RESEARCH ARTICLE

An Evaluation of Contextual-Fit and Value of Clinical Placements in a Dual Licensure Program

Kelly M. Anderson, JaneDiane Smith, and Bob Algozzine
University of North Carolina at Charlotte

Jacob Olsen
California State University Long Beach

Given continuing criticisms of teacher education, many higher education programs are turning to innovative ways to redesign their preparation of teachers for meeting the needs of students in inclusive environments. Among promising approaches are efforts to align and integrate the content and pedagogy of general and special education with participation in high quality clinical field experiences. In this research, we documented the extent to which standards and research-based practices aligned with experiences in schools, as well as the measured and perceived value of participating in these high-quality clinical experiences for candidates in a dual certification teacher education program. Our findings suggest that schools vary in levels of use of inclusive practices. Results also suggest that field placements aligned with profession standards of teacher preparation positively influence the development of preservice teachers' knowledge and use of these skills.

Keywords: combined credential teacher preparation, general education, special education, clinical field placements, inclusive practices

Preparing teachers using the same manner that has been in place over the last few decades has come under continuing review (Bettini, Benedict, Thomas, Kimerling, Choi, & McLeskey, 2017; Brownell, Sindelar, Kiely, & Danielson, 2010; Feng & Sass, 2013). Given the shift in demographics and other diversity (e.g., socio-economic status, ethnicity, cultural and linguistic background, language spoken at home) of K-12 students across the United States, now more than ever before, graduates of teacher preparation programs need to be highly knowledgeable and skilled in working with a range of abilities, needs, and individual differences (Brock, Case, & Taylor, 2013; DeLuca, 2012; Kalogrides, Loeb, & Beteille, 2013; Mason-Williams, Bettini, & Gagnon, 2017; O'Hara & Pritchard, 2008). The introduction of the Common Core Standards, in addition to the most recent reauthorizations of the Individuals with Disabilities Education Act of 2004 (IDEA) and Every Student Succeeds Act (ESSA, 2015), have added intense responsibility on teachers to produce clear evidence of the impact of their instruction on the academic progress of *all* K-12 students. Without question, the context of teaching and learning in K-12 classrooms

has changed in the last decade (Cuthrell et al., 2014; Darling-Hammond, 2012; Feng & Sass, 2013; Kalogrides et al., 2013; Yanhui, 2013). Preparing quality teachers for practice in this current education environment of high-stakes accountability and expected inclusive instructional impact on increasingly diverse students has reignited national scrutiny of traditional approaches to teacher preparation. With the striking changes in expectations for teachers, a great deal of attention has turned to the extent to which education has actually transformed to ensure beginning as well as seasoned teachers are effectively prepared for the challenges of the new climate in America's schools.

Much of the criticisms of teacher preparation over the years targets an apparent discrepancy between how preservice teachers are prepared and the reality of classroom practices (AACTE, 1976, 2010; Bettini et al., 2017; Bondy & Ross, 2005; Brownell et al., 2010; Cochran-Smith & Fries, 2005; Darling-Hammond, 2014; Duncan, 2009; NCES, 1999; NCATE, 2010; NCTQ, 2013, 2014; Sarason, Davidson, & Blatt, 1962; Whitford & Villaume, 2014). Reports such as the NCATE *Blue Ribbon (2010)*, AACTE *Reforming Teacher Preparation (2010), and* NCTQ *Prep Review* (2013, 2014) in addition to the current accreditation standards outlined by the Council for the Accreditation of Educator Preparation (CAEP, 2018) have provoked increasing interest in the need to more intentionally alter teacher education programs to *clinical-based* models of preparation. Specifically, the pressure on teacher educators to break away from traditional patterns of compartmentalization of university-based programs by various specializations, typically organized around student characteristics (e.g., disabilities –special education, gifted and talented – academically and intellectually gifted programs) accompanied by clinical partnerships with expert school personnel is rapidly becoming the new reform mantra for teacher educators (Rueda & Stillman, 2012). Training teachers in traditional teacher preparation models structured around discipline-specific programs containing a prescribed sequence of courses and generic clinical experiences is seen as less effective in preparing future teachers for the challenges they will face in the changing dynamics of schools today (Cuthrell et al., 2014; Darling-Hammond, 2014, 2012; Kalogrides & Loeb, 2013; Kalogrides et al., 2013; Yanhui, 2013).

Emerging innovative teacher preparation programs take an alternative route by paralleling integrated coursework in content and pedagogy (i.e., instruction of students with disabilities, English Language Learners – within general education environments) with extensive, contextually fit clinical practice working in K-12 classrooms with a wide range of diverse learners (AACTE, 2010). Contemporary models of teacher preparation require preservice candidates to spend time working with a diversity of students under the supervision of expert teachers. This type of clinical field practice moves beyond the notion of 'simply spending more time in schools,' by allowing preservice teachers more time to apply and refine the knowledge and skills they are simultaneously learning in their preparation coursework. In these models of preparation, the role of the expert practitioner becomes critical in helping candidates make essential connections between their learning and the inclusive approaches they employ when responding to the needs of their diverse learners (Bettini et al., 2017; Bondy & Ross, 2005; Brownell, Sindelar, Kiely, & Danielson, 2010; Darling-Hammond, 2014; Whitford & Villaume, 2014).

Program reform alone comes with its own set of challenges and does not guarantee substantive change or redesign of teacher preparation from traditional structures to more clinical-based programs as described by the CAEP (2018), NCATE Blue Ribbon Report (2010) and the NCTQ Teacher Preparation Review (2013, 2014). Teacher preparation programs are driven by national and state professional standards for degree and licensure requirements (e.g., Association for Childhood Education International Elementary Education Standards (ACEI), 2007, and

Council for Exceptional Children Initial and Advanced Preparation Standards (CEC), 2015), directing what is taught within coursework along with proficiencies candidates must achieve in fulfillment of program completion (e.g., collaboration with professionals and families, co-teaching, knowledge of federal mandates, prereferral, and referral processes in special education, differentiated instruction for meeting the diverse needs of learners, and use of research-based interventions and teaching practices). These may or may not parallel the national and state standards for K-12 student performance expectations and school initiatives (e.g., Multi-tiered Systems of Support (MTSS), Reading First Initiative, and Positive Behavior Interventions and Supports (PBIS)). Additionally, defining what constitutes 'quality' clinical experiences requires thoughtful discourse among faculty and school partners, followed with identification of school placements that present a 'good fit' in terms of alignment of district and school initiatives and the professional standards teacher candidates are being assessed on in fulfillment of their preparation programs. Darling-Hammond (2006) suggests that strong innovative preparation programs "create a coherent set of learning experiences that include extensive clinical experiences, carefully chosen to support the ideas presented in simultaneous, closely interwoven course work" (p. 305).

With the convergence of policy requirements (ESSA, 2015 and IDEA, 2004), coupled with intensifying teacher performance expectations in meeting the needs of all learners, as well as progressively more inclusion of diverse K-12 students participating in general education, teacher educators are realizing the inherent value of restructuring discrete teacher preparation programs and redesigning to more '*collaborative or combined*' dual preservice training. Conceptually collaborative dual preparation programs have existed since the mid-1980s, yet more recently have gained increased attention by teacher educators with the intent of improving educational outcomes for students with disabilities as well as respond to the vast student diversities in schools today. Typically characterized by intentional integration of general and special education content expertise, pedagogy and professional standards within a single undergraduate preservice program simultaneously leading to two or more teaching credentials, how these transformed dual credential teacher education programs play out in curricula can vary greatly across teacher education programs (Pugach & Blanton, 2012).

Extensive and systematical investigation of the overall effectiveness of dual preparation programs has yet to be conducted and is minimally evident in the literature. Early literature on collaborative teacher education programs (1983-2001) provides insights into multiple illustrations of program descriptions providing the stages of development and implementation by faculty (Pugach, Blanton, Correa, 2011). The next wave of literature on collaborative dual preparation programs (2001-Present) extends our understanding beyond descriptions of development and implementation to include formative and summative program evaluation data (e.g., Fullerton, McBride, Bert, & Ruben, 2011; Jenkins, Pateman, & Black, 2002; Sands, Duffield & Parsons, 2006; Sobel, Iceman-Sands, & Basile, 2007; Stoddard, Braun, Hewitt, & Koorland, 2006). Only a few studies found within the literature specifically focus their investigations on the effectiveness of specific components of dual teacher preparation programs such as collaborative methods courses and/or required collaboration in field experiences. This research provides evidence of positive impacts of dual preparation in relationship to K-12 student learning (e.g., Brown, Welsh, Hill, & Cipko, 2008; Kamens, 2007; Utley, 2009; Van Laarhoven, Munk, Lynch, Bosma, & Rouse, 2007). Only one study was found in the literature that specifically focused on investigating the complexity and implications of the role of field experiences within dual credential teacher education programs. In their research, Kent and Giles (2016) examined the effectiveness of a field component merged into a newly designed dual credential teacher preparation program. Results

from the study suggested that although challenging to implement, the intense field experiences allowed dual preservice teachers opportunities to face the challenges of meeting a diverse population of students. In their recommendations for further research, Kent and Giles suggest future research is necessary to determine the specific field elements that contribute to successful application of skills by dual candidates teaching in inclusive settings.

In this article, we describe findings from a systematic evaluation completed by university faculty in collaboration with local school partners to document and compare selected features of the clinical student teaching experiences of candidates during their dual certification teacher preparation program. Specifically, we were interested in the extent to which careful identification of high quality schools implementing similar inclusive practices to those professional standards and research-based practices woven within a dual licensure preparation were related to candidates' abilities to refine and expand their knowledge and skills related to both special education and general education in their student teaching experiences.

METHOD

In this research, we examined the extent to which (a) selected professional standards and research-based practices were evident in schools serving as clinical placements, (b) competence acquired during dual student teaching was similar for students participating in discrete preparation programs, and (c) the extent to which dual candidates applied their knowledge and skills in general and special education classrooms. We conducted our study using an undergraduate dual licensure program at an urban research university located in the southeastern region of the United States and multiple assessments contextually- and practically-fit for addressing the following research questions:

1. To what extent are professional and research-based practices similar across schools serving as student teaching sites?
2. To what extent is teaching competence demonstrated by dual candidates similar to those demonstrated by candidates in discrete preparation programs (Elementary Education, Special Education)?
3. To what extent do dual teacher education program candidates apply their integrated knowledge and skills in general and special education when placed in schools rated as 'Target' and/or 'Acceptable' using the *Inclusive Practices Clinical Site Checklist* (IPCSC)?

Participants and Program/Setting

School partners included: (a) a regional consultant for the state Department of Public Instruction Exceptional Children's program, (b) a Human Resources Director for a local school district, and (c) principals representing two additional surrounding school districts. The primary inclusion criteria for these individuals was extensive knowledge of schools practices and structures, and knowledge of initiatives specific to supporting students' academic and behavioral growth. Individuals not familiar with school policies and practices were excluded. A multi-faceted

approach was used to recruit individuals. University supervisors identified a list of highly inclusive schools.

Sixty-five participants representing a sample of convenience completed the IPCSC across urban, suburban and rural local education agencies within the region closest to the university (i.e., within 50 miles of campus). Participants included school principals, assistant principals, general education and exceptional children's (EC) teachers, general and special education faculty, consultants, facilitators, graduate student teaching interns, and university supervisors of clinical field experiences. Participants who completed the IPCSC were employed by, consulted with, completed graduate internships, and/or supervised student teaching at the schools being rated. Electronic and hard copies of the IPCSC were completed on schools that were geographically diverse and located in urban, suburban, and rural settings. Distribution of the IPCSC included various types of schools including those receiving supplemental federal funds due to high percentages of students from low-income families (Title 1) in urban settings as well as those serving more affluent families in suburban neighborhoods. The role of the rater varied significantly, and raters indicated they had extensive familiarity with the school sites.

Candidates in the dual program and peers in discipline specific programs served as a second group of participants. As part of a larger study, candidates completing Elementary Education and Special Education discrete programs were randomly selected to serve as comparison groups. Candidates from the discrete Elementary and Special Education Programs were considered comparison groups with the dual candidates using the following criteria: a) similar entrance dates into their respective teacher education programs, and b) completion of all professional education coursework leading up to approval to student teach. To date, three cohorts of dual candidates (n = 42) have graduated. During that same time frame, 27 special education majors and 30 general education majors selected as part of the comparison groups completed their respective programs. Participants (n = 99) were similar in that they were predominately Caucasian females with comparable grade point averages (GPAs) at entrance into, and graduation from their respective programs. It should be noted that student teaching school sites for the candidates in the dual program were identified using the IPCSC; student teaching sites for candidates enrolled in discipline specific programs were randomly selected based on geographic location and candidate preference. This aspect of data collection was included in the study with the intent of gaining insights as to the influence of dual preparation in terms of meeting professional standards and expected initial teacher proficiencies in areas such as collaboration, differentiated instruction for meeting the learning needs of diverse learners, and creating responsive learning environments (ACEI, 2007; CEC 2015).

Procedure

The dual licensure program consisting of integrated course work across general and special education core content and pedagogy was chosen as the focus of this study due to the complexities experienced in finding quality inclusive student teaching experiences in both general and special education classroom settings. Relevant state licensure criteria require dual candidates to engage in clinical practice in both learning environments (i.e., elementary and special education classrooms) particularly in fulfillment of student teaching requirements. Identifying quality student teaching placements in which candidates can apply and extend their knowledge and skills in both a general education classroom and a special education classroom within a school setting is challenging. In

efforts to build stronger partnerships with regional school personnel and identify desirable and effective clinical and student teaching experiences, program data were collected and examined to evaluate the content and value of the clinical and student teaching classroom experiences for candidates in a dual preparation program.

Program data were collected using three measures that documented coherence/alignment and dual licensure candidates' experiences. The IPCSC provided evidence of the extent to which (a) professional standards and research-based practices integrated into the dual program were evident in schools providing clinical and student teaching experiences. The *Student Teaching Assessment Rubric* (STAR, 2012) provided evidence of competence during student teaching. Dual licensure candidates' perceptions of their ability to apply integrated knowledge and skills in general and special education professional standards during student teaching were assessed with the *Dual Student Teacher Self-Evaluation* (DSE). Each measure is described more fully in the following sections.

IPCSC.   The first stage of the study focused on examining the alignment of professional standards and research-based practices embedded in the dual program course content, and the identification of current school (e.g., School-wide Positive Behavior Interventions and Support, SWPBIS, Multi-tiered Systems of Support, MTSS) and classroom initiatives (e.g. effective co-teaching, use of research-based practices in content areas such as reading, math) for possible student teaching experience assignments. Driven by the assumption that for candidates to authentically refine and extend the knowledge and skills acquired in their preparation program they first needed to be assigned to quality student teaching experiences in schools and classrooms that were engaged in similar research-based practices. The IPCS, developed by our research team with guidance and feedback from school partners (e.g., Exceptional Children's Directors, School Administrators), was then used in the identification of schools in which professional standards and research-based practices embedded within the coursework of the dual program aligned with current regional school and classroom initiatives.

To assess content validity, the school partners, described previously, critiqued the instrument for word choice and content of specific items using a Wiki created for data collection. The instrument was revised based on partners' feedback. For example, descriptors were added to better explain each research-based practice/professional standard. Also, scoring was critiqued and reevaluated. Whereas initially each research-based practice/professional standard was rated as *clearly evident*, *not evident*, *needs more information*, and *evidence of criteria*, it was recommended that specific descriptors for each research-based practice/professional standard be rated to increase the reliability of the scoring.

The final instrument consists of three sections. Demographic information was collected in the first section. In the second section of the instrument, raters provided the following information about themselves relevant to the school: (a) name, (b) familiarity with school in terms of number of visits, and (c) capacity in which they became familiar with the school. The third section of the instrument included items representative of 3 categories and 9 professional standards/research-based practices (see Table 1). Internal consistency reliability estimates were .83 for the total scale and .60 for instructional responsiveness, .66 for collaboration, and .72 for inclusive leadership item categories. Inter-rater agreement of .80 was documented by dividing the number of agreements by the total number of checklists completed by two independent raters during the same year at the same site. The IPCSC technical manual and measure are available upon request.

TABLE 1
IPSCS Standards/Research-based Practices, and Item Distributions

Category	Professional Standard/Research-Based Practice
Collaboration (9 items)	Effective collaboration among general and special education teachers occurs on a regular basis using the models of co-teaching and consultation surrounding students' needs. (2 items)
	Systematic collaboration among general and special education teachers occurs regularly to address student needs using principles and practices of multi-tiered systems of academic support (RtI). (2 items)
	General and special education teachers participate in professional development opportunities affording opportunities to learn from one another (e.g., Professional Learning Communities (PLCs)). (2 items)
	Systematic collaboration among general and special education teachers occurs regularly to address student needs using principles and practices of multi-tiered systems of behavior support (PBIS). (3 items)
Instructional Responsiveness (4 items)	General education teachers demonstrate knowledge, skills and commitment to responding to the needs of diverse learners and increasing their classroom participation including students with disabilities and culturally and linguistically diverse students. (2 items)
	General and special education teachers possess knowledge and skills in the latest research/research based practices of instruction. (2 items)
Inclusive Leadership (7 items)	Administrators have mechanisms in place to support collaborative work among general and special education teachers on a regular basis. (3 items)
	Administrators provide leadership and support on a regular basis by being actively involved in significant school initiatives such As RtI, PBIS and inclusive, responsive instruction for all students. (2 items)
	Administrators provide leadership and support to general and special education teachers by being actively engaged in prereferral (RtI) and special education referral, evaluation and determination of eligibility and services on a regular and consistent basis. (2 items)

STAR.   The STAR is one of several college-level performance measures for assessment and is used to document competence during student teaching. It is completed on all candidates finishing teacher education programs including those enrolled in the dual and discipline specific programs (i.e., General Education, Special Education). The 32-item measure rates candidates on their *Knowledge* (i.e., Learner Development, Learning Differences, Content Knowledge),

Effectiveness (i.e., Learning Environments, Application of Content, Assessment, Planning for Instruction, Instructional Strategies), and *Commitment* (i.e., Professional Learning and Ethical Practice, Leadership and Collaboration). Multiple elements are scored within each category. The candidate's level of performance is rated on a scale of 0 through 3 during student teaching observations. A rating of 0 on any element indicates that the descriptors were not observed while a score of 3 suggests exceptional/distinguished performance. Internal consistency reliability estimates were .91 for the total scale and .83 for instructional knowledge .89 for effectiveness, and .66 for commitment item categories.

All student teachers purchased a copy of the STAR and reviewed it carefully before participating in final school-based experiences and evaluations. The cooperating teacher(s) and the university supervisor complete the STAR on four separate observations during the 15-week student teaching experience. Candidates also self-evaluate using the STAR. The final rating completed by the university supervisor is reported at the college level.

DSE.   The DSE is a researcher developed measure completed only by dual candidates. This measure gathers data on candidate perceptions regarding their ability to apply integrated knowledge and skills in general and special education professional standards and research-based practices during student teaching. Three cohorts of dual candidates ($N = 42$) have graduated. Again, dual candidate participants completing the DSE were predominately Caucasian females with high professional and overall GPAs.

The DSE captures a candidate's self-reflection. The 22-item measure has candidates rate the extent to which coursework and clinical experiences in the dual program prepared them to teach in inclusive settings using a five-point Likert scale (i.e., 1 = Strongly Disagree to 5 = Strongly Agree). The systematic and time intensive process used to develop the IPCSC described previously served as the basis for the development of this measure.

The DSE includes the same components as the IPCSC: Collaboration, Instructional Responsiveness, and Inclusive Leadership. Within each component, dual candidates rate their abilities to apply research-based practices/professional standards in student teaching sites. Examples of the 13 items rated within Collaboration include: (a) Implemented co-teaching best practices, (b) Successfully implemented the multi-tiered system of academic support process or followed the process related to student academic interventions and progress monitoring (i.e., continuous improvement), and (c) Demonstrated the ability to use data associated with evaluating the effectiveness of multi-tiered system of academic and/or behavior supports. Seven items are rated under Instructional Responsiveness such as: (a) Differentiated instruction, and (b) Implemented research-based reading instruction. Inclusive Leadership is comprised of items such as: Believed to be knowledgeable and had learned the skills to understand the administrator's level of involvement in pre- referral, eligibility determination, and/or the IEP process. To support content validity, the DSE was intentionally aligned with the research-based practices/professional standards of the IPCSC. Copies of DSE are available upon request.

Design and Data Analysis

A non-experimental multi-group research design was used to evaluate the extent to which program standards/practices aligned with current school initiatives and the extent to which candidates applied knowledge/skills in clinical experiences. Additionally, data from the STAR (2012) and the

DSE were examined to describe: (1) the dual candidates' perceptions of their abilities to apply their knowledge and skills, and, (2) confirm or deny the 'cohesiveness' among the dual preparation program and actual school and classroom practices found within their clinical and student teaching experiences.

IPCSC. Total scores on the IPCSC were analyzed to determine the frequency of schools identified as *Target, Acceptable,* and *Not Acceptable*. Descriptive statistics were used to document demographic variables and scores for *Target* and *Acceptable* schools. To investigate overall and component level differences (i.e., average scores for Collaboration, Instructional Responsiveness, Inclusive Leadership), we calculated and compared means, standard deviations, and *t* tests for independent samples; and, we evaluated effect sizes using criteria (i.e., small = .20, medium = .50, large = .80) suggested by Cohen (1988).

STAR. Analysis of variance (ANOVA) was employed to determine if the differences between scores for the candidates in the dual and discipline specific programs were statistically significantly different from zero (i.e., Special Education, General Education). *Post-hoc* testing using the Tukey test was used to identify differences between groups.

DSE. Descriptive statistics were calculated for each research-based practice/professional standard. A category score was calculated by summing the individual scores for each item within a category. A total score was obtained by summing the three category scores. Descriptive statistics were calculated per category and total scores.

RESULTS

We were interested in professional standards and research-based practices and dual teacher candidates' competence and perceptions of knowledge and application of skills. We describe our findings in the following two sections.

Professional Standards and Research-Based Practices

Forty-four (68%) of the schools obtained total scores that were considered *Target* (i.e., 31- 40) while the remaining sites (*n* = 21) obtained a score that were within the *Acceptable* range (i.e., 20-30). No IPCSCs were returned for schools that would have been considered *Not Acceptable*. Analysis of demographic variables indicated that *Target* schools were geographically diverse and located in urban (39%), suburban (52%), and rural (9%) settings. *Acceptable* sites also reflected schools in urban (24%), suburban (71%), and rural (5%) settings. Sites in both the *Target* and *Acceptable* ranges varied slightly in that 44% and 30% of the schools were identified as Title One settings, respectively. The majority (83%) of *Target* schools and 74% of the *Acceptabl*e sites provided a combination of co-teaching and resource settings. Co-teaching was the only EC setting reported by 8% of the *Target* schools.

TABLE 2
IPCSC Means, Standard Deviations, and Comparison Statistics for Target and
Acceptable Schools

Category	Target (n = 44)		Acceptable (n = 21)		t	ES
	M	SD	M	SD		
Collaboration (9 items, 18 pts)	15.27	2.04	11.00	1.64		
Effective Collaboration (3 items, 6 pts)	5.14	1.03	3.33	1.16		
Systematic Collaboration (2 items, 4 pts)	3.66	0.65	2.62	0.97		
Collaboration/PD and PLC (2 items, 4 pts)	3.34	0.78	2.57	0.75		
Collaboration/PBIS (2 items, 4 pts)	3.14	0.98	2.48	0.87		
Collaboration Component Score	**1.72**	**0.23**	**1.25**	**0.14**	**8.31***	**2.04**
Instructional Responsiveness (4 items, 8 pts)	7.41	0.84	6.10	1.26		
Instructional Diverse Learners (2 items, 4 pts)	3.66	0.53	3.00	0.84		
Instructional/Research-Based Practices (2 items, 4 pts)	3.75	0.62	3.10	0.77		
Instructional Responsiveness Component Score	**1.85**	**0.21**	**1.52**	**0.32**	**4.98***	**1.57**
Inclusive Leadership (7 items, 14 pts)	12.48	1.34	9.38	2.18		
Inclusive Leadership/Collaboration (3 items, 6 pts)	5.20	0.95	3.71	1.31		
Inclusive Leadership/School Initiatives (2 items, 4 pts)	3.70	0.59	3.05	0.83		
Inclusive Leadership/Pre- and Referral (2 items, 4 pts)	3.57	.82	2.76	1.14		
Instructional Leadership Component Score	**1.79**	**0.19**	**1.34**	**0.31**	**7.20***	**2.37**
Overall Total Score (20 items, 40 pts)	35.16	3.06	26.48	3.23	10.51*	2.84

Note. Professional Development (PD), Professional Learning Communities (PLC), Positive Behavior Intervention Support (PBIS); component scores represent average score of items belonging to each component; $ES = (M_{Target} - M_{Acceptable})/SD_{Target}$
*$p < .01$

As illustrated in Table 2, scores across Collaboration, Instructional Responsiveness, and Inclusive Leadership were consistently higher for Target schools and a significantly higher overall IPCSC total score (M = 35.16, SD = 3.06) was evident. Statistically significant differences and large effect sizes ranging from 1.57 to 2.37 were also documented for component scores.

Competence and Perceptions of Knowledge and Skills

Star.   Analyses of data for the first three cohorts of dual candidates and randomly selected comparison groups from discipline specific programs revealed statistically significant differences on approximately one-third of the elements rated on the STAR (see Table 3). *Post-hoc* analyses indicated that dual candidates scored significantly higher than their general education and special education peers on the following elements of *Effectiveness*: Establishes Expectations for Behavior, Establishes Criteria and Provides Assessment Feedback, Monitors and Adjusts Lesson Plans (to Meet and Enhance Student Progress toward Goals), Collaborates and Plans with Other Professionals, and Develops Higher Order Thinking Skills in Students. In comparison to counterparts completing student teaching in special education, dual candidates scored significantly higher on these elements of *Knowledge, Effectiveness*, and *Commitment*: Makes Content Relevant and Accessible to All Learners, Teachers Connect Concepts, Assumes the Professional Roles and Maintains High Ethical Standards, Exhibits Leadership and Collaboration in Professional Settings, Communicates with Families. Dual candidates also scored significantly higher than their general education peers on a *Knowledge* element (i.e., Individualizes the Instructional Environment) as well as one *Effectiveness* element (i.e., Manages Time and Materials).

DSE.   Means and standard deviations calculated for the total score, category scores (i.e., Collaboration, Instructional Responsiveness, Inclusive Leadership), and each research-based practice/professional standard (see Table 4) indicated that candidates in the dual preparation program agreed or strongly agreed that they demonstrated the ability to apply research-based practices/professional standards in their student teaching placements. Individual items within the category of Instructional Responsiveness received consistently high ratings for an overall category rating of Strongly Agree. Ratings of individual items within the categories of Collaboration and Inclusive Leadership showed some variability, however they still resulted in overall category ratings of Agree. The total score for the DSE was also rated as Agree (e.g, Mean= 4.06 on 5-point scale).

TABLE 3
Means, Standard Deviations, and Comparisons for Selected Elements on Star

Elements	General Ed (GE; $n = 30$)		Special Ed (SE; $n = 27$)		Dual Ed (DE; $n = 42$)			
	M	SD	M	SD	M	SD	F	Follow-Up
K1a: Individualizes Environment	2.33	0.48	2.59	0.50	2.71	0.46	5.66*	DE>GE
K2a. Content Knowledge	2.63	0.49	2.26	0.45	2.60	0.50	5.29*	GE>SE DE>SE
K2d: Content Relevant and Accessible	2.63	0.49	2.37	0.49	2.79	0.42	6.70*	DE>SE
E1a. Manages Time & Materials	2.57	0.50	2.70	0.47	2.83	0.38	3.19*	DE>GE
E1b: Expectations for Behavior	2.37	0.49	2.41	0.50	2.71	0.46	5.72*	DE>GE DE>SE
E2a Connects Concepts	2.67	0.48	2.41	0.51	2.69	0.47	3.20*	DE>SE
E3b: Criteria & Assessment Feedback	2.17	0.38	2.30	0.47	2.60	0.50	8.43*	DE>GE DE>SE
E4a. Develops Plans Aligned with State & District Curriculum	2.93	0.25	2.59	0.50	2.93	0.26	9.63*	DE>SE GE>SE
E4b: Monitors & Adjusts Lesson Plans	2.67	0.48	2.52	0.51	2.93	0.26	8.83*	DE>GE DE>SE
E4c. Collaborates and Plans with Professionals	2.37	0.49	2.48	0.51	2.81	0.40	9.12*	DE>SE DE>GE
E5b: Develops Higher Order Thinking Skills	2.20	0.41	2.19	0.40	2.50	0.51	5.66*	DE>GE DE>SE
C1a: Assumes Professional Role & Maintains High Ethical Standards	2.83	0.38	2.63	0.50	2.90	0.30	4.33*	DE>SE
C1b: Completes Student Teaching Responsibilities	2.67	0.48	2.52	0.51	2.81	0.46	3.09*	DE>SE
C2a: Exhibits Leadership & Collaboration	2.23	0.43	2.04	0.52	2.48	0.51	6.89*	DE>SE
C2b: Communicates with Families	2.23	0.51	2.11	0.58	2.48	0.51	4.35*	DE>SE

DISCUSSION

Criticisms of teacher preparation programs being disconnected from the realities of classrooms has prevailed for decades (AACTE, 1976, 2010; CAEP, 2013; NCATE, 2010; NCTQ, 2013, 2014,

Sarason et al., 1962). Specifically, teacher educators are being challenged to rethink traditional structures and transform preparation programs to better reflect the realities of K-12 education today. The NCATE Blue Ribbon Report (2010), NCTQ Teacher Prep Review (2013, 2014) and the latest CAEP accreditation standards (2018) identify the inclusion of extensive and well-thought-out clinical experiences in which candidates have numerous opportunities to apply and hone their knowledge of content and pedagogy under the watchful supervision of highly qualified, expert practitioners, as significant components of reformed teacher preparation programs. The identification and use of quality clinical field placements is a critical connection to transforming teacher preparation, particularly dual programs in which candidates are expected to demonstrate proficiency in general and special education knowledge and skills as prerequisite to graduation.

Using multiple perspectives, this study sought to document similarities and differences in research-based practices across districts serving as student teaching sites and their relationships with competence and perceptions for candidates in in a dual-certification program. Our results suggest there are differences in the extent to which sites are implementing research-based practices and professional standards that align with preferred preparation program content and identifying student teaching placements that do plays an important role in the extent to which teacher candidates develop their knowledge and skills. Sites that scored within the *Target* range were reported to consistently demonstrate the research-based practices/professional standards that are reflective of high quality, collaborative learning environments according to the literature. These sites were considered "model" clinical and student teaching experiences for dual candidates in that they were tightly aligned with the knowledge and skills being taught in the dual preparation program. Designation as an *Acceptable* site suggests that these schools demonstrated many of the research-based practices/professional standards. These sites also served as appropriate student teaching placements for candidates enrolled in the dual program, especially considering that it may be idealistic to identify a "model" clinical placement for thirty candidates during one semester.

Ideally, identification of clinical and student teaching experiences purposefully aligned with the content (or pedagogy) of the dual preparation program, should result in candidates being able to refine and expand their knowledge and skills as they progress to program completion. Pedagogy combined with opportunities to apply knowledge and skills with support from expert teachers during the student teaching experience were related to dual candidates' competency on the STAR including several elements of *Knowledge, Effectiveness*, and *Commitment*.

Additionally, our data suggest that dual candidates perceived they were prepared to, provided with the opportunity, and demonstrated the ability to apply the research-based practices/professional standards taught within their program. Collectively, we believe these outcomes support the value of "cohesiveness" and "contextual fit" between dual preparation program content and clinical experiences.

TABLE 4
Means and Standard Deviations for Dual Student Teacher Self Evaluation

Item[a]	M (SD)	Rating[b]
Collaboration (13 items/65 pts maximum	**51.50 (6.02)**	(M = 3.96)
Implemented co-teaching	3.93 (1.00)	
Participated in shared instructional planning	4.63 (0.54)	
Discussed effectiveness of co-teaching	3.90 (0.90)	
Collaborated on committees (e.g., RtI, PBIS)	3.93 (1.10)	
Receptive to feedback-collaboration on committees	4.30 (1.04)	
Understand multi-tiered systems of academic support	4.03 (1.03)	
Implement multi-tiered systems of academic support	3.55 (1.32)	
Observed or participated in PLCs	4.25 (0.71)	
Observed or participated in PD	4.53 (0.60)	
Prepared to implement PBIS	3.55 (1.11)	
Receptive to feedback-implementing PBIS	3.75 (1.19)	
Implemented PBIS Universal School Wide Plan	3.60 (1.17)	
Evaluated the effectiveness of RtI &/or PBIS	3.58 (0.75)	
Instructional Responsiveness (8 items/40 pts maximum)	**33.10 (3.86)**	(M = 4.12)
Differentiated instruction	4.53 (0.51)	
Receptive to feedback-differentiated instruction	4.73 (0.45)	
Used technology/resources to meet diverse needs	4.54 (0.51)	
Receptive to feedback-use of technology to meet needs	4.75 (0.44)	
Implemented research-based reading instruction	4.43 (0.50)	
Receptive to feedback-research based reading instruction	4.58 (0.50)	
Implemented research-based math instruction	4.08 (1.10)	
Receptive to feedback-research based math instruction	4.20 (1.24)	
Inclusive Leadership (2 items/10 pts maximum)	**8.73 (1.24)**	(M = 4.37)
Knowledge of administrator's involvement (e.g., IEP)	4.12 (0.79)	
Weekly faculty meetings	4.60 (1.13)	
Dual Self-Evaluation Total (23 items/110 pts maximum)	**93.33 (8.78)**	(M = 4.06)

Note. [a]RtI=Response to Intervention, PLC=Professional Learning Communities, PD=Professional Development, PBIS=Positive Behavioral Intervention Support
[b]Ratings based on a 5-point Likert-scale (1 = Strongly Disagree to 5 = Strongly Agree)

Limitations

Our schools were diverse and located across urban, suburban, and rural settings. Participants in the study were also diverse and included school and district professionals, university faculty, graduate students, and preservice teachers across disciplines. While wide-ranging characteristics may be considered a strength in supporting generalization, our sample size was relatively small and our work was completed at a single institution. In addition to potential limits in our sampling and overall analyses, our measurement was primarily self-reported responses. A variety of professionals who had significant familiarity with the schools completed the IPCSCs. A professional's assessment of practices found within a school may have been influenced by a variety of factors (e.g., role, responsibilities, professional training, and experience). Familiarity with the school may have resulted in an "inflation" of the ratings to portray the site in a positive manner.

Schools rating themselves as no evidence on several items yielding a total score within the *Not Acceptable* range may have been reluctant to return completed checklists. Finally, the selection of research-based practices and professional standards used to develop the IPCSC were aligned specifically with the dual preparation program content at one urban university. The practices and standards included in the IPCSC were not intended to be exhaustive of the literature and there may be additional practices/standards necessary for coherence/alignment with other clinical placements.

IMPLICATIONS FOR IMPROVEMENT OF RESEARCH AND PRACTICE

There are several implications for future research and the improvement of practice. First, it will be important to replicate findings associated with this study. Second, the process of weighting research-based practices/professional standards may need to be considered with respect to scoring in order to reflect practices/standards most indicative of desired sites for dual preparation clinical and student teaching placements. Another direction for future research is to examine the reliability and validity of ratings compared to systematic observations.

CONCLUSIONS

Our results support the value of weaving core professional standards and research-based practices with quality clinical experiences for teacher candidates. Our work provides evidence that supports the value of quality clinical experiences aligned with the core professional standards and research-based practices taught to candidates in their dual preparation program. Faculty and school partners identified quality clinical schools for candidates where the research-based practices and professional standards implemented daily were indeed reflective of the content and pedagogy acquired throughout their dual teacher preparation program. Transition from traditional teacher preparation structures to innovative programs that integrate disciplines, purposely infuse clinical experiences that are "…carefully chosen to support the ideas presented in simultaneous, closely interwoven course work" (Darling-Hammond, 2006, p. 305) is essential to authentic reform. The notion of 'clinically-based' models of teacher preparation is not however, without challenges. Investigations focusing on alignment among teacher preparation content and clinical school and classroom practices are critical to narrowing the apparent 'gap' between how we prepare candidates to teach and the realities of today's classrooms and students' academic and social needs. Defining what constitutes 'quality' clinical experiences requires thoughtful discourse among faculty and school partners, followed with identification of school placements that are a 'good fit' in terms of coherence/alignment of district and school initiatives and the practices/standards teacher candidates are being assessed on in fulfillment of their preparation program.

REFERENCES

Association for Childhood Education International (ACEI). (2007). *Association for childhood education international: Elementary education standards and supporting explanation*. Retrieved from http://caepnet.org/accreditation/caep-accreditation/spa-standards-and-report-forms/acei

American Association of Colleges of Teacher Education (AACTE). (1976). *Education for the profession of teaching*. Washington, DC: Author.

American Association of Colleges of Teacher Education (AACTE). (2010). *Reforming teacher preparation: The critical clinical component*. Washington, DC: Author.

Bettini, E., Benedict, A., Thomas, R., Kimerling, J., Choi, N., & McLeskey, J. (2017). Cultivating a community of effective special education teachers. *Remedial & Special Education, 38*, 111-126. doi:10.1177/0741932516664790

Bondy, E., & Ross, D. D. (2005). *Preparing for inclusive teaching: Meeting the challenges of teacher education reform.* Albany, NY: State University of New York Press.

Brock, C. H., Case, R., & Taylor, S. S. (2013). Dilemmas in guiding pre-service teachers to explore literacy instruction and diversity. *Teacher Education Quarterly*, *40*(1), 81-100.

Brown, K. S., Welsh, L. A., Hill, K. H., & Cipko, J. P. (2008). The efficacy of embedding special education instruction in teacher preparation programs in the United States. *Teaching and Teacher Education*, *24*, 2087-2094.doi: 10.1016/j.tate.2008.02.013

Brownell M. T., Sindelar P. T., Kiely M. T., & Danielson L. C. (2010). Special education teacher quality and preparation: Exposing foundations, constructing a new model. *Exceptional Children*, *76*, 357-377. doi:10.1177/0014402915598782

Cochran-Smith, M., & Fries, K. (2005). Researching teacher education in changing times: Politics and paradigms. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education* (pp. 69-109). Mahwah, NJ: Erlbaum.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Council for the Accreditation of Educator Preparation (CAEP). (2018). *The CAEP standards*. Retrieved from http://caepnet.org/standards/introduction

Council for Exceptional Children (CEC). (2015). *CEC initial and advanced preparation standards*. Retrieved from https://www.cec.sped.org/Standards/Special-Educator-Professional-Preparation-Standards/CEC-Initial-and-Advanced-Preparation-Standards

Cuthrell, K., Stapleton, J. N., Bullock, A. A., Lys, D. B., Smith, J. J., & Fogarty, E. (2014). Mapping the journey of reform and assessment for an elementary education teacher preparation program. *Journal of Curriculum & Instruction*, *8*(1), 67-85. doi:10.3776/joci.2014.v8n1p67-85

Darling-Hammond, L. (2006). Constructing 21st century teacher education. *Journal of Teacher Education*, 57, 300-314. doi: 10.1177/0022487105285962

Darling-Hammond, L. (2012). The right start: Creating a strong foundation for the teaching career. *Kappan*, *94*(3), 8-13. doi:10.1177/003172171209400303

Darling-Hammond, L. (2014). Strengthening clinical preparation: The holy grail of teacher education. *Peabody Journal of Education*, *89*, 547-561. doi:10.1080/0161956X.2014.939009

DeLuca, C. (2012). Selecting inclusive teacher candidates: Validity and reliability issues in admission policy and practice. *Teacher Education Quarterly*, *39*(4), 7-31.

Duncan, A. (2009, October 22). Teacher preparation: Reforming the uncertain profession. U.S. Department of Education. Retrieved from http://www.ed.gov/news/speeches/teacher-preparation-reforming-uncertain-profession

Every Student Succeeds Act of 2015. (2015, December 10). Retrieved from http://www.ed.gov/ESSA

Feng L., & Sass T. R. (2013). What makes special-education teachers special? Teacher training and achievement of students with disabilities. *Economics of Education Review*, *36*, 122-134. doi:10.1016/j.econedurev.2013.06.006

Fullerton, A., Ruben, B. J., McBride, S., & Bert, S. (2011). Evaluation of a merged secondary and special education program. *Teacher Education Quarterly*, *38*(2), 45-60.

Individuals with Disabilities Education Improvement Act of 2004 (IDEA), Pub.L.No.108-446, 118 Stat. 2647 (2004), [Amending 20 U.S.C. § § 1400 et seq.].

Jenkins, A. A., Pateman, B., & Black, R. S. (2002). Partnerships for dual preparation in elementary, secondary, and special education programs. *Remedial and Special Education*, *23*(6), 359-371. doi:10.1177/07419325020230060601

Kalogrides D., & Loeb S. (2013). Different teachers, different peers: The magnitude and effects of student sorting within schools. *Educational Researcher*, *42*, 304-316. doi:10.3102/0013189X13495087

Kalogrides D., Loeb S., & Beteille T. (2013). Systematic sorting: Teacher characteristics and class assignments. *Sociology of Education*, *86*, 103-123. doi:10.1177/0038040712456555

Kamens, M. W. (2007). Learning about co-teaching: A collaborative student teaching experience for preservice teachers. *Teacher Education and Special Education*, *30*(3), 155-166. doi:10.1177/088840640703000304

Kent, A., & Giles, A. (2016). Dual certification in general and special education: What is the role of field experience in preservice teacher preparation? *The Professional Educator*, 40(2), 1-14.

Mason-Williams, L., Bettini, E., & Gagnon, J. C. (2017). Access to qualified special educators across elementary neighborhood and exclusionary schools. *Remedial and Special Education*, *38*, 297-307. doi:10.1177/0741932517713311

National Center for Education Statistics (NCES, 1999). The condition of education, 1999. *Institute of Education Sciences*. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=1999022

National Council on Teacher Quality (NCTQ). (2013). *Teacher prep review 2013 report.* Washington, DC: Author.

National Council on Teacher Quality (NCTQ). (2014). *Teacher prep review 2014 report.* Washington, DC: Author.

National Council of Accreditation for Teacher Education (NCATE). (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers*. Report of the Blue Ribbon Panel. Washington, DC: Author.

O'Hara, S., & Pritchard, R. H. (2008). Meeting the challenge of diversity: Professional development for teacher educators. *Teacher Education Quarterly*, *35*(1), 43-61.

Office of Field Experiences, (2012). *Student teaching and graduate internship assessment rubric (STAR).* (2nd ed.). Dubuque, IA: Kendall/Hunt.

Pugach, M. C., & Blanton, L. P. (2012). Enacting diversity in dual certification programs. *Journal of Teacher Education*, *63*(4), 254-267. doi:10.1177/0022487112446970

Pugach, M. C., Blanton, L. P., & Correa, V. (2011). An historical perspective on the role of collaboration in teacher education reform: Making good on the promise of teaching all students. *Teacher Education and Special Education*, *34*(3), 183-200. doi:10.1177/0888406411406141

Rueda, R., & Stillman, J. (2012). The 21st century teacher: A cultural perspective. *Journal of Teacher Education*, *63*, 245-253. doi:10.1177/0022487112446511

Sands, D. I., Duffield, J. A., & Parsons, B. A. (2006). Evaluating infused content in a merged special education and general education teacher preparation program. *Action in Teacher Education*, *28*, 92-103.

Sarason, S., Davidson, K., & Blatt, B. (1962). *The preparation of teachers: An unstudied problem in education*. New York, NY: Wiley.

Sobel, D., Iceman-Sands, D., & Basile, C. (2007). Merging general and special education teacher preparation programs to create an inclusive program for diverse learners. *New Educator*, *3*(2), 241-262.

Stoddard, K., Braun, B., Hewitt, M., & Koorland, M. A. (2006). Teachers for all children: A combined elementary and special education teacher preparation program and three year evaluation. *International Journal of Special Education*, *21*, 219-234. https://doi.org/10.1177%2F0888406411404569

The Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning (NCATE, 2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers.* Washington, DC: Author.

Utley, B. L. (2009). An analysis of the outcomes of a unified teacher preparation program. *Teacher Education and Special Education*, *32*(2), 137-149. doi:10.1177/0888406409334204

Van Laarhoven, T. R., Munk, D. D., Lynch, K., Bosma, J., & Rouse, J. (2007). A model for preparing special and general preservice teachers for inclusive education. *Journal of Teacher Education*, *58*(5), 440-455. doi:10.1177/0022487107306803

Whitford, B. L., & Villaume, S. K. (2014). Clincial teacher preparation: A retrospective. *Peabody Journal of Education*, *89*, 423-425. doi:10.1080/0161956X.2014.938590

Yanhui, P. (2013). Preparing culturally competent preK-12 educators. *New England Reading Association Journal*, *49*, 77-80.