

Source: Author's analysis based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

foundations (18 of 132 courses) and human development (18 of 132 courses). Other content area courses and classroom management courses are rarely shared.

Of the key informants interviewed, three represented colleges or universities with separate general and special education degree programs. Each program takes a distinct approach to overlapping coursework. In one Georgia institution the five-course overlap between programs was attributed by the key informant to common requirements in math and reading rather than to the program's design. For an institution in South Carolina that shares 12 courses between general and special education programs, the key informant contended that the overlap makes both programs stronger, describing the approach as "inclusive" "bring[ing] the majors together." Yet she acknowledged that the sharing occurs not just because of philosophy but also because of the need to derive the most out of scarce resources. In an institution in North Carolina with eight shared courses, the key informant depicted the resulting diversity of enrolled candidates as a resource for looking at things from different perspectives. This North Carolina institution has tried to avoid isolating the programs and operates under a shared belief that bringing candidates from different majors together makes for a richer learning environment. Until recently, the general and special education programs were in the same department, and faculty were "always interacting," perhaps shaping their organizational belief.

Although data are limited, the study also looked at the focus of courses that are not shared in the five colleges and universities that have the highest number of common courses between special and general education programs. These nonshared courses represent roughly half the required professional sequence. Analysis of the course titles showed that general education nonshared courses are content-area courses, especially reading and math, and to a lesser extent art, music, science, and social studies. Special education nonshared courses vary, but tend to include curriculum,

A comprehensive approach to preparing general educators to work with students with disabilities is creating teacher preparation programs that enable candidates to earn both general and special education licenses

planning, and methods courses. No general and special education programs in these five institutions share a course pertaining to professional collaboration or multiculturalism or diversity.

In sum, there was considerable evidence of shared courses (13 of 18 programs), and several key informants considered that an important program design feature.

Blanton and Pugach (2007) suggest that shared courses can help prepare teacher candidates for the collaboration expected between general and special educators in schools. This study identified another possible reason: in one case shared courses were not part of the program's design but a result of limited resources and common requirements.

Practicing collaborative program design

An alternative to the individual approaches reviewed so far is the systematic combining of general and special education training throughout a teacher preparation program. What has been referred to as *collaborative teacher preparation* (Blanton and Pugach 2007; Blanton et al. 1997) can include a range of strategies, as Voltz (2003) finds in a follow-up interview study of 13 representatives of 63 collaborative programs included in a national survey study. Although the sample was small and represented only those willing to participate, Voltz finds that programs used practices such as coteaching in the same classroom, joint planning, and guest lecturing to infuse disability content throughout the program, rather than relying solely on a disability-focused course.

But collaborative programs are not common. Two survey studies found that roughly half of teacher preparation programs across the country address disability content through specific courses, while only a small number of colleges and universities report collaborating more systematically across

general and special education (Miller and Stayton 1998; Voltz 2003). In addition, Pugach (2005) notes that few studies contrast different types of collaborative teacher preparation programs—such as programs that offer a combination of dedicated disability-focused coursework and content embedded into other courses and fully integrated programs that use the strand approach and require no dedicated special education coursework. Studies focus instead on how particular collaborative programs were developed (Lesar et al. 1997; Dice et al. 1996; Jenkins, Paleman, and Black 2002) or survey their prevalence and characteristics (Miller and Stayton 1998; Voltz 2003).

To better understand collaborative programs and bring coherence to future investigations, Blanton and Pugach (2007) created a three-part conceptual framework for characterizing programs:

- *Discrete.* There is little if any relationship between programs that prepare general and special education teachers. There might be coordination in the provision of individual courses, but not at the program level.
- *Integrated.* General and special education faculty work collaboratively at the program level to align multiple segments of their programs, such as classes, field experiences, and performance assessments. Coordination extends beyond the provision of individual courses. Candidates earn a general education license based on a philosophy of inclusion; earning a special education license is optional.
- *Merged.* There is a single curriculum with complete integration of courses and field experiences that addresses the needs of students with disabilities as a routine part of the program. All candidates earn both a general and special education license.

A comprehensive approach to preparing general educators to work with students with disabilities is creating teacher preparation programs that enable candidates to earn both general and special

education licenses. Of the 36 colleges and universities in the sample, 4 offer programs that can result in both an elementary and special education license—1 in Florida, 2 in Georgia, and 1 in Mississippi.

At the two combined programs in Georgia key informants explained that state teacher licensing and preparation requirements have been influential (see appendix D for a description of each state's licensing options). Georgia has made structural changes in its licensing requirements and has created a dual P–5 license in early childhood and special education with an emphasis on mild to moderate disabilities. As in many states, Georgia's regular special education license covers PreK–12. The narrowed grade span of the dual license makes it more feasible for programs to incorporate sufficient special education content. Concurrent with Georgia's new licensing options, one key informant indicated that state officials in Georgia are encouraging colleges and universities to create programs that result in two licenses.

The four colleges and universities in the sample that offer a combined general and special education preparation program offer distinct alternatives to candidates. For example, in one Georgia institution and the one Florida institution the combined general and special education program is the only route to certification in special education at the undergraduate level, but the institutions also offer a program for elementary education certification only. There were considerably common coursework requirements between the combined general and special education program and the separate elementary program in the two programs. But the Florida program required equal numbers of general and special education courses, while the Georgia program required fewer special education courses and more general education courses that focus on strategies for inclusive classrooms. Teacher candidates in the separate elementary education degree program at this Georgia institution take these inclusion-oriented courses even though they are not in the combined degree program.

The second Georgia institution that offers a program that combines general and special education is unique in that it is the only available path to certification in either elementary or special education. It represents, in Blanton and Pugach's (2007) typology, a fully merged program in overall program design. The dual major at North Georgia College and State University (named with permission) originated from needs identified for both general and special education teachers and from schools in the region. A program leader explained, "We were preparing early childhood teachers to go into schools with large numbers of children at risk, and we were finding that the traditional type of early childhood curriculum wasn't sufficient." In addition, program leaders wanted to fully prepare teacher candidates for the complex reality of today's schools to ensure that they would remain teaching in a state with significant teacher shortages. Thus far, dual major graduates have been evenly split between those who take general and those who take special education positions.

At North Georgia College and State University planning for the program was bolstered by the high number of pre-existing overlapping courses, but planning still took one year. The effort was led by 10 general and special education faculty who were given course releases to focus on the task and who met for an hour and a half each week for the entire year. Program leaders prioritize willingness to collaborate when hiring new faculty members—one of the core strategies for promoting collaboration identified by Blanton and Pugach (2007). Part of the development process was requesting a dispensation from the state—which licenses special education PreK–12—to acknowledge a P–5 special education specialization. The recently restructured licensing option in Georgia for special and early education P–5 is consistent with the dual major's goal of training "elementary school specialists." The program has also benefited from the state's new teacher

Four programs reviewed in this study have developed degree programs that can result in licenses in both elementary and special education

certificate assessment expressly designed for dual programs. Candidates previously took two tests (one in general and one in special education).

The program is now increasing its multicultural programming and supporting a learning community of freshmen and sophomores who are interested in the dual major as well as Spanish language training. One program leader predicted: “We’re going to have both the diversity piece as well as our special education piece and the whole

big picture of the diversity issue will come into the project.” An outstanding challenge, however, is incorporating an English language learner student focus, but program space makes this difficult to accommodate. Box 2 shows the key design features and challenges associated with developing the North Georgia College and State University dual degree program.

In sum, four programs reviewed in this study have developed degree programs that can result

BOX 2

Design features and challenges of the North Georgia College and State University dual degree program

Key design features of the North Georgia College and State University dual degree program:

- Continual revision and efforts to further develop and improve.
- Weekly faculty meetings and work groups that develop particular strands of curriculum and connected courses.
- A flat hierarchy with program coordinators instead of department heads.
- Several rounds of aligning program components (such as courses, assessment instruments) with National Council for Accreditation of Teacher Education, Interstate New Teacher Assessment and Support Consortium, Council for Exceptional Children, and state professional standards, as well as a metacognitive model developed by the faculty.

- Increased credit hours (from 120 to 132), and a fifth semester (taken in the summer between junior and senior years).
- Curriculum linked (excluding the summer session) through five course strands: foundations and theory, assessment, classroom and behavioral management, methods in curriculum and professionalism, and leadership.
- Balanced coursework between general and special education, with effort to integrate and embed as much as possible.
- Range of disabilities covered, but focus is on mild to moderate intellectual disabilities, learning disabilities, and emotional and behavioral disorders.
- Substantial content area focuses in courses, specifically in reading, math, and science (equivalent to endorsement levels in each).
- Extensive fieldwork component.
- Introductory courses redesigned to include more content related

to multiculturalism and working with children at risk.

Challenges have included:

- Shifting from a culture of faculty autonomy to one of faculty collaboration.
- Working with the state to align the program with candidate licensing and testing requirements.
- Communicating with school districts what dually certified means and how to tell whether an applicant is dually certified.
- Handling greater workload due to faculty’s increased commitment to collaborative course development and field placements.
- For non-Research I universities, competing for federal personnel preparation grants to support the collaborative program development and operations.
- Creating an assessment instrument and common language for observing teacher candidates across general and special education fieldwork settings.

in licenses in both elementary and special education. Consistent with published descriptions of these collaborative programs (Blanton et al. 1997; Blanton and Pugach 2007), these four varied in design and in whether they were the only elementary and special education degree option or one of several. One program in the sample met the criterion of a fully merged general and special education preparation program (Blanton and Pugach 2007).

PUTTING IT ALL TOGETHER

Programs generally do not rely on just one strategy to integrate disability content but use a combination of strategies. One key informant, for example, explained that disability content is integrated into her program in three main ways: by requiring the core course “Meeting Needs of Special Students in Elementary Schools,” by integrating disability content into field experiences, and by ensuring that general and special education candidates take numerous courses together. To show how programs use strategies in combination, a composite measure of the extent of integration was developed

for this study (see appendix A). Table 5 lists the factors included in the measure.

Programs’ composite scores on the extent of integration range from 0 to 9, with an average of 3.17. Among states, Georgia and North Carolina have the highest averages (4.5). Larger programs have a mean extent of integration composite score of 3.3, and smaller programs a mean score of 2.7 (the difference is not statistically significant; $p = .634$). The patterns of scores are similar for the distribution of extent of integration composite scores for elementary education teacher programs in colleges and universities with and without special education departments (figure 8).

The five highest scoring programs (with a composite score of 6 or higher) were examined to see whether the programs with substantial disability content integration had anything in common. Three programs are in colleges and universities with a special education department, one is a fully merged general and special education program, and one is in an institution without a special education department. No one strategy predominates among these top-scoring programs. One

TABLE 5
Composite measure of the extent of integration in teacher preparation programs

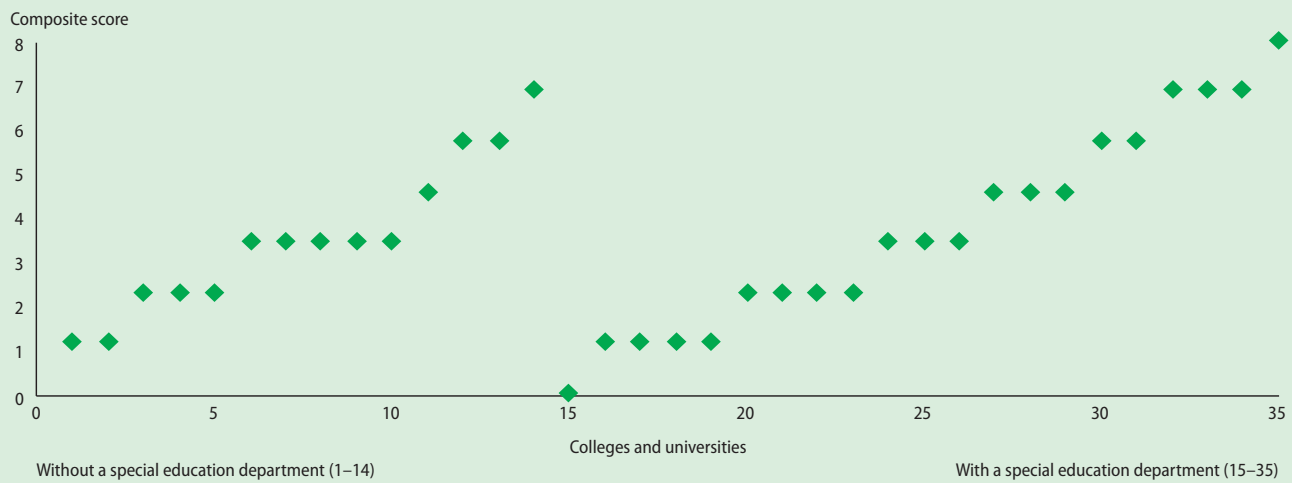
Category	Criterion	Number of points
Mission statements	Incorporating disability content into the college or university mission	0–1
	Incorporating disability content into the elementary education department mission	0–1
Disability-focused courses	Each required course	0–3
Embedded disability-related courses	Incorporating disability content in reading course	0–1
	Incorporating disability content in math course	0–1
Field experience	Requiring field experience in the disability-focused course	0–1
	Requiring fieldwork relating to students with disabilities other than in core course	0–1
Composite score, maximum		9
Average composite score		3.17

Note: The study had no validated means to determine the relative weight to give each component of the scale, especially for the values given to embedded disability content in reading and math courses relative to those given to disability-focused courses. Giving one point for each required disability-focused course seemed justified, however. Giving one point for each reading and math course (and others) with embedded disability content would have inflated the overall value of the strand approach over the requirement of having one or more disability-focused courses. Future investigation to develop and validate such scales would be helpful.

Source: Authors’ compilation based on data from course catalogues, syllabi, and related program documents obtained from institution web sites.

FIGURE 8

Composite measure of integration scores by presence of special education department for elementary education teacher preparation programs in sample, 2007



Source: Authors' analysis based on application of criteria; data from course catalogues, syllabi, and related program documents obtained from school web sites.

program graduates a small number of candidates and shares more than half its courses with the special education program, including a practicum. Another program requires multiple disability-focused courses and also embeds disability content into other required courses. Two programs require substantial shared courses with the special education program and are aligned under a common conceptual framework.

Key informants from all six programs indicated that the integration of disability content can be bolstered by regular interaction among faculty with general and special education expertise, whether in the same department or not. For

example, a key informant representing North Georgia College and State University who teaches required reading courses explained: “We meet and talk all the time, so . . . if I have a question in my content area reading class on how to address a certain area, with, say, language disability, I can run across the hall and say, ‘How do I handle this?’ or ‘What strategy should I use to help them understand?’” Yet interview findings indicate that the level of collaboration across general and special education varied even among programs with high scores on the extent of integration composite: one of the highest scoring programs has only intermittent and often obligatory collaboration across general and special education.