Reviewing Special Education Teacher Preparation Field Experience Placements, Activities, and Research

Do We Know the Difference Maker?

Sarah A. Nagro & Laurie U. deBettencourt

Preparing teachers to educate students with disabilities is complex. Special education teacher preparation programs are intended to equip candidates with the essential skills necessary for educating students with a wide range of learning and behavioral needs across various settings. Preparing special education teacher candidates to educate students with disabilities across various educational contexts requires more than simply teaching about evidence-based practices or directing special education teacher candidates to watch other effective teachers (Leko & Brownell, 2011). Leaders in the field recommend that teacher preparation programs include opportunities for candidates to practice meeting the needs of diverse learners through carefully crafted supervised experiences (e.g., Brownell, Ross, Colon, & McCallum, 2005).

Across many teacher preparation contexts, supervised field experiences are documented as the most important learning experiences within teacher preparation (Buck, Morsink, Griffin, Hines, & Lenk, 1992; Conderman, Morin, & Stephens, 2005; Connelly & Graham, 2009; Recchia & Puig, 2011). According to Phillion,

Sarah A. Nagro is an assistant professor in the College of Education and Human Development at George Mason University, Fairfax, Virginia. Laurie U. deBettencourt is a professor in the School of Education at Johns Hopkins University, Baltimore, Maryland. Email addresses: snagro@gmu.edu & deBetten@jhu.edu

Miller, and Lehman (2005), field experiences are the best vehicles to prepare future teachers for the complexity and diversity of the classroom. Supervised field experiences allow teacher candidates to apply the theories and strategies they learn to practical situations (Leko & Brownell, 2011). During such experiences, special education teacher candidates learn real-time problem-solving skills and gain confidence in instructing students with various disabilities (Ludlow, Gaylon-Keramidas, & Landers, 2007). During field experiences, teacher candidates actively engage in the profession and begin to view themselves as educators (Hixon & So, 2009), resulting in learning and development through application of knowledge in real classroom settings (Cook & Schirmer, 2006).

However, the teaching community lacks a clear universal method for defining a field experience (i.e., what are the defining characteristics) and which activities or components within a field experience must be included to best prepare teacher candidates for classroom realities (Sindelar, Brownell, & Billingsley, 2010). As a result, the discussions on field experiences are often a mix of apples and oranges, which makes them difficult to compare or measure. In fact, in some reports, researchers have described the literature base discussing field experiences as uninformative. For example, Cochran-Smith and Fries (2005) described the literature base as *incoherent*; McCall, McHatton, and Shealey (2014) described the literature on field experiences as *lacking coordination*; and Sindelar and colleagues (2010) described the literature as *thin*. For this literature review, we broadly defined *field experiences* as any teacher preparation activities within authentic school-based settings that integrate course work and require teacher candidates to work directly with students. One type of field experience in the literature is referred to as the *student teaching experience* or *internship*, where the teacher candidate takes on the role of a classroom teacher in a comprehensive manner, which is different from working with students in small groups or one on one once or twice a week. Another type of field experience, referred to as a practicum experience, is typically shorter than an internship in length and may take place prior to the more formal longer-in-length student teaching in the candidate's program of studies. While what defines a field experience may not be well documented in the literature, most teacher preparation faculty agree special education teacher preparation programs should include at least one field experience because it is a critical part of a teacher candidate's preparation (see Buck et al., 1992; Conderman et al., 2005; Connelly & Graham, 2009; Recchia & Puig, 2011).

Recently, researchers have attempted to review what is known about assessing special education teacher candidates' preparation. McCall and colleagues (2014) conducted a review of the research from 2000 to 2013 across three broad and overlapping aspects of special education teacher candidates' preparation: core knowledge, dispositions, and applied experiences. The third section of their review discussed assessment approaches, which focused on teacher candidates' application of their skills while working directly with children in field experiences. McCall and colleagues concluded that the literature base inadequately described the transfer of knowledge

to application. Although the review was broad reaching, their design was unable to capture details that may explain why field experiences are often considered the most important learning experience for teacher candidates (Buck et al., 1992; Conderman et al., 2005; Connelly & Graham, 2009; Recchia & Puig, 2011). There is a need for a clearer definition of what constitutes a field experience and a list of the components that make up such an experience. Once the parts are delineated, systematic documentation of a teacher candidate's growth during a field experience might explain specifically what components of the experience are most critical. Additionally, a clearer understanding of critical field experience components may provide guidance on how various special education teacher preparation programs can be structured and assessed to provide the most benefit to teacher candidates (Leko & Brownell, 2011).

There is a paucity of research on what constitutes an ideal special education field experience, and it is not clear which components or activities within a field experience impact a teacher's growth to the greatest extent. Reviewing past research will assist in categorizing the components typically included in field experiences and may assist in supporting why field experiences are considered the cornerstone of special education teacher preparation (Connelly & Graham, 2009). The purpose of this article is to review the existing body of literature on field experiences that include special education teacher candidates for two purposes: (a) to categorize components of field experiences and (b) to understand what types of questions can be answered regarding the effects of such components on special education teacher candidates. Specifically, the following questions guided our review: (a) What are common components of field experience placements? (b) What are the components of field experiences that are considered the most important? (c) What is known about the effects of the components of field experiences on special education teacher candidates based on the research design, data collection, and methods used?

Method

Keywords that served as search terms for this current review were similar to those used in an earlier review conducted by McCall and colleagues (2014). Academic Search Complete, Education Full Text, Education Journals, Education Source, Education Research Information Center (ERIC), JSTOR, PsycINFO, and Teacher's Reference Center were searched using multiple combinations of the following terms: *applied, experience, field, field-based, fieldwork, internship, practicum, preservice, special education, student teaching, teacher candidate,* and *teacher preparation*. Additionally, all issues from 2000 through 2014 of *Teacher Education and Special Education* (TESE), the journal of the Teacher Education Division of the Council for Exceptional Children, were hand searched, given the journal's aim and scope.

Through the TESE hand search, two pertinent literature reviews were identified. The first review, by Vernon-Dotson, Floyd, Dukes, and Darling (2014), focused on

reviewing course delivery methods within special education teacher preparation, and the second, by Billingsley and Scheuermann (2014), focused on the use of virtual technology to enhance special education teacher preparation. Neither review directly overlapped with the purpose of this review, but both potentially included studies that described or measured the effects of field experiences that included special education teacher candidates. Therefore an ancestral search of both reference lists was conducted. A total of 108 potential publications were identified using the aforementioned search methods. Peer-reviewed publications between 2000 and 2014 that discussed teacher preparation of special education candidates within the United States and that met the following criteria were included in this review:

- Publications that described or measured the impact of any type of field experience developed and facilitated as part of a teacher preparation program that included special education teacher candidates (within alternative or traditional programs) including full or half-day, early, initial, project driven, or formal field experiences such as, but not limited to, pre–student teaching, student teaching, teaching practicums, or teaching internships were included.

- Publications with wide-ranging methodologies, including descriptive studies, case studies, program descriptions or evaluations, exploratory studies, qualitative studies, mixed-method studies, single-subject designed studies, and group designed studies, were included.

- Publications that included special education teacher preparation in some capacity, such as the authors measured changes within special education teacher candidate populations after participating in field experiences, compared preparedness of special and general education teacher candidates, or described a field experience within a teacher preparation program that included special education candidates, were included.

- Publications that included teacher candidate surveys about preparedness to teach areas other than special education without also including special education were not included, because the intention was to understand which field experience components and activities were intended to help teacher candidates become effective special education teachers.

- Teacher preparation programs outside the scope of special education that placed teacher candidates in field experiences that included students with disabilities were excluded, because such programs are not focused on developing effective special education teachers.

Thirty-six of the 108 potential publications met all five criteria. Most publications excluded were theoretical perspective or position papers on field experiences but did not actually describe or analyze at least one field experience. Although the in-

tention of the analysis was to code the 36 publications for specifics relating to the research questions, many individual publications did not include enough information to answer all three questions. Therefore reviewing this body of literature as a whole allows for a more meaningful analysis of the research questions and current practices in special education teacher preparation.

Results

Field Experience Sample and Scope

The 36 publications included a total of 107 teacher preparation programs and 1,091 teacher candidates. Within the sample, 422 participants were special education teacher candidates, and an additional 669 teacher candidates participated in general education or unspecified teacher preparation programs. Of the 422 special education teacher candidates, 48% ($n = 201$) were seeking special education certification only, 41% ($n = 174$) were seeking dual certification in special education and early childhood, and 11% ($n = 47$) were seeking dual certification in special education and general education. The preparation programs included traditional face-to-face, distance education, and alternative models, including emergency placements in high-needs schools or hard-to-staff areas. Special education preparation programs ranged in focus from educating students with severe disabilities to educating students in cotaught or inclusive classrooms. The majority of the publications (97%, $n = 35$) included information regarding field experience placements, and most special education teacher candidates (63%, $n = 22$) were placed in elementary classrooms for at least part of their field experience. During these experiences, special educators were either the full-time teacher, coteaching with another teacher candidate or cooperating teacher, facilitating small-group or individual instruction, or mainly observing other professionals. The extent of placements varied greatly from 6 hours to more than 400 hours because this sample as a whole ($N = 36$) included all types of field experiences as we broadly defined them. To better understand the components of specific field experience types, the results are further divided into three sections: special education teacher preparation program reviews, student teaching internships, and field experience practicums. Each author independently categorized the 36 studies as either a program review, student teaching internship, or field experience practicum based on the operational definitions created a priori from previous literature and inclusion criteria for this study. There was 100% agreement on the categorization of the 36 publications (summarized in Tables 1–3).

Special Education Teacher Preparation Program Reviews

Seventeen publications included in this review and summarized in Table 1 are program reviews including a description of all or several field experiences within at least one special education teacher preparation program. There is no clear consen-

sus on the number of practicums and student teaching internships per preparation program. The difficulty in understanding the frequency and extent of field experiences across studies is due in part to the varied reporting. For example, authors classified field experiences by the year or semester each field experience occurred within a given program (see A. Adams, Bondy, & Kuhel, 2005; Macy, Squires, & Barton, 2009), the number of semesters field experiences lasted (see Oyler, 2011), the number of hours per week teacher candidates were in classrooms (see Fullerton, Ruben, McBride, & Bert, 2011), the number of total hours per field experience (see Hadadian, Koch, & Merbler, 2012; Voss & Bufkin, 2011), the number of weeks per placement (see Ludlow et al., 2007), or the frequency of placements within a program (see Morewood & Condo, 2012), and some authors combined several of these field experience descriptors (see Ruhl & Hall, 2002). Despite the variation in reporting, most authors did draw conclusions about field experiences in relation to the benefits to teacher candidates.

Authors concluded that field experiences allowed teacher candidates to link pedagogy with knowledge, provided opportunities to implement evidence-based practices, prepared teacher candidates to educate and manage behaviors of students with disabilities, required teacher candidates to problem solve in authentic settings, and engaged teacher candidates in all aspects of the profession (see Table 1). Authors reported that teacher candidates better understood specific student populations, became more comfortable working with students with disabilities, and felt that their skills in educating students with disabilities improved after completing the field experiences. Fifteen of the 17 program reviews were descriptive in nature, including qualitative studies, case studies, and program descriptions. Thus the analyses were limited to descriptive statistics.

Special Education Student Teaching Internships

Thirteen of the 36 publications, summarized in Table 2, focused on student teaching internships within special education teacher preparation programs. Based on findings from this review, special education student teaching field experiences include seven common components, as displayed in Figure 1. The clear consensus is that a student teaching internship lasts one semester ranging from 10 to 15 weeks. Special education student teachers are typically placed in school settings within elementary classrooms. Student teaching field experience placements include students with disabilities and may be in general education classrooms or special self-contained classrooms. Special education teacher candidates practice special education instructional strategies similar to those of in-service teachers, including, but not limited to, working with small groups and individual students in addition to teaching whole-group lessons; developing and maintaining behavior management programs; collecting student data to make instructional decisions; developing, implementing, and assessing individual student interventions; and modifying and

Table 1

Literature Summary of Program Reviews Specific to Special Education Teacher Candidates' Field Experiences

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
A. Adams, Bondy, and Kuhel (2005)	3 groups of EC/SETC: A. *n* = 5 completed junior practicum B. *n* = 7 completed junior practicum and senior internship C. *n* = 6 program completed	Placement • Elementary Schools Extent • Met with one child for 1 hour twice a week for one semester Framework • Junior year field experience followed by an in-school senior field experience internship • No course, seminar, or training associated with field experience	Teaching • Worked with students and families from high-risk populations Professional • No information provided Assessment and guidance • No information provided	Design • Qualitative Data • Audiotape recorded semi-structured open-ended interviews ranging from 45 to 60 minutes were coded for themes	TC opinion of field experience ranged from a waste of time to instilling passion and commitment toward the career. Although no clear distension between groups, those further along in the program reported greater benefit from initial field experience in relation to their future in education.
Andrews, Miller, Evans, and Smith (2003)	*N* = 1 SETPP	Placement • Remained in their SE classrooms Extent • 4 semesters over 2 years on-the-job full-time teaching • 40 hours in GE during summer Framework • Employed on emergency waivers as long-term subs or para-professionals • Several seminars	Teaching • No information provided Professional • Classroom setup at beginning of year Assessment and guidance • Assignments tailored to placement • US observations • Immediate feedback from US, doctoral students, advisors, and district support • District support for on-the-job needs • 2 year skills acquisition portfolio	Design • Program description Data • Student satisfaction surveys about the program and career • Descriptive statistics	80% of survey respondents felt proud to be special education teachers, but there was no description or analysis regarding the impact of field experiences.
Childre (2014)	*N* = 15 dual-certification GE/SETC	Placement • Remained in their classrooms (previously para-professionals) • Changed placements in summer Extent • 6 three-credit SE field experiences Framework • Commitment to rural SE • Focus on professional standards • Funding for CEC membership, conferences and certification exam	Teaching • No information provided Professional • Peer support and learning communities Assessment and guidance • Course work included field projects to ensure application of knowledge in classrooms • "Decision point" projects required for continuation in the program	Design • Program description Data • Descriptive statistics	While 93% of TC graduated and were certified in both special education and at least one general education content area, there was no description or analysis regarding the impact of field experiences.
Conderman, Morin, and	*N* = 61 SETPP	Placement • 84% of programs place students with experienced CT	Teaching (most common activities listed since none occurred in all 61 programs) • Develop and implement assessments	Design • Exploratory study Data	Field experience frameworks that combined pedagogy and knowledge through critical discussion and reflection were thought by

Table 1

Literature Summary of Program Reviews Specific to Special Education Teacher Candidates' Field Experiences (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
Stephens (2005)		• 78% of programs consider distance when placing TC in schools Extent • No information provided Framework • Half of the programs used traditional letter grading, while the other half used a pass/fail system	• Supervise groups of students • Use technology while teaching • Use formal assessments and grade SWD • Create and modify classroom materials • Develop behavior management plans • Coteach with a general educator Professional • Cowrite and attend IEP meetings • Attend in-service training • Contact parents • Write assessment reports • Develop bulletin boards Assessment and guidance • Self-reflection • Videotape lessons • Portfolios • Four formal US observations with oral and written feedback	•Surveyed field experience coordinators •Descriptive statistics	field experience coordinators to lead to high-quality special education teacher preparation.
Evans, Williams, King, and Metcalf (2010)	*N* = 1 SETPP	Placement • Rural K–12 public schools and clinical settings Extent • No information provided Framework • K–12 application of targeted skills occurred as a component of each course, and frequent field experiences were made possible by an ongoing partnership between the university and 34 public school systems.	Teaching • Progress monitoring and data-driven decision making Professional • Observe others teaching Assessment and guidance • Professors integrated, modeled, observed, and then assessed TC application of UDL in inclusive classrooms • Self-reflection	Design •Program description Data •No data, no analysis	TC have several opportunities to implement evidence-based practices and strategies for using a UDL framework within real and different classrooms.
Fullerton, Ruben, McBride, and Bert (2011)	*N* = 1 dual-certification SETPP	Placement • Middle/high school (cotaught, inclusive and special classrooms) Extent (2 years) • 1 cotaught semester, 10 hours/week • 1 supervised semester, 10 hours/week • 1 semester in SE, 20 hours/week • 1 cotaught semester in inclusion, 20 hours/week • 1 semester with SWD (severe), 20+ hours/week	Teaching • Formative assessment, progress monitoring, and data-driven decision making • Design differentiated content area instruction and assessments • Implement evidence-based practices • Coteach • Use of technology when teaching Professional • No information provided Assessment and guidance • Complete action research projects	Design •Program description Data •No data, no analysis	After 5 years, development on this program continues.

Table 1

Literature Summary of Program Reviews Specific to Special Education Teacher Candidates' Field Experiences (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
		• 1 cotaught semester in inclusion, full-time Framework • Focus on professional standards, collaboration, and inclusion	• US in both content areas and SE • Observed as both a GE and SEITC • Feedback on strengths and weaknesses • Self-reflection • Self-assessment		
Hadadian, Koch, and Merbler (2012)	*N* = 21 SEITC	Placement • Rotate through pre-, elementary, middle, and high schools and vocational settings Extent • Year 2: yearlong residential internship (600 hours) • Year 4: semester-long formal student teaching (260 hours) Framework • Deaf education focus • University–school partnership	Teaching • No information provided Professional • Engage in extracurricular activities (sports, parties, dances, and field trips) Assessment and guidance • Formal and informal observations and feedback • Immediate US lesson plan feedback • Reflection • Portfolio	Design •Descriptive (survey) Data •Surveyed TC who completed Year 2 through TC who graduated using both Likert-scale close-ended and open-ended questions	TC felt they had a better understanding of the deaf population culture and the needs of students with disabilities after completing the yearlong residency in Year 2.
Jung, Gaylon Keramidas, Collins, and Ludlow (2006)	*N* = 4 SETPP A. Increasing the Number, Competence, and Resources of Early Interventionis ts in Areas of Shortage (INCREAS) C. Reaching Educators with Alternative Certification in Teaching (REACT) D. Harnessing Technology to Integrate Technology for SWD (severe) Inclusion for Young Children With Special Needs (PIPPIN)	A. Placement • Rural settings • Remain in current employment A. Extent • Three 100-hour practicums A. Framework • Focus on professional standards • Online practicum seminars B. Placement • Rural settings B. Extent • Year 1: 2 practicums • Year 2: 2 student teaching placements B. Framework • TC obtain temporary certification upon enrollment • Receive tuition stipend • Online practicum seminars C. Placement • Rural settings • Severe settings in elementary & secondary classrooms C. Extent • No information provided C. Framework • Online practicum seminars D. Placement	A. Teaching • Develop an intervention plan A. Professional • Evaluate student programs, development, and environment • Visit neonatal intensive care unit • Interview intensive care service • coordinators • Online PLC with peers and instructors A. Assessment and guidance • 25-item assignment menu to individualize goals and assignments • US competency interviews of TC • Community mentor provide resources • Four observations: two US and two mentor • Self-assessment B. Teaching • Develop alternative assessments • Implement direct instruction programs • Develop a behavior management program • Use standardized assessments • Collect, track, and analyze data to make instructional decisions and modifications B. Professional • Complete ecological inventory	Design • Program description Data • No data, no analysis	Programs using online practicums to facilitate field experiences can address geographic restraints of teacher preparation programs in rural areas.

Table 1

Literature Summary of Program Reviews Specific to Special Education Teacher Candidates' Field Experiences (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
		• Rural settings D. Extent • No information provided D. Framework • Focus on ECSE • Online practicum seminar	• Develop IEPs and write a transition plan • Write a teaching philosophy B. Assessment and guidance • Year 1: three U/S observations per semester • Year 2: five U/S observations per semester • Videotaped observations are included • Self-reflections and portfolio C/D. Teaching • Develop an intervention plan C/D. Professional • Use technology to complete objectives • Create a PD plan and attend PD seminars C/D. Assessment and guidance • CT model, observe, provide feedback • Four CT observations and evaluations • U/S assess teaching artifacts and student samples and provide written feedback • Audioconferencing • Reflective journal and self-assessment C. Electronic portfolio		
King-Sears, Carran, Dammann, and Sullivan Arter (2012)	*N* = 64 GETC *N* = 34 SETC From five TPP (traditional and alternative)	Placement • Various settings including self-contained, inclusive, cotaught classrooms, or resource rooms Extent • Two field experiences Framework • No information provided	Teaching • No information provided Professional • No information provided Assessment and guidance • School-based supervisor highly qualified in SE offering feedback • U/S observe and evaluate interns throughout the semester	Design • Quasi-experimental Data • Online survey after field experience 2; • Independent *t*-tests and descriptive statistics	SETC self-rated their skills in educating SWD (environment, behavior, strategies, assessment, instruction, and professional practice) significantly higher after participating in SE field experiences when compared to GETC.
Ludlow, Gaylon-Keramidas, and Landers (2007)	*N* = 18 SETC	Placement • Two settings: K–6 and 5–12 in classrooms with SWD (autism) Extent • Four-course driven practicums • TC complete student teaching either on-the-job (15 weeks full days or 30 weeks half-days) or full-time (6 weeks full days or 12 weeks half-days in two settings) Framework • Focus on autism in rural areas • Internship seminar	Teaching • Whole-group, small-group, and individualized instruction Professional • No information provided Assessment and guidance • Master teachers assigned to full-time and peer mentors assigned to on-the-job TC • Formal observations • U/S assessment forms • Reflective journal • Culminating performance assessment	Design • Program description Data • TC satisfaction forms completed after first course with initial practicum • Mean responses from 14 item, 5-point Likert- scale survey	TC felt to be most important that instructors linked courses to practical situations, they learned to solve problems in the field, and the skills gained were directly applicable to their career.

Table 1

Literature Summary of Program Reviews Specific to Special Education Teacher Candidates' Field Experiences (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
			• Portfolio		
Macy, Squires, and Barton (2009)	*N* = 28 EC/SETC	Placement • Four placements over 2 years in EC or residential settings Extent • First semester: observation • Second semester: half-days • Third semester: full days • Fourth semester: provide on-campus summer services to students who do not qualify for extended school year Framework • Aligning practicum activities to program competencies and professional standards	Teaching • Child progress monitor and evaluations • Design learning activities • Implement IEP or IFSP • Adapt/modify materials/environments Professional • Observe other EC professionals • Attend IEP or IFSP meetings • Scheduling routines and daily activities • Design/organize learning environments • Organize adult roles and responsibilities Assessment and guidance • Several US observations and conferences • Written and verbal feedback • Self-assessment	Design • Program Description Data • TC used a Likert-scale self-rating to determine level of assistance required before and after the fourth semester practicum on program competencies	TC felt they needed less assistance with program competencies after completing the field experiences.
Morewood and Condo (2012)	*N* = 1 SETC	Placement • One placement in a rural elementary school • One placement in a suburban high school Extent • Two SE placements over 1 year Framework • No information provided	Teaching • Functional Behavior Assessment • Strategies Implementation Project linked to course work • Inquiry Research Project: collect and analyze student data to make decisions Professional • No information provided Assessment and guidance • Videotape lessons three times/week	Design • Case study Data • TC thoughts and suggestions about the 5-year SE preparation program were quoted • No analysis	Over the 5-year program the TC felt the best way to learn was through authentic teaching experiences.
Oyler (2011)	*N* = 1 SETPP	Placement • High-needs schools • Elementary inclusive classrooms • Coteaching in third semester Extent • Yearlong (two semesters) in GE • Third semester is in SE Framework • Focus on inquiry, curricular, and social justice • Cohort model • Yearlong supplemental course	Teaching • Coteaching • Collect and analyze student data to make decisions Professional • Attend IEP meeting • Participate in instructional workshops • Participate in grade-level teams • Collaborate with SE service providers Assessment and guidance • Inquiry-based assignments • Midterm and final evaluations • US observations with debriefs • Written and verbal feedback • Reflective journal • Portfolio	Design • Program description Data • No data, no analysis	Field partners were looking for graduates who were trained in the service delivery models in place in the district, such as self-contained classrooms or pullout recourse rooms, but teacher educators in this preparation program were committed to a focus on specialized instruction regardless of setting.

Table 1

Literature Summary of Program Reviews Specific to Special Education Teacher Candidates' Field Experiences (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
Recchia and Puig (2011)	*N* = 5 dual-certification EC/SETC	Placement • Rotate through infant and toddler, pre-K, K, and Grade 1 or 2 classrooms • Rotate through GE, SE self-contained, and inclusive settings Extent • Five semesters (150–250 hours) Framework • Focus on collaboration	Teaching • No information provided Professional • No information provided Assessment and guidance • Individualized weekly written feedback from a university mentor in response to the TC journals • Weekly reflective journal with US feedback	Design • qualitative Data • Reflective journals from TC in either the first or second formal internship were coded for themes	Overall, field experiences in self-contained settings offered more value for TC because these classrooms were a rich training ground given the range of individual student needs, and TC felt more prepared to work with SWD (severe) after completion.
Ruhl and Hall (2002)	*N* = 1 SETPP	Placement and extent • Semester 1: 15 weeks, 2 half-days per SE setting; observation • Semester 2: 6 weeks, 4 half-days/week in SE • Semester 3: 10 weeks, rural or suburban GE • Semester 4: 15 weeks, 4 days/week urban SE Framework • Field experience seminar	Teaching • Collect and analyze student data to make decisions Professional • No information provided Assessment and guidance • Regular US observations • Midpoint and summative proficiency checklists • Videotape instruction • Self-evaluate and share data with CT	Design • Program description Data • No data, no analysis	This model focused on using validated and best practices for teacher education
Sayeski and Paulsen (2012)	*N* = 389 TC from elementary, special, or secondary education TPP	Placements • No information provided Extent • No information provided Framework • No information provided	Teaching • Pre-planning and sharing resources Professional • No information provided Assessment and guidance • CT mentor and model effective practices • Written and verbal feedback from CT • Reflection	Design • Qualitative Data • 3 years of exit surveys • Dichotomously coded to verify established categories	TC highly valued one-on-one mentorship, concrete and frequent written and verbal feedback, ability to explore different teaching strategies, and engagement is all aspects of the profession.
Voss and Bufkin (2011)	*N* = 123 ECTC, some of whom were seeking dual certification in SE	Placement • Early childhood setting Extent • 152 observation hours • 200 initial hours in an inclusive classroom • 400 internship hours EC inclusive settings Framework • Focus on professional standards • Field experience seminar and supplemental course work	Teaching • Develop data-driven student learning plans based standardized testing results • Modifying curriculum and student learning environments • Creating learning centers Professional • No information provided Assessment and guidance • No information provided	Design • Mixed methods Data • TC interviews, reflections, and researcher notes coded for themes • Pre/post self-evaluation surveys analyzed using paired *t*-tests	Overall, as TC became more comfortable working with students with disabilities, they improved professionally, and field experience enhanced opportunities for TC to practice and develop professional skills.

Note. CT = cooperating teacher, EC = early childhood, GE = general education, IEP = individualized education program, IFSP = individualized family service plan, OTR = opportunities to respond, PD = professional development, PLC = professional learning community, SE = special education, SWD = students with disabilities, TC = teacher candidate, US = university supervisor.

adapting content, materials, and learning environments. Student teaching field experiences often include assessments to measure teacher candidates' growth, and in some cases, teacher candidates evaluate their own performance through written reflections, videotaped lessons, self-evaluations, and monitoring progress toward self-identified goals. Student teaching field experiences include guidance from university supervisors, cooperating teachers, mentors, or coaches. Specific opportunities for guidance occur through observations combined with written and/or verbal feedback, often supplemented by computer-based and audio/visual technologies (see Figure 1).

Authors of the 13 publications concluded that student teaching internships connected theory to classroom realities. The internship experiences allowed teacher candidates to bring to life teaching practices they previously read about, to apply student interventions in real-life teaching situations, to adjust to demands of classroom teachers, to collaborate with professionals who had differing perspectives, and to notice both strengths and weaknesses of their own teaching practices. Authors found that special education teacher candidates who successfully completed student teaching internships consistently demonstrated teaching proficiency, developed positive attitudes toward teaching, shaped their expectations for the career, increased desired teaching practices, and decreased less desirable teaching practices. S. Adams and Wolf (2008) credited teacher candidates' growth to a field

Figure 1

Common Student Teaching Internship Components as Described in the Literature

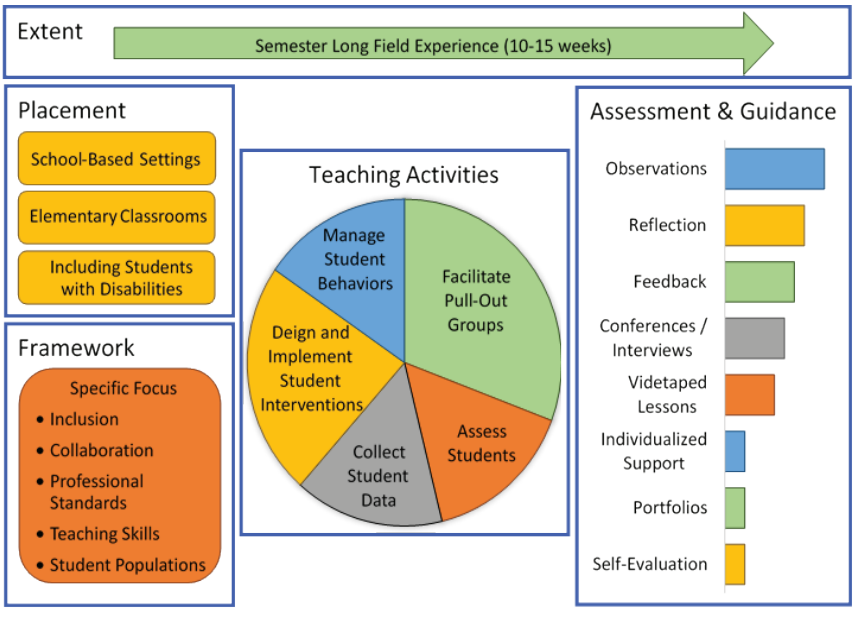

Table 2

Literature Summary of Student Teaching Internships Specific to Special Education Teacher Candidates

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
S. Adams and Wolf (2008)	*N* = 86 dual-certification EC/SETC	Placement • Infant/toddler, preschool, or primary setting Extent • No information provided Framework • Focus on state, national, and professional standards for teaching	Teaching • Collected student data through formal and informal assessments Professional • No information provided Assessment and guidance • Site supervisor observations • Performance-based assessments • Self-reflection • Self-evaluation • Portfolio and time logs • Individualized support based on need	Design • Descriptive Data • 10-item performance-based assessment including ability to plan, teach, and reflect (data collected over 5 years) • Average aggregated scores (basic-advanced)	More than 5 years of the field experiences focused on professional standards and performance-based assessments, TC consistently demonstrated proficiency; Authors noted that clear expectations organized through rubrics were essential for TC as well as site and university supervisors.
Falconer and Lignugaris-Kraft (2002)	*N* = 4 SETC	Placement • Elementary classroom Extent • 10 weeks Framework • Focus on six teacher skills: presentation skills, distribution of responses, correction procedures, rate of praise, lesson pace, and behavior management	Teaching • No information provided Professional • No information provided Assessment and guidance • Weekly observations by CT and/or US • Four to six two-way audio/video conferences • Portfolio of professional growth with artifacts collected during internship • Written and verbal feedback using standardized observational forms	Design • Qualitative Data • Supervisor field notes and TC interviews • Divided negative and positive statements then coded for themes	Computer-based two-way conferencing enhanced the frequency, immediacy, and types of communication between supervisors and TC as well as personalized support based on individual TC needs.
Griffin, Jones, and Kilgore (2006)	Pilot: *N* = 30 dual-certification GE/SETC Follow-up study: *N* = 22 dual-certification EC/SETC	Placement • General education classrooms Extent • 10 weeks Framework • Focus on collaboration and inclusive education • TC have to select one professional other than their CT to partner with	Teaching • Collaboratively design an intervention for one child within the general education setting Professional • No information provided Assessment and guidance • Collaborative reflective journal capturing both members' professional position, meeting notes, procedures, feedback, classroom observations, and reflection of collaborative experience	Design • Qualitative Data • Written assignments and reflections • Interviews • Pilot study data was coded for recurring topics and domains • Domains were expanded/modified during the follow-up	Collaborative problem solving conducted during student teaching allowed TC to bring to life one type of collaboration as opposed to only reading about collaboration, which expanded the TC's definition of collaboration.
Guteng, Tracy, and	*N* = 5 SETC	Placement	Teaching • Curriculum adaptation during mini-lessons	Design • Qualitative	TC moved through five stages of field experience starting

Table 2

Literature Summary of Student Teaching Internships Specific to Special Education Teacher Candidates (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
Chappell (2000)		• Elementary, middle, and high school classrooms in deaf education programs Extent • 10 weeks Framework • Focus on deaf education	Professional • No information provided Assessment and guidance • US observations and feedback • Weekly reflective journals	Data • Reflective journals • E-mails and interviews • Observations • Identified within case themes to track between case rates	with frustration and resulting in enthusiasm and a positive attitude toward teaching, suggesting that TC adjust to teaching demands as a result of field experience.
Hanline (2010)	*N* = 15 dual-certification EC/SETC	Placement • Inclusive classroom (ages 3–5) Extent • 13 weeks, 100 hours Framework • TC previously completed four practicums, two in SE (high and low incidence settings) • Bimonthly seminars	Teaching • Run small and large group activities • Develop, implement, and assess individualized early interventions Professional • No information provided Assessment and guidance • Three US observations with exit interviews • Weekly reflective journals	Design • Qualitative Data • Reflective journals • US observation notes • Exit interviews • All coded for themes	TC benefited from field experiences by connecting theory to classroom realities where TC observed the effects of intervention implementation for young children
Kamens (2007)	*N* = 2 dyads GE/SETC-GETC	Placement • Suburban, elementary setting Extent • Spring semester Framework • Two TC placed in coteaching part of the day and alone the other part • TC previously completed an initial student teaching internship • 2-day field placement seminar	Teaching • No information provided Professional • No information provided Assessment and guidance • Classroom observation written reports and verbal feedback • Written feedback from CT • Reflective journals	Design • Case study Data • Researcher field notes and observations • TC interviews • E-mail exchanges between TC pairs • US and CT notes • All coded for themes	TC found emotional support from working in pairs. TC emphasized the importance of the field experience in shaping their expectations for the career and collaborating with someone with differing perspectives.
Keller, Brady, and Taylor (2005)	*N* = 3 SETC	Placement • Elementary SE self-contained classrooms (Grades K–5) Extent • Full-time Framework • Accelerated program • TC were full-time substitute teachers during student teaching	Teaching • No information provided Professional • No information provided Assessment and guidance • Mentor teachers support each TC daily • Formal US observations • Self-evaluation using data collection • Personal goal setting	Design • Single-subject multiple baseline Data • 5–21 5-minute self-coded audio clips • Staggered phases • Four to six maintenance probes	All three TC increased frequency of targeted teacher behavior during data-based self-evaluation, but behaviors were not maintained, suggesting that TC would benefit from ongoing prompts or self-evaluation practices.
Knapczyk, Hew, Frey, and Wall-Marencik (2005)	*N* = 26 SETC in a collaborative TPP across four campuses	Placement • Remained in current employment, which ranged from public school to residential, preschool through high school in urban, suburban, or rural communities Extent	Teaching • Data collection, analysis, decision making, and evaluation of individual student interventions Professional • Online PLC with TC, mentors, and university personnel	Design • Qualitative Data • TC questionnaire • Electronic logs of mentor/TC interactions • Reflection logs	Online mentoring provided TC with guidance and support when geographical limitation may have otherwise prevented such support. TC felt the field experience enhanced their PD by helping them apply

Table 2

Literature Summary of Student Teaching Internships Specific to Special Education Teacher Candidates (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
		• 15-week internship Framework • 25 TC held limited teaching license and all TC were seeking SE certification	Assessment and guidance • TC had one to two out-of-district mentors • Online mentoring • Internship project facilitated by instructor • Reflective journal aligned to assignments	• All coded for themes • Descriptive statistics	interventions in real-life teaching situations.
Leko and Brownell (2011)	*N* = 6 SETC	Placement • Elementary classrooms with SWD (high incidence) • Settings ranged from inclusion, pullout, and resource (Grades K–3) Extent • Fall semester Framework • TC previously completed initial field experiences in inclusive classrooms	Teaching • No information provided Professional • No information provided Assessment and guidance • US observations with verbal feedback multiple times throughout the semester • Videotape three lessons • TC reflect on their videotapes • Interviews	Design • Qualitative Data • TC interviews, surveys, and pre/post concept maps • Researcher field notes and ratings • Program course syllabi • All coded for themes	TC benefited from applying knowledge in practical settings that had a high degree of structure, focused on student needs, included opportunities for implementation of intensive instruction, and included CT who were knowledgeable in both SE and the content area.
Roberson, Woolsey, Seabrooks, and Williams (2004a)	*N* = 8 SETC	Placement • Ranged from K-12 Extent • Semester-long Framework • Final internship in a deaf education program • Field experience seminar	Teaching • Whole-group, small-group, and individualized instruction • TC use media & technology • TC prompt, manage & discipline behaviors Professional • No information provided Assessment & Guidance • 3 US observations • Videotape lessons	Design • Descriptive Study Data • Mean percentages of computer-coded TC behaviors and student behaviors collected in 20 second intervals during formal observations	Overall, TC behaviors during field experiences were similar to those of in-service teachers. Video-based data collection with computer-based coding is one way to supplement teacher preparation
Roberson, Woolsey, Seabrooks, and Williams (2004b)	*N* = 13 SETC	Placement • Placement within various settings, including self-contained classrooms and resource rooms across elementary, middle, and high schools Extent • One semester Framework • No information provided	Teaching • Whole-group, small-group, and individualized instruction • TC prompt, manage, and discipline behaviors Professional • No information provided Assessment and guidance • Three US observations with conferences • Videotape lessons	Design • Descriptive study Data • Mean percentages of computer-coded TC behaviors and student behaviors collected in 20-second intervals during formal observations	Providing TC with a field experience data timeline produced through video-based data collection and computer-based coding helped TC notice strengths and weaknesses and can be used to demonstrate the effective teaching needed for certification.
Rock et al. (2009)	*N* = 15 SETC	Placements • Both urban and rural locations across grades in elementary, middle, and high schools Extent • Semester-long	Teaching • No information provided Professional • No information provided Assessment and guidance	Design • Mixed methods Data • Videos coded for rate of target behaviors, student engagement, classroom	Overall, teachers made significant increases in desired practices as well as significant decreases in less desired practices. The combination of video, audio, and computer-

Table 2

Literature Summary of Student Teaching Internships Specific to Special Education Teacher Candidates (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
		Framework • No information provided	• Immediate feedback and coaching while delivering instruction using bug-in-ear technology • Write reflections • Videotape lessons	climate, and bug-in-ear disruptions • Paired-samples *t*-tests using pre/post scores • TC self-reported data coded for themes	based technologies allowed for real-time supervision of teachers (possible solution to geographical limitations).
Scheeler, McAfee, Ruhl, and Lee (2012)	*N* = 5 SETC	Placement • Urban school district • SE and self-contained classrooms Extent • Initial junior year direct instruction internship (first of two student teaching placements) • 14 weeks during senior year Framework • No information provided	Teaching • Three-term contingency trials Professional • No information provided Assessment and guidance • Researcher feedback via wireless technology and two to three observations/week with conferencing • Weekly US observations and written feedback • Videotape lessons	Design • Single-subject multiple baseline Data • Percentage of completed three-term contingency trials graphed over 20 sessions across staggered phases	Immediate, corrective feedback resulted in higher levels of targeted teacher practice compared to deferred feedback, and providing this type of feedback using technology promotes more teacher learning in applied settings.

Note. CT = cooperating teacher. EC = early childhood. GE = general education. IEP = individualized education program. IFSP = individualized family service plan. OTR = opportunities to respond. PD = professional development. PLC = professional learning community. SE = special education. SWD = students with disabilities. TC = teacher candidate. US = university supervisor.

experience focused on professional standards and performance-based assessments, where teacher candidates, school-based supervisors, and university supervisors all had clear expectations during the field experience. Other authors credited teacher candidates' growth to the supports built in to student teaching internships, including online mentors, teaching partners, rubrics, immediate feedback, cooperating teachers knowledgeable in both content and special education practices, video-based data collection, and self-reflection (see Table 2). All 13 studies focused on student teaching internships within this review noted positive aspects of this type of field experience. However, only three of these studies included an experimental design allowing for direct investigations of the impacts of student teaching internships, including specific components of these field experiences.

Field Experience Practicums

Six of the 36 publications, summarized in Table 3, focused on field experience practicums within special education teacher preparation programs. Based on this review, practicums align with coordinating seminars and are typically measured by number of classroom hours. The practicums in this review ranged from only 6 classroom hours to 2 full days per week for 14 weeks. Defining a practicum in the literature is not as clear as defining student teaching field experiences, partially due to the varied uses for practicums. Practicums appear to be used to focus on just one aspect of teaching, such as coteaching (see Van Laarhoven, Munk, Lynch, Bosma, & Rouse, 2007), behavior management (see Dymond, Renzaglia, Halle, Chadsey, & Bentz, 2008), or using assistive technology (see Anderson & Petch-Hogan, 2001). However, in some cases, practicum placements can closely resemble student teaching, such as in the example where teacher candidates spent 100 classroom hours over 10 weeks in providing special education services in a resource room (see Capizzi, Wehby, & Sandmel, 2010).

This subsample of six studies, three of which are experimental in design, is not large enough to provide an in-depth understanding of the role field experience practicums play in special education teacher development. Given this, several authors did draw conclusions about the benefits of field experience practicums (see Table 3). First, teacher candidates who participated in practicums felt that actually teaching in real classrooms was very beneficial to their own preparation. Second, authors reported that field experience practicums supported self-reflection and positively influenced teacher candidate knowledge and development. Specifically, after participating in a field experience practicum with a corresponding course, special education teacher candidates increased the percentage of correctly implemented lesson components, including obtaining student attention before teaching, providing advanced organizers, including background knowledge questions, linking current lesson to prior lessons, presenting content sequentially, using visuals, modeling and using examples, checking for student understanding, providing corrective feedback, providing clear directions,

Table 3
Literature Summary of Field Experiences of Practicums Specific to Special Education Teacher Candidates

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
Anderson and Petch-Hogan (2001)	*N* = 8 SETC	Placement • Elementary, middle, or high school in GE or SE Extent • 16 weeks, 4 hours/week Framework • 2-week preplacement seminar • The first of six field experiences	Teaching • Use assistive technology for a minimum of 2 hours Professional • No information provided Assessment and guidance • Self-evaluation	Design • Case study Data • Pre/post Likert-scale self-evaluation surveys • Compared using a paired-samples *t*-test	TC made significant improvements in perceived acquisition of knowledge and ability to use technology as a teacher tool and to facilitate instruction after participating in the field experience.
Capizzi, Webby, and Sandmel (2010)	*N* = 3 SETC	Placement • Resource classroom working with elementary, middle, and high school students Extent • 10 classroom hours per week for approximately 10 weeks Framework • Aligned to practicum course	Teaching • No information provided Professional • No information provided Assessment and guidance • Self-evaluation • Videotape two or more lessons/week • Two to three mentoring sessions • Two to three mentor feedback forms • Four US observations	Design • Single-subject multiple baseline Data • Percentage of correct lesson components, behavior specific praise, and OTR • Visual analysis across staggered phases	Across three cases, TC increased the percentage of correctly implemented lesson components after participating in the field experience.
Dymond, Renzaglia, Halle, Chadsey, and Bentz (2008)	*N* = 2 SETC	Placement • Elementary inclusive and SE classrooms Extent • 4 classroom hours/week Framework • No information provided	Teaching • Whole-group, small-group, and individualized instruction • Progress monitoring • Behavior management Professional • No information provided Assessment and guidance • Eight US videoconference observations (concurrent on-site observer at times) • Feedback on instructional delivery and professional behavior	Design • Case study Data • Skills monitoring checklist as an observation instrument • Point-by-point comparison between distance observer and on-site observer	Videoconferencing is a promising and potentially reliable practice for observing TC during field experiences when observers were trained to score TC using a checklist.
O'Brian, Stoner, Appel, and	*N* = 9 SETC	Placement	Teaching • No information provided Professional	Design • Qualitative Data	Hands-on experiences supported reflection and

Table 3

Literature Summary of Field Experiences of Practicums Specific to Special Education Teacher Candidates (continued)

Literature	Sample	Field experience placement	Field experience activities beyond writing and teaching lessons	Research design, data collection, and analysis	Findings and conclusions
House (2007)		• Self-contained and cotaught classrooms from early childhood to high school Extent • First of two field experiences • 14 weeks, 2 full days/week Framework • Field experience seminar	• No information provided Assessment and guidance • Written and verbal mentor feedback • Self-reflection logs	• TC observations and interview quotes • Reflection logs coded line by line for themes and connections	influenced teacher knowledge and development
Scheeler, McKinnon, and Stout (2012)	*N* = 5 SETC	Placement • GE classrooms Extent • 14 weeks, 3 or 4 days/week • TC pullout individual children placed at risk for 15–20 minutes twice/day Framework • No information provided	Teaching • Pullout sessions Professional • No information provided Assessment and guidance • Researchers offered real-time feedback during direct instruction using a webcam and Bluetooth technology • Videotape lessons	Design • Single-subject multiple baseline Data • Checklist of desired practices procedural correctness coded across staggered phases (6–11 probes per TC)	Overall, immediate feedback delivered using technology increased desired teacher practices more effectively compared to delayed (possible solution to geographical limitations).
Van Laarhoven, Munk, Lynch, Bosma, and Rouse (2007)	Three Groups: A. *N* = 15 SETC B. *N* = 38 GETC C. *N* = 53 GETC (control group)	Placement • Inclusive classroom Extent • 6 classroom hours Framework • 10-hour seminar on collaborative teaching and inclusive settings	Teaching • Simulated coplanning and then actual coplanning and coteaching Professional • No information provided Assessment and guidance • Reflective meetings after each lesson including verbal feedback from US and CT	Design • Quasi-experimental Data • Inclusion attitude and disposition survey • Written response probes • Descriptive statistics • ANOVA parametric tests using pre/post measures	Although the data were inconclusive in regard to differences between groups, participants felt actual teaching in real classrooms was "very beneficial."

Note. CT = cooperating teacher. EC = early childhood. GE = general education. IEP = individualized education program. IFSP = individualized family service plan. OTR = opportunities to respond. PD = professional development. PLC = professional learning community. SE = special education. SWD = students with disabilities. TC = teacher candidate. US = university supervisor.

and summarizing the lesson (Capizzi et al., 2010). Last, specific components of field experience practicums, such as videoconferencing, show promise for elevating supervision and mentoring practices (see Dymond et al., 2008).

Summary

When considering the body of literature reviewed as a whole, 78% (n = 28) of publications included conclusions that teacher candidates benefited from field experiences regardless of the type. Most often (61%, n = 22), publications included conclusions that the success of field experiences could be attributed to the application of knowledge in real classroom situations similar to those candidates would experience when entering the workforce.

Overall, most publications (81%) were descriptive (n = 19) or qualitative (n = 10) in design, including, but not limited to, program descriptions, case studies, and exploratory studies (see Table 4). Authors from 28 of the 36 publications collected data from interviews, observation notes, surveys, reflective journals, or videotaped lessons. Less commonly, data were collected from checklists, performance-based assessments, self-evaluations, or observation rubrics. Least often, data were collected from e-mail exchanges and faculty surveys. Only 13% (n = 5) of the publications measured changes in teacher candidates' practices, such as procedural correctness on given teaching domains, and another 13% (n = 5) measured changes in perceived knowledge of teaching, perceived ability to teach, or attitude toward teaching students.

What Works Clearinghouse (WWC) was created as a central source for evidence-based educational programs and interventions that coincided with the No Child Left Behind Act of 2001, which called for scientifically based experimental or quasi-experimental group designs educational research grounded in empirical methods including adequate data analysis and reliable measures. According to WWC's (2011) *Procedures and Standards Handbook*, two or more studies must be published showing statistically significant positive effects where at least one of the studies is a randomized controlled trial to determine with any level of certainty if field experience, in this case, has a positive effect on special education teacher candidates. No experimental group designed studies specific to the effects of field experiences during special education teacher preparation were found in peer-reviewed journals from 2000 through August 2014.

Horner and colleagues (2005) suggested that the evidence base of a practice may be considered when a minimum of five single-subject studies with at least 20 total participants meeting acceptable methodological criteria and published in peer-reviewed journals are conducted by at least three different researchers in three different geographic locations. The four single-subject designed studies in this review do not meet Horner and colleagues' (2005) minimal requirements for reviewing research quality and evidence base of field experiences during special education teacher preparation. While most authors within this literature review

echoed the notion that field experiences are the most important learning experience within teacher preparation, no such conclusions can be drawn based on this review.

Discussion

The purpose of this article was to review the existing body of literature on field experiences for special education teacher candidates to categorize effective field experiences and underscore why such experiences are considered the keystone of special education teacher preparation. The purpose was to capture any peer-reviewed publications meeting the inclusion criteria that would offer some insight into components and activities of special education field experiences. Thirty-six peer-reviewed publications including information about field experiences of 1,091 teacher candidates (422 in special education) and 107 preparation programs were reviewed. This sample represented special education teacher preparation programs including the common dual-certification programs combining special education with either early childhood or general education. Future efforts should also target new types of dual-certification programs, such as dual special education and bilingual education programs, that are now rising in popularity. While no such publications were identified after searching eight databases using a combination of 13 search terms, it is likely that such work will be readily available in the near future or is already available through open source alternatives to the scholarly databases used in this review.

Table 4
Summary of Field Experience Publication Methodologies

	Studies in this review		Special education teacher candidates		Teacher preparation programs	
Research design	*f*	%	*f*	%	*f*	%
Descriptive	18	50	202	48	81	76
Qualitative	10	28	140[a]	33	14	13
Single subject	4	11	16	4	4	4
Quasi-experimental	2	6	49	12	6	6
Mixed methods	2	6	15[b]	4	2	2
Total	36	100	422	100	107	100

[a]The total number of special education teacher candidates included in qualitative study samples does not include 389 teacher candidates from Sayeski and Paulsen (2012) because it was not clear how many teacher candidates were special education teacher candidates. None of the 389 teacher candidates were added to the sample of special education teacher candidates. [b]The total number of special education teacher candidates included in mixed methods study samples does not include 123 teacher candidates from Voss and Bufkin (2011) because it was not clear how many teacher candidates were special education teacher candidates. None of the 123 teacher candidates were added to the total sample of special education teacher candidates.

The first step in the review process was to highlight several special education field experience commonalities across all publications. Unfortunately, the vast majority (81%) of publications were descriptive in nature, limiting further analyses regarding the effects of field experiences and field experience activities (see Table 4). As a consequence of the research methods employed, generalizations about specific components or assessments included in special education teacher preparation field experiences are limited. Descriptive and qualitative research methods generate theoretical models and support scientific inferences but do not measure causal effects of an intervention (Feuer, Towne, & Shavelson, 2002) and therefore can help articulate details about special education teacher preparation field experiences but not directly explain effects on teacher candidates' preparation. Experimental group design research leads to the best estimates of effect, but the absence of experimental conditions in this body of literature is not surprising given the complexities of special education teacher preparation research. Considering ongoing challenges in regard to conducting experimental research, quasi-experimental designed research of field experiences may be the most appropriate method for empirical investigations.

How Do We Measure the Difference Makers?

Although the importance of field experiences in the context of special educa-

Table 5
Five Steps for Designing Field Experiences and Studying Their Effectiveness

Steps	Examples	Empirically document
1. Set the extent of the field experience	• A specific portion of the school year • Minimum number of classroom hours • Minimum number of lessons taught	How does the selected extent of a field experience allow for critical activities to occur?
2. Select teaching activities	• Designing instruction • Facilitating instruction • Managing student behaviors • Collecting student data • Assessing students	How do the required teaching activities translate to expectations within the profession?
3. Determine the products	• Written reflection • Videotaped lesson • Portfolio	How did producing the selected product result in professional growth?
4. Assess the teacher candidates	• Self-assessment • Observation • Competency exam	How did this assessment measure teacher ability?
5. Provide ongoing feedback	• Oral and written feedback • Observation form • Completed rubric • Conference	How does the feedback emphasize professional teaching standards used to determine profession-ready teachers?

tion teacher preparation is undisputed, empirical research on the changes in teacher candidates as a result of participating in different types of field experiences (e.g., online preparation, virtual training, shorter placements, residential models) is needed. It is hoped that, over time, we will be able to identify changes in field experience trends, but currently there are not enough data to substantiate such claims. Because of the varied purposes for field experiences, we may never be able to uniformly define them, but one definition of field experience may not be necessary. Asking empirical questions about field experience may lead to a better understanding of the true difference makers within special education teacher preparation.

Five recommendations for designing special education field experiences and studying their effectiveness are outlined in Table 5. Asking empirical questions about the extent, activities, products, assessments, and types of feedback for field experiences to directly study specific components of field experiences (e.g., self-reflection, videotaped lessons, portfolios, self-evaluation, coplanning and coteaching, personal goal setting, performance-based assessment) is needed to understand which activities contribute to the preparation of profession-ready special education teachers in a meaningful way. Additionally, descriptions of field experiences organized in this review as placement types, extent, and framework; teaching and professional activities; and methods for guiding and assessing teacher candidates remain in demand and will allow for a more well-rounded understanding of current practices within the field. Last, as special education teacher preparation programs continue to be questioned concerning their impact on student outcomes (Brownell, Griffin, Leko, & Stephens, 2011), researchers must extend the research base with rigorous efforts to link changes in teacher candidates' knowledge, skills, and dispositions to student outcomes.

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Note

[1] References marked with a dagger were included in the review.