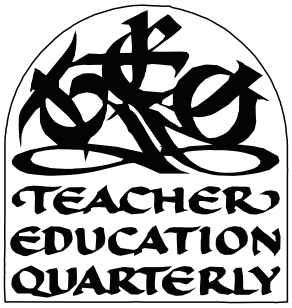

The Difference Explicit Preparation Makes in Cooperating Teacher Practice

Karen Elizabeth Lafferty

Abstract

The lack of preparation for cooperating teachers is a long-standing problem in teacher education, as is the haphazard nature and quality of field experiences. This study of 119 preservice and 146 cooperating teachers in 10 university-based credentialing programs in California examined the difference preparation made in how cooperating teachers enacted their role, as well as the relationship between preservice teachers' perceptions of cooperating teacher practice and their ratings of their field experience. A significant finding was that cooperating teachers who received preparation for their role reported greater enactment of practices overall and in particular practices related to prompting reflection and goal setting. Preservice teachers' field ratings strongly correlated to their perceptions of cooperating teacher practice. Implications are for design and implementation of professional development for cooperating teachers to improve field experience quality.

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Introduction

University-based teacher education programs rely on cooperating teachers to provide a meaningful field experience rooted in the day-to-day practicalities of the classroom. Part of what differentiates traditional programs from alternative credentialing pathways is placement with an experienced classroom teacher. Whereas university supervisors and faculty may offer theoretical perspectives on education, both preservice and cooperating teachers view student teaching as where people learn about the real life of schools and children (Leatham & Peterson, 2010; Zanting, Verloop, Vermunt, & Van Driel, 1998). Studies consistently identify cooperating teachers as the actors with the most influence during the field experience because they serve as socializing agents, gatekeepers to the profession, and role models—for both good and bad practice (Clarke, Triggs, & Nielsen, 2014; Guyton & McIntyre, 1990; Wang & Odell, 2002). Preservice teachers often accept their cooperating teachers as experts in all aspects of teaching—as well as in teaching others to teach.

Despite persistent emphasis on the importance of the field experience and its influence on preservice teachers, the lack of preparation for cooperating teachers is well documented (Butler & Cuenca, 2012; Clarke et al., 2014). Universities rely on classroom teachers serving as teacher educators yet do not prepare them for that role. One reason is the belief that teacher education is a "self-evident" activity, or one that any teacher can do (Zeichner, 2005). Another is that inservice teachers report relying on their own student teaching experience for strategies (Koerner, 1992; Wang & Odell, 2002). Cooperating teachers also have minimal time to attend professional development, especially in light of increased demands and decreased compensation for their work as teacher educators (Fives, Mills, & Dacey, 2016). Although the 2011 National Council on Teacher Quality report on student teaching made several recommendations about cooperating teacher selection, it remained silent on the issue of training (Greenberg, Walsh, & McKee, 2015). This view of educating teachers—from different voices in the credentialing arena—as a self-evident activity contributes to a laissez-faire approach to preparing cooperating teachers for their role. The assumption that experienced teachers of children can also be teachers of teachers thus constrains the potential effectiveness of the field experience. A status quo that takes a hands-off approach to ensuring quality placements and preparation for cooperating teachers leaves open the question of relevance in the current context for teacher education.

The absence of formal preparation for cooperating teachers becomes a more pressing problem in light of new credentialing requirements and, in particular, the adoption of performance-based assessments like the edTPA. University professors have begun responding to the need to support preservice teachers in reflection on their practice, recognizing that mere imitation of teaching strategies is not sufficient in the new context for teacher preparation; novice teachers need to reflect on instructional decisions and plan for future instruction (Lit & Lotan, 2013; Peck, Gallucci, & Sloan, 2010). Preservice teachers, however, look more to their coop-

erating teachers—who were prepared for the classroom in a different time—for guidance in learning to teach. One way to address this gap in reflective practice is to provide explicit preparation for cooperating teachers. Professional development for cooperating teachers, especially with a focus on supporting reflection, has the potential to improve the quality of the field experience for credential candidates.

Improving quality is especially important given challenges from fast-track alternatives to teacher certification that bypass the field experience and thus the cooperating teacher. Although alternative programs like Teach for America (TFA) credential only a small number of teachers, the threat to traditional, university-based programs lies in the framing of the challenge. As Heilig and Jez (2010) explained, proponents of TFA "see the current pool of teachers as a major contributor to the failures of today's schools" (p. 12). This pool of teachers, which includes potential cooperating teachers, is viewed not as a resource but as an impediment to improving teacher education and teacher quality (Kumashiro, 2010). Research on teacher effectiveness has indicated few differences in quality between teachers participating in alternative and traditional pathways to the classroom, suggesting that fast-track routes may do as well as programs involving cooperating teachers in preparing teachers (Boyd, Goldhaber, Lankford, & Wyckoff, 2007; Boyd et al., 2006). Because student teaching assignments have been haphazard, and perhaps without regard to placement with effective cooperating teachers, some of these critiques may be warranted (Hoff, 2013). One way for university-based programs to address these concerns and remain relevant is by offering high-quality field placements that include professional development and preparation for the most influential actor in teacher preparation: the cooperating teacher.

This study examined the difference various factors (e.g., training, grade level, years of experience) made in cooperating teachers' practice. The purpose was to identify factors contributing to any differences in how cooperating teachers enacted their roles and whether differences in cooperating teacher practice could account for differences in how preservice teachers rated their field experience. The research questions were thus:

1. What are the significant contributing factors to cooperating teachers' enactment of practices?

2. What is the relationship between preservice teachers' perceptions of cooperating teacher practice and their rating of the field experience?

Understanding significant factors in enactment of practices could inform design of professional development, particularly in making the most effective use of cooperating teachers' time and given limited resources from the university. Identification of those factors and practices most strongly correlated to preservice teachers' ratings of the quality of their field experience would further inform design by directing preparation toward practices that make the greatest difference.

Theoretical Framework

Part of the challenge in defining quality field experiences lies in differing conceptions of what it means to act as a cooperating teacher. Many perceive their role in a strictly functional way—providing a place for preservice teachers to practice (Feiman-Nemser, 1998; K. M. Hall, Draper, Smith, & Bullough, 2008; Koerner, 1992; Leatham & Peterson, 2010). Other research studies have revealed an expectation that preservice teachers mimic cooperating teacher practice (Graham, 2006; Hamman, Fives, & Olivarez, 2007). Cooperating teachers who leave preservice teachers to "sink or swim" or who simply expect imitation of their own practice engage differently than those who provide feedback, prompt reflection, and share their own rationales about teaching decisions (Graham, 2006; Valencia, Martin, Place, & Grossman, 2009). Leatham and Peterson (2010) characterized this difference as the gap between looking like a teacher and thinking like one. If cooperating and preservice teachers believe it is sufficient to know how to run a classroom without knowing how to help children learn, then they are less likely to value elements of the field experience that promote reflection. These distinctions between the technical and the reflective stances in teacher preparation date back to John Dewey (1904) and surface today in debates between tricks-of-the-trade approaches (e.g., Teach Like a Champion, No-Nonsense Nurturer) and ones that value teaching as a thinking and learning profession. One way to approach this distinction is through the framework of cognitive apprenticeship.

Cognitive apprenticeship theory suggests how experts socialize novices into a community of practice where much of the knowledge must be made explicit through externalizing the internal aspects of practice (e.g., decision making) that would otherwise remain hidden (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991). Theories of learning as a social practice and cognitive apprenticeship explain how cooperating teachers perceive and enact their roles as they socialize preservice teachers into the language, culture, and identity of K–12 educators, helping them develop skills and knowledge within a specific context (Lave & Wenger, 1991). This socialization can occur on a surface level—with preservice teachers becoming capable mimics—or on a deeper level as experts verbalize their thinking so novice educators can gain access to models for how to reflect on teaching decisions.

As Stalmeijer (2015) explained, the metacognition of experts becomes available to novices through activities grounded in practice and social context, or in the case of teacher education, during the field experience. Brown, Collins, and Newman (1989) identified six components—modeling, coaching, scaffolding, articulation, reflection, and exploration—that are sequenced for increasing complexity as novices move toward more central participation in the community of practice (Lave & Wenger, 1991). In the field experience, cognitive apprenticeship practices have the potential to help preservice teachers understand not simply the external components of teaching but also the reflective aspects of learning in and from practice (Feiman-Nemser, 2001).

Described as educative mentoring by Feiman-Nemser (1998), practices like prompting reflection, helping novices set goals, and giving rationales for teaching decisions also provide scaffolds into the kinds of thinking required by performance assessments such as the edTPA. Unfortunately, without explicit preparation, cooperating teachers tend to default to forms of mentoring that emphasize affective and technical support rather than critical feedback and reflection (Wang & Odell, 2002). Although transmission of knowledge of how to run a classroom may look like success, in a changing landscape of teacher preparation, mere imitation of practice may no longer suffice and represents a lost opportunity to distinguish traditional, university-based programs from those that dispense with field placements with an experienced educator.

Literature Review

Much of the literature on cooperating teachers has focused on a priori qualities (e.g., Killian & Wilkins, 2009) or questions of selection (e.g., Glenn, 2006) rather than preparation or training for their role. Studies of student teacher perceptions have tended to examine affective elements in the field experience (e.g., Hamman & Romano, 2009) or mentoring perspectives (e.g., Dawson, 2014) rather than inquiring about specific practices. This review presents studies related to preparation for the cooperating teacher role—specifically what participants have wanted to learn—and the influence of this preparation on practice. Recommendations for training have circulated for decades (Guyton, 1989) and have resurfaced in recent years, yet empirical studies of implementation (Crasborn, Hennissen, Brouwer, Korthagen, & Bergen, 2010) have been scarce, as have been program descriptions (D. M. Hall, Hughes, & Thelk, 2017) and research on the relationship between preparation and practice. Broad agreement exists, however, that cooperating teachers play a critical role in preparing new teachers.

Haphazard Preparation for Cooperating Teachers

Researchers have pointed to the lack of preparation for cooperating teachers as a persistent weakness in preservice teacher education (Butler & Cuenca, 2012; Clarke et al., 2014). Although Clarke (2001) found that only 15% of the 778 cooperating teachers in his study had received no training for their role, the nature and duration of their preparation varied; most reported attending in-school meetings, a workshop, or a university course. Fives et al. (2016) also found that whereas most cooperating teachers were offered some type of training, it mostly consisted of meeting attendance and personal contact with university personnel. Despite long-standing recommendations for more formal professional development (Gareis & Grant, 2014; Giebelhaus & Bowman, 2002; Guyton, 1989), research on preparation for cooperating teachers and studies of its effectiveness have been scant. This haphazard approach in practice and research leaves open questions as

to the most important factors in preparing cooperating teachers for their role and what makes the most difference in their work with preservice teachers, which are prerequisites to designing effective professional development.

Tensions in Preparation for Cooperating Teachers

Researchers have focused more on cooperating teachers' perspectives and role in teacher preparation, finding differences and tensions. Kahn's (2001) interviews with 20 cooperating teachers revealed a desire for more professional development and an expanded role as teacher educators. Black, Olmsted, and Mottonen (2016) reported that cooperating teachers wanted to understand their role and learn how to have difficult conversations with their student teachers as well as learn about logistics (e.g., how to complete observation forms). This tension between acting in a broader sense as a teacher educator and knowing how to handle technical tasks represents a degree of confusion about the cooperating teacher role. Clarke and Jarvis-Selinger (2005) recommended that universities take into account the varying perspectives of cooperating teachers and respect the ways in which they conceive of their role (e.g., nurturing, technical).

Other tensions concern training delivery and content. In what they described as a pilot study, Childre and Van Rie (2015) designed a hybrid mentor teacher training program that consisted of one 6-hour face-to-face session and four 6-hour self-paced, online modules. Topics included program requirements, response to intervention, universal design for learning, and classroom management. Feedback was largely positive, although participants requested fewer hours. In their study of physical education teachers, Wright et al. (2006) reported that participants found the training helpful but wanted more "hands-on" activities, such as case studies, practice scoring of video observations, and role-playing. More recently, D. M. Hall and colleagues (2017) described a university–school district partnership to provide training to co-operating teachers. On the basis of stakeholder feedback and school needs, a 2-day workshop addressing topics like feedback, data-driven conversations, and the new teacher experience was developed. A majority of the 60 participants identified types of feedback as one of the most important ideas (88.3%) from the workshop; however, pre- and postassessment data did not support a significant increase in self-efficacy in mentorship. The authors suggested that this was due to the workshop's limited length (D. M. Hall et al., 2017). One example of a successful partnership was described by Tunney and van Es (2016) as they sought to establish a shared understanding between university supervisors and cooperating teachers through collaborative construction and implementation of a shared observation protocol tool. Drawing on a formative intervention model of professional development (Engeström, 2011), the researchers used video clips first to prompt discussion around problems of practice and mentoring and then to develop and refine an observation protocol based in five mathematical practices. This led to agreement by the cooperating teachers to model the teaching

practices for their preservice teachers the subsequent fall. These tensions between a desire for an expanded role and limited time, learning about program logistics and engaging in hands-on activities, and university and district priorities require a careful balancing act as universities consider how to design and implement professional development.

Research on Effects of Preparation

A limited number of studies prior to D. M. Hall et al. (2017) examined the effects of preparation on cooperating teacher practice or preservice teacher performance. Daane and Latham (1998) described an effort to tighten the relationship between teaching strategies taught in methods courses and those modeled in field placements through five 2-hour sessions for cooperating teachers. They reported an increase in use of the strategies, commenting that participants especially appreciated the ability to provide feedback on the sessions and in student teacher evaluations. In considering feedback provided directly to preservice teachers, Wright and colleagues (2006) had suggested comparison of observation conferences to look for differences between trained and untrained cooperating teachers, an approach taken by Crasborn et al. (2010). Crasborn et al. described the Skills for Mentor Teachers to Activate Reflection in Teachers (SMART) program, which included training, peer consultation, and coaching in nine sessions during a 3-month period. The 30 participants learned specific tools in encouraging reflection (e.g., asking specifying questions) and then used a push-button device to mark reflective moments in later discussions with their preservice teachers. Analysis and comparison of dialogues before and after SMART training revealed that cooperating teachers identify more reflective moments after training and also use more strategies, such as "asking for concreteness" and "summarizing content." Crasborn et al. concluded that training had resulted in greater awareness of reflective moments and use of mentoring skills. These studies have suggested that even when limited in duration, preparation can make a difference in cooperating teacher practice.

Other researchers have looked for differences in preservice teacher performance. Giebelhaus and Bowman (2002) compared videotaped observations of preservice teachers whose cooperating teachers had received the standard training to those who received an additional 30 hours of preparation. Preservice teachers whose cooperating teachers received the additional training had statistically significant higher scores on 11 of 19 criteria. Gareis and Grant (2014) described a 9-month graduate-level course for cooperating teachers who were recommended to become clinical faculty. The course included summer and school-year sessions where participants learned about setting expectations for preservice teachers, observing instruction, and using coaching strategies. In comparing feedback on cooperating teachers (the control group) to the trained clinical faculty, Gareis and Grant found that training led to better evaluations for their preservice teachers, even though the

clinical faculty themselves tended to rate preservice teachers lower than untrained cooperating teachers. The researchers attributed this result in part to "feedback that is honest, timely, specific, accurate, and constructive" (Gareis & Grant, 2014, p. 86), concluding that training for cooperating teachers made a crucial difference. In one of the first studies to examine the effect of cooperating teacher training on candidate performance on the edTPA, Chizhik, Chizhik, Close, and Gallego (2017) described a model of student teaching supervision that embedded lesson-study groups consisting of two preservice teachers, their cooperating teachers, and a university liaison in the field experience. Preservice teachers who participated in the lesson study model scored significantly higher on two subsections of the edTPA, Planning to Support Varied Student Learning Needs and Analysis of Student Learning. The researchers attributed this difference in part to construction of a shared understanding of teaching practice. These studies indicated that cooperating teacher preparation is a factor in improved preservice teacher performance.

Although researchers are beginning to take up the call for implementation and study of professional development for cooperating teachers, what is less clear is what particular differences preparation makes in their practice and preparation's importance relative to other factors. This study responds to that gap in the literature and connects cooperating teacher practice to preservice teachers' perceptions of the quality of their field experience.

Method

This study, part of a larger investigation into cooperating teacher practice, drew on survey data from 10 university-based credentialing programs in California. On behalf of the principal investigator, credentialing programs sent recruitment e-mails with links to a survey to preservice teachers in their final field placement and to their cooperating teachers.

Sample

In 2014–2015, the year of the study, universities credentialed 73.8% of new teachers in California, 64.4% in traditional programs and 9.4% via intern pathways (California Commission on Teaching Credentialing [CTC], 2016). Of those, 49.0% were prepared at California state universities (CSU), 7.9% at the University of California (UC), and 43.1% at private universities (CTC, 2016). The sample of 119 preservice teachers roughly mirrored these percentages, with 40.0% prepared at CSUs, 10.0% at UCs, and 50.0% at private universities. Of the 146 cooperating teachers, 41.8% worked with a preservice teacher affiliated with a CSU, 13.6% with a UC, and 44.5% with a private university.

The preservice teacher respondents were predominantly female (77.3%) and White (67.2%). Racial and ethnic demographics are shown in Table 1. Respondents

ranged in age from 21 to 64 years, with a mean age of 30.21 (*SD* = 9.55). The majority (51.2%) were teaching in K–5 classrooms, with 14.3% teaching in Grades 6–8 and 34.4% teaching in Grades 9–12.

The majority of cooperating teacher respondents were also female (81.5%) and White (77.4%), with racial demographics also presented in Table 1. Age ranged from 27 to 75 years, with a mean of 45.84 years (*SD* = 10.03). Most were teaching in K–5 classrooms (43.8%), with 19.9% in Grades 6–8 and 36.3% in Grades 9–12. The range of teaching experience was from 3 to 42 years, with a mean of 18.19 years (*SD* = 8.20). Of the teachers who responded to the item about the number of previous preservice teachers, the range was from zero to 50, with a mean of 4.71 (*N* = 141, *SD* = 6.12). Fourteen teachers had earned National Board Certification.

Cooperating teachers were asked about their desire to work with a preservice teacher that year and any preparation they had received. Responses were on a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*), with the verbatim item statements and results presented in Table 2. All but five respondents had wanted to work with a preservice teacher. More cooperating teachers reported receiving preparation related to procedures (*N* = 89) than other training on how

Table 1

Racial and Ethnic Demographics of Preservice and Cooperating Teachers

	Preservice		*Cooperating*	
	Frequency	*Percentage*	*Frequency*	*Percentage*
Latino/Latina	7	5.9	18	12.3
African American/Black	3	2.5	2	1.4
Asian American	9	7.6	5	3.4
Pacific Islander	2	1.7	1	0.7
White	80	67.2	113	77.4
Multiracial	11	9.2	4	2.7
Other	3	2.5	2	1.4
Prefer not to state	4	3.4	1	0.7

Note. *N* = 119 for preservice. *N* = 146 for cooperating.

Table 2

Cooperating Teacher Attitudes and Preparation

Item	*M*	*SD*
I wanted to work with a student teacher this year.	3.55	.63
I received training on procedures such as how to complete forms.	2.71	.85
I received training on how to work with a student teacher.	2.69	.88

Note. *N* = 146.

to work with a student teacher ($N = 80$). Sixty-five participants reported receiving both procedural and other training. The items on training asked only for a response about participation and did not ask for any specific information about preparation (e.g., duration, type, provider).

Instrumentation

The instrument for this study, the Cognitive Apprenticeship Teaching Questionnaire (CATQ), was adapted from the Maastricht Clinical Teaching Questionnaire, a validated instrument originally developed for use in medical teaching (Stalmeijer, Dolmans, Wolfhagen, Muijtjens, & Scherpbier, 2010). Both cooperating and preservice teacher versions of the CATQ consist of 16 Likert-type items about specific practices of cooperating teachers linked to principles of cognitive apprenticeship (e.g., creating opportunities to observe, providing rationales for actions, offering feedback). The items were set on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*), with a rating above 3.0 indicating agreement with the item. Reliability of both the preservice teacher scale ($\alpha = .96$, $N = 119$) and the cooperating teacher scale ($\alpha = .88$, $N = 146$) was deemed acceptable.

Data Analysis

For both versions of the CATQ, the 16 items were summed to create a composite score with a theoretical range of 16–64. The mean for the preservice teacher composite was 52.44 ($N = 119$, $SD = 10.78$). In addition to responding to the 16 CATQ items, preservice teachers indicated their level of agreement with five statements about aspects of their placements beyond the direct control of their cooperating teachers and provided an overall rating of their field experience. The mean for the cooperating teacher composite CATQ score was 57.50 ($N = 146$, $SD = 5.36$). Respondents were asked about factors that might co-occur with preparation to work with preservice teachers, such as their number of years of teaching experience, number of previous student teachers, and whether they held National Board Certification. It was hypothesized that teachers with more years of experience or who had previously worked with preservice teachers may have been exposed to more preparation for their role. Because National Board Certification requires teachers to compile portfolios similar to those required by performance assessments like the edTPA, it was included as a factor. Correlation analysis revealed few significant relationships among factors. Although there was a moderate correlation between years of experience and the number of previous preservice teachers ($r = .52$), the correlation to procedural or other training was not significant. The only other moderate correlation was between having received procedural training and other training ($r = .58$). After this check, a series of analyses of variance (ANOVAs) was used to probe for differences. For the ANOVAs, cooperating teachers were grouped by age and years of experience using the National Center for Education Statistics

(2015) categories. Subsequent regression analyses determined the degree to which selected factors contributed to cooperating teacher practice.

Results

The first research question for the study asked about factors contributing to cooperating teachers' enactment of practices as described by the CATQ. A series of ANOVAs on background and teaching context factors found no significant differences based on cooperating teacher gender, grade level, or type of credentialing institution (CSU, UC, private). Cooperating teachers of color had significantly higher means for three items: serving as a role model, $t(87.393) = -2.044$, $p = .04$, encouraging goal formulation, $t(144) = -1.941$, $p = .05$, and encouraging goal pursuit, $t(144) = -2.595$, $p = .01$. National Board Certified teachers had significantly lower means for six items: serving as a role model, $t(141) = 15.96$, $p = .04$, providing a rationale for actions, $t(141) = 9.04$, $p = .002$, allowing risk taking, $t(141) = 13.45$, $p = .034$, creating a safe environment, $t(141) = 18.96$, $p = .02$, showing genuine interest in the preservice teacher, $t(141) = 20.96$, $p = .004$, and showing respect, $t(141) = 15.36$, $p = .054$. One-way analysis of variance on the item for adjusting teaching activities to the preservice teachers' level of experience revealed a significant difference in means by age group, $F(4, 144) = 2.40$, $p = .05$, as well as years of experience, $F(3, 144) = 2.75$, $p = .045$. Descriptive statistics are provided in Table 3 and reflect a rise and then a decrease in adjusting to the preservice teacher related to age and a continued rise with years of experience. Younger cooperating teachers and those with less experience had lower means for adjusting to the level of the student teacher, showing overall disagreement with the statement.

Table 3

Descriptive Statistics for Adjusting to Preservice Teacher's Level

	N	*M*	*SD*
Age (years)			
<30	5	2.60	0.89
30–39	34	2.94	0.69
40–49	56	3.32	0.77
50–59	38	3.03	0.82
≥60	12	2.83	0.94
Experience (years)			
0–5	6	2.50	0.84
6–10	23	2.83	0.65
11–15	29	3.00	0.89
>16	87	3.21	0.78

Note. $N = 146$.

With regard to preparation for working with a preservice teacher, independent samples *t*-tests indicated significantly higher means for the composite CATQ score as well as 4 of the 16 items for cooperating teachers who reported receiving procedural training. Results are shown in Table 4. Two of the practices, providing a rationale for

Table 4

Independent Samples t-Test for Mean Differences Based on Procedural Training

Item	*M*	*SD*	*t-Test*
Provided a rationale for actions			$t(90.96) = 2.542$, p = 0.011
Yes, training	3.78	0.42	
No	3.54	0.60	
Asked for a rationale for actions			$t(144) = 2.662$, p = 0.009
Yes, training	3.44	0.58	
No	3.16	0.68	
Encouraged formulation of goals			$t(144) = 2.916$, p = 0.004
Yes, training	3.38	0.59	
No	3.05	0.77	
Created a safe learning environment			$t(77.33) = 2.244$, p = 0.029
Yes, training	3.90	0.30	
No	3.72	0.56	
Composite CATQ			$t(89.69) = 2.842$, p = 0.006
Yes, training	58.56	4.35	
No	55.84	6.33	

Note. $N = 89$ for receiving procedural training. $N = 57$ for not receiving training.

Table 5

Independent Samples t-Test for Mean Differences Based on Training to Work with a Preservice Teacher

Item	*M*	*SD*	*t-Test*
Asked for a rationale for actions			$t(144) = 2.595$, $p = 0.010$
Yes, training	3.45	0.59	
No	3.18	0.65	
Asked questions to increase understanding			$t(144) = 2.483$, $p = 0.014$
Yes, training	3.56	0.52	
No	3.33	0.59	
Encouraged pursuit of goals			$t(144) = 2.042$, $p = 0.043$
Yes, training	3.43	0.61	
No	3.21	0.65	

Note: $N = 80$ for receiving other training. $N = 66$ for not receiving training.

actions and asking for rationales, describe making thinking about teaching decisions visible, key aspects of cognitive apprenticeship. Encouraging goal formulation is related to promoting growth, whereas creating a safe learning environment addresses affective elements of the field experience. The significant difference in the composite CATQ, $p = .006$, reflects an overall greater use of practices by those cooperating teachers who received procedural training. Cooperating teachers who reported receiving other training to work with a preservice teacher had significantly higher means on three CATQ items, as shown in Table 5. Again, two practices describe making explicit the thought process behind teaching decisions: asking for a rationale and asking questions to increase understanding. The third practice, encouraging pursuit of goals, involves promoting growth in the preservice teacher.

Next, background and teaching context variables were regressed onto the composite CATQ to identify significant contributing factors to cooperating teacher practice. The seven variables selected for stepwise regression were race (coded dichotomously as White/teacher of color), age, number of prior preservice teachers, years of experience, National Board Certification, and having received procedural training or other training. As shown in Table 6, two variables entered the model, explaining 11.6% of the variance in the composite CATQ score. The variable of having received procedural training had the greatest impact in the model ($\beta = .270$). In the analysis for Research Question 1, although the factors of age, race, experience, and National Board Certification indicated some differences in CATQ scores, preparation was associated with the strongest positive influence on cooperating teacher practice.

The second research question asked about the relationship between preservice teachers' perceptions of their cooperating teachers' practice and their ratings of the field experience. Analysis revealed significant, positive correlations for all 16 CATQ items ($r > .50$) and a strong correlation of the composite CATQ to the field experience rating ($r = .79$), signaling the importance of the cooperating teacher in providing what preservice teachers view as a high-quality field experience. As shown in Table 7, the individual CATQ items with the strongest correlations were serving as a role model, demonstrating how to use teaching strategies and giving useful feedback. The top six items described cooperating teacher practices related to modeling or the affective relationship with the preservice teacher. The relationship of cooperating teacher practice, as measured by the CATQ, to the field experience

Table 6

Stepwise Regression of Background and Teaching Context Factors on Composite Cognitive Apprenticeship Teaching Questionnaire Score

Independent variable	β	*t*	*Sig. t*
Procedural training	0.270	3.27	0.001
Number prior PSTs	0.166	2.00	0.047

Note. $N = 146$. $R = .340$. $R^2 = .116$. $p < .000$. PST = preservice teacher.

rating was stronger than other factors in the placement, which is illustrated in Table 8. Factors such as whether the classroom had adequate supplies and compatibility with university course work had low to moderate correlations to the field experience rating. The relationship between cooperating teacher practice, as perceived and reported by preservice teachers, and their sense of having had a high-quality field experience was strong and outweighed other aspects of the placement.

Discussion

The research questions for this study established two related lines of inquiry: first, identifying the factors that make the most difference in cooperating teacher practice, and second, examining the relationship between preservice teachers' perceptions of cooperating teacher practice and their ratings of the field experience. The data from the study suggest that the most significant contributor to enactment of practices is training and that greater enactment of practices—especially in providing feedback and demonstrating teaching strategies—is associated with a high-quality field experience. The findings also support the long-standing assertion that cooperating teachers hold the most influential role in the field experience.

Table 7
Bivariate Correlations of Preservice Cognitive Apprenticeship Teaching Questionnaire Items to the Field Experience Rating

Item	*Correlation coefficient*[a]
Composite CATQ	.79
CT served as a role model	.74
CT consistently demonstrated how to use teaching strategies	.72
PST given useful feedback during or immediately after direct observation of teaching	.72
CT showed genuine interest in PST as a student	.70
CT showed respect	.69
CT created a safe learning environment	.67
CT provided rationale for actions	.66
CT asked questions aimed at increasing PST's understanding	.64
CT adjusted teaching activities to PST's level of experience	.61
PST allowed to take risks	.59
PST encouraged to pursue learning goals	.59
PST prompted to explore strengths and weaknesses	.58
PST offered sufficient opportunities to teach independently	.56
PST encouraged to formulate learning goals	.55
CT created sufficient opportunities for observation	.53
PST asked to provide a rationale for actions	.51

Note. $N = 119$. CT = cooperating teacher. PST = preservice teacher.
[a]All correlations significant at the $p < .01$ level.

Factors Influencing Cooperating Teacher Practice

Multiple factors were explored as possible influences on cooperating teacher practice. Variables such as gender, grade level, and type of credentialing institution did not play a significant role. Race did emerge as a significant factor in the degree to which cooperating teachers reported serving as a role model and encouraging both goal formulation and pursuit. Although the study had a voluntary mechanism for matching cooperating and preservice teacher responses, not enough pairs opted to participate, so it is unknown whether teachers of color were paired together. The nature of the pairings may have influenced cooperating teacher practice; however, data are insufficient to draw that conclusion.

The factor accounting for the biggest difference in cooperating teacher practice was whether respondents had received any kind of training for their role. Cooperating teachers who received procedural training enacted practices to a greater degree overall and engaged more in reflective practices, such as providing and asking for rationales. Practices such as creating a safe learning environment and asking questions to increase understanding not only provide the affective support valued by preservice teachers (Torrez & Krebs, 2012) but also support the kinds of reflection required by performance and portfolio assessments. Additionally, they align with the practices described by cognitive apprenticeship where novice teachers first gain understanding through modeling and then greater autonomy through reflection. Preservice teachers want opportunities for both observation and growth and see these as essential to learning how to teach (Torrez & Krebs, 2012). Providing

Table 8

Descriptive Statistics and Correlations for Field Experience Items

	Field experience items		*Correlation to field experience rating*
Item	*M*	*SD*	*r*
The climate of the school is welcoming and supportive.	3.43	0.75	0.55
I am getting a realistic sense of the life of schools and classrooms.	3.61	0.61	0.51
My classroom has adequate equipment and supplies.	3.30	0.71	0.36
My placement is compatible with what I am learning in my university courses.	3.27	0.84	0.58
My cooperating teacher and university supervisor have a good working relationship.	3.22	0.76	0.60
I have had a high-quality student teaching experience.	3.44	0.82	–

Note. $N = 119$.

professional development for cooperating teachers that leads to greater enactment of these practices suggests one way to improve field experiences and preservice teachers' perceptions of having participated in a high-quality preparation for teaching.

As other researchers have shown, preparation can have a positive effect on cooperating teacher practice (Gareis & Grant, 2014; Giebelhaus & Bowman, 2002) and promote reflection (Crasborn et al., 2010). The work of Crasborn and colleagues indicated that improving feedback, one of the practices most strongly correlated to the field experience rating, can be achieved through training sessions focused on encouraging reflection. The results from this study suggested that explicit preparation—even in the modest form of reviewing program evaluation protocols—may contribute to cooperating teachers enacting their role differently. Researchers have found that cooperating teachers are not always aware of the outsized importance of their role (Anderson, 2007). Promoting awareness even in a limited fashion may contribute to greater enactment of practices and thus contribute to improved quality of the field experience.

Although teachers with more years of experience reported a rise in adjusting to the preservice teacher's level of experience, this was the only significant difference in cooperating teacher practice related to experience. As training was only moderately correlated to years of experience, it appears that simply being an experienced teacher is not a replacement for preparation. Having more years in the classroom did not automatically translate into greater enactment of practices. The factor other than training that did contribute significantly to overall cooperating teacher practice was previous experience in working with preservice teachers. Procedural training and the number of prior student teachers were the only two factors to enter the regression model for the CATQ composite score, explaining more than 11.6% of the difference. What remains unknown is whether teachers with more experience in working with preservice teachers had acquired skills or training in previous years. This speaks to the haphazard nature of field placements, where preservice teachers from the same program may have cooperating teachers with widely varied experience, preparation, and conception of their role (Valencia et al., 2009). In this case, years of experience cannot serve as an effective indicator of whether a classroom teacher will offer a high-quality placement.

One unexpected finding concerned National Board Certified teachers (NBCTs). Although the NBCTs had completed a performance-based assessment and reflective teaching portfolio, they had significantly lower means on six of the CATQ items, including acting as a role model. Darling-Hammond (2010) suggested a career-long continuum of performance assessments culminating with the National Board and pointed to research suggesting that educators who have earned certification reflect more deeply on their practice. The findings from this study, however, indicate that this experience does not necessarily transfer to work with preservice teachers, calling attention to the need for cooperating teachers to be prepared for their role. The assumption that experienced teachers, even those with additional certification,

will be able to act as teacher educators without explicit preparation is called into question by the findings from this study.

Cooperating Teacher Influence

Whereas factors outside the cooperating teacher's direct control, such as school climate and resources, were moderately correlated to the field experience rating, cooperating teacher practice as described by the CATQ had the strongest relationship to the field experience rating (r = .79). Preservice teachers who perceived greater enactment of practices like providing feedback and demonstrating teaching strategies rated the quality of their field experience more highly. Although offering feedback often appears as an important component of cooperating teacher practice (e.g., Gareis & Grant, 2014; Sayeski & Paulsen, 2012; Torrez & Krebs, 2012), researchers have pointed to challenges in cooperating teachers assuming a critical stance (K. M. Hall et al., 2008). Cooperating teachers may wish to preserve good working relationships with their preservice teachers or feel ill prepared to offer critiques (Clarke & Jarvis-Selinger, 2005; Torrez & Krebs, 2012). In this study, the practices with the strongest correlations to the field rating concerned external and affective aspects of teaching, such as acting as a role model and demonstrating teaching strategies. The weakest correlation was for the cooperating teacher asking the preservice teacher to provide rationales for actions (r = .51), a concern when performance evaluations like the edTPA specifically call for reflection on practice. One possibility is that cooperating teachers may not be aware of how to support preservice teacher growth in this area, a gap that professional development could fill.

Gaps in Preparation

Although the majority of teachers in this study reported receiving some sort of training, the literature indicates that preparation is often limited to program orientations and individual meetings with university supervisors (Clarke, 2001; Fives et al., 2016). This kind of procedural preparation, while contributing to increased enactment of practices in this study, does less to target the support valued or needed by preservice teachers. The practices most highly correlated to the field experience rating—serving as a role model, demonstrating teaching strategies, giving useful feedback—concern external aspects of teaching and reflect the strong influence of the cooperating teacher, an importance that cooperating teachers may not recognize (Ambrosetti, 2014; Anderson, 2007). The CATQ items with the next strongest correlations—showing interest in the preservice teacher, showing respect, and creating a safe learning environment—may prove difficult to operationalize in training, although Sayeski and Paulsen (2012) described practices such as sharing resources and building trust through treating preservice teachers as equals. Whereas preservice teachers may value external and affective support, they may not perceive the importance of their cooperating teachers making their thinking explicit and talking through instructional

decisions (Zanting et al., 1998). Training that emphasizes to cooperating teachers the influence of their role, the importance of a supportive environment, and the need to make their own reflection about teaching visible has the potential to fill existing gaps in preparation and improve the quality of the field experience.

Challenges in the Current Context

One factor complicating implementation of cooperating teacher preparation, however, is the projected shortfall in teacher supply in California and elsewhere and the need to credential large numbers of teachers in a limited time frame. In recent years, California credentialing programs have produced fewer teachers while demand has increased (CTC, 2015; Mead, Aldeman, Chuong, & Obbard, 2015). The current and projected supply–demand curve suggests that concerns about high-quality preparation may be countered by pressures to produce an adequate number of classroom teachers.

At the same time, university-based credentialing programs face increased competition from preparation routes that offer placement as the teacher of record. From 2014–2015 to 2015–2016, there was a 31.2% increase in the number of teachers credentialed through university-based intern programs and a 16.9% increase in district- or county-based credentials (CTC, 2017). This suggests demand for fast-track pathways into teaching where candidates may draw on support from university and school site mentors but where they do not work alongside a cooperating teacher. A possible explanation is that prospective teachers are weighing the worth of programs where they pay tuition for field experiences that may vary widely in quality against the value of entering the profession as the teacher of record while earning a paycheck and benefits. In this context, offering preparation for cooperating teachers may be a way for universities to differentiate their programs from other routes to earning a teaching credential.

Limitations

A few factors limit the study's findings. First, respondents were all cooperating or preservice teachers in California, which may limit generalizability to states with different credentialing requirements. Also, although the findings about NBCTs were intriguing, they represented only 9.8% of survey respondents. Further research with larger sample sizes is needed into how NBCTs perceive and enact their role as cooperating teachers. Finally, the survey questions about training did not specify the type of preparation beyond distinguishing between procedural and other types of training. Research targeted at assessing the influence and effectiveness of varying types of preparation for work with preservice teachers would likely offer data useful for designing professional development.

Conclusion

A clear policy implication is for explicit preparation of cooperating teachers, a step already taken by the state of California in requiring 10 hours of training by credentialing programs (CTC, 2015). This preparation—if focused on reflective practice—has the potential to support preservice teacher success on performance assessments and promote professional learning as novices enter into schools and classrooms (Chizhik et al., 2017). One problematic aspect, however, is the minimal funding to support design, development, and implementation of this training. It remains to be seen how university-based credentialing programs will address the mandate and the degree to which they are able to offer meaningful preparation that is not unduly burdensome.

Further implications concern the nature of professional development for cooperating teachers. Researchers have identified the practices valued by preservice teachers, which could inform design (Hamman & Romano, 2009; Sayeski & Paulsen, 2012); however, with few incentives available, such as stipends, credentialing programs need to plan for relevance, ease of use, and conciseness. A study by Fives and colleagues (2016) replicated an analysis of cooperating teacher compensation from 1957 to 1958, finding that in 2012–2013, teachers were compensated less yet were expected to do more. Given the average monetary compensation of $232 cited across the 18 programs in the study, universities will need to take into account the value of teachers' time. For example, although participants in a hybrid preparation program rated it highly on most elements, they also asked that the time commitment be reduced (Childre & Van Rie, 2015), a sentiment shared by participants in other studies (Black et al., 2016). Program designs will need to consider the tension between cooperating teachers' desire to support their student teachers with the time constraints inherent to being both a teacher of children and a teacher educator (Ambrosetti, 2014; Wright et al., 2006).

Another noteworthy finding with significant implications was the difference in enactment of practices by cooperating teachers of color and White teachers. One question that merits further study is why cooperating teachers of color report acting as a role model and encouraging goal setting and pursuit to a greater degree than White teachers. One possibility is that purposeful pairings could result in higher quality field experiences for preservice teachers of color, especially with regard to role modeling. Better field experiences could in turn result in better preparation and retention, which is especially important as schools in California and across the United States face not only teacher shortages but a racial gap between teacher and student populations (Villegas, Strom, & Lucas, 2012).

Finally, it appears that teacher education is not a self-evident activity where transfer of skills, knowledge, and reflection on practice is automatic (Zeichner, 2005). Transfer and transmission models of learning to teach based in technical approaches threaten to deprofessionalize teaching rather than emphasize the reflective thinking

needed to respond to students' needs. Especially with regard to reflection, preparation makes a difference. Results indicate that in teacher preparation, cooperating teachers continue to play the most significant role yet are underprepared to enact the practices that contribute most to what preservice teachers perceive as a high-quality field experience. As these programs face competition from credentialing routes that bypass field placements, an investment in professional development for cooperating teachers has the potential not only to improve the quality of student teaching but also to emphasize the relevance of university-based teacher preparation. Grossman (2008) has written about the challenges of universities retaining jurisdiction over teacher credentialing. To retain relevance in teacher credentialing, university-based programs need to support and emphasize the element that differentiates their professional preparation of teachers—placement with an experienced, reflective, and, perhaps most importantly, prepared cooperating teacher.

References

Ambrosetti, A. (2014). Are you ready to be a mentor? Preparing teachers for mentoring preservice teachers. *Australian Journal of Teacher Education, 39*(6), 30–42.

Anderson, D. (2007). The role of cooperating teachers' power in student teaching. *Education, 128*, 3–323.

Black, G. L., Olmsted, B., & Mottonen, A. L. (2016). Associate teachers' perceptions of effective mentorship professional development. *The New Educator, 12*, 322–342.

Boyd, D., Goldhaber, D. D., Lankford, H., & Wyckoff, J. H. (2007). The effect of certification and preparation on teacher quality. *The Future of Children, 17*(1), 45–68.

Boyd, D. J., Grossman, P., Lankford, H., Loeb, S., Michelli, N. M., & Wyckoff, J. (2006). Complex by design: Investigating pathways into teaching in New York city schools. *Journal of Teacher Education, 57*, 155–166.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*, 32–42.

Brown, J. S., Collins, A., & Newman, S. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 47–60). Hillsdale, NJ: Lawrence Erlbaum.

Butler, B. M., & Cuenca, A. (2012). Conceptualizing the roles of mentor teachers during student teaching. *Action in Teacher Education, 34*, 296–308.

California Commission on Teacher Credentialing. (2015). *Program sponsor alert: Commission adoption of preliminary multiple subject/single subject program standards and the transition plan*. Sacramento, CA: Author. Retrieved from http://www.ctc.ca.gov/educator-prep/PS-alerts/2015/PSA-15-07.pdf

California Commission on Teacher Credentialing. (2016). *Teacher supply in California: A report to the legislature*. Sacramento, CA: Author. Retrieved from http://www.ctc.ca.gov/reports/TS-2014-2015-AnnualRpt.pdf

California Commission on Teacher Credentialing. (2017). *Teacher supply in California: A report to the legislature*. Sacramento, CA: Author. Retrieved from https://www.ctc.ca.gov/docs/default-source/commission/reports/ts-2015-2016-annualrpt.pdf?sfvrsn=84d346b1_4

Childre, A. L., & Van Rie, G. L. (2015). Mentor teacher training: A hybrid model to promote

partnering in candidate development. *Rural Special Education Quarterly, 34*(1), 10–16.
Chizhik, E. W., Chizhik, A. W., Close, C., & Gallego, M. (2017). SMILE (Shared Mentoring in Instructional Learning Environments): Effectiveness of a lesson-study approach to student teaching supervision on a teacher education performance assessment. *Teacher Education Quarterly, 44*(2), 27–47.
Clarke, A. (2001). Characteristics of co-operating teachers. *Canadian Journal of Education/ Revue Canadienne de l'Éducation, 26*, 237–256.
Clarke, A., & Jarvis-Selinger, S. (2005). What the teaching perspectives of cooperating teachers tell us about their advisory practices. *Teaching and Teacher Education, 21*(1), 65–78.
Clarke, A., Triggs, V., & Nielsen, W. (2014). Cooperating teacher participation in teacher education: A review of the literature. *Review of Educational Research, 84*, 163–202.
Crasborn, F., Hennissen, P., Brouwer, N., Korthagen, F., & Bergen, T. (2010). Capturing mentor teachers' reflective moments during mentoring dialogues. *Teachers and Teaching: Theory and Practice, 16*(1), 7–29.
Daane, C. J., & Latham, D. (1998). Helping supervising teachers stay abreast of effective instructional strategies. *Contemporary Education, 69*, 141–144.
Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education, 61*(1–2), 35–47.
Dawson, P. (2014). Beyond a definition toward a framework for designing and specifying mentoring models. *Educational Researcher, 43*, 137–145.
Dewey, J. (1904). The relation of theory to practice in education. In C. A. McMurray (Ed.), *The third NSSE yearbook* (pp. 9–30). Chicago, IL: University of Chicago Press.
Engeström, Y. (2011). From design experiments to formative interventions. *Theory & Psychology, 21*, 598–628.
Feiman-Nemser, S. (1998). Teachers as teacher educators. *European Journal of Teacher Education, 21*, 63–74.
Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *The Teachers College Record, 103*, 1013–1055.
Fives, H., Mills, T. M., & Dacey, C. M. (2016). Cooperating teacher compensation and benefits: Comparing 1957–1958 and 2012–2013. *Journal of Teacher Education, 67*, 105–119.
Gareis, C. R., & Grant, L. W. (2014). The efficacy of training cooperating teachers. *Teaching and Teacher Education, 39*, 77–88.
Giebelhaus, C. R., & Bowman, C. L. (2002). Teaching mentors: Is it worth the effort? *Journal of Educational Research, 95*, 246–254.
Glenn, W. (2006). Model versus mentor: Defining the necessary qualities of the effective cooperating teacher. *Teacher Education Quarterly, 33*, 85–95.
Graham, B. (2006). Conditions for successful field experiences: Perceptions of cooperating teachers. *Teaching and Teacher Education, 22*, 1118–1129.
Greenberg, J., Walsh, K., & McKee, A. (2015). *2014 teacher prep review*. Washington, DC: National Council on Teacher Quality.
Grossman, P. (2008). Responding to our critics: From crisis to opportunity in research on teacher education. *Journal of Teacher Education, 59,* 10–23.
Guyton, E. (1989). Guidelines for developing educational programs for cooperating teachers. *Action in Teacher Education, 11*(3), 54–58.
Guyton, E., & McIntyre, D. J. (1990). Student teaching and school experiences. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 514–534). New York, NY: Macmillan.

Hall, D. M., Hughes, M. A., & Thelk, A. D. (2017). Developing mentorship skills in clinical faculty: A best practices approach to supporting beginning teachers. *The Teacher Educators' Journal, 10*, 77–98.

Hall, K. M., Draper, R. J., Smith, L. K., & Bullough, R. V., Jr. (2008). More than a place to teach: Exploring the perceptions of the roles and responsibilities of mentor teachers. *Mentoring & Tutoring: Partnership in Learning, 16*, 328–345.

Hamman, D., Fives, H., & Olivarez, A. (2007). Efficacy and pedagogical interaction in cooperating and student teacher dyads. *Journal of Classroom Interaction, 41*(42), 55–63.

Hamman, D., & Romano, J. E. (2009). The desired cooperator: Preservice preferences and role confusion during the teaching practicum. *Current Issues in Education, 11*(4), 1–14.

Heilig, J. V., & Jez, S. J. (2010). *Teach for America: A review of the evidence*. Boulder, CO: Education and the Public Interest Center & Education Policy Research Unit. Retrieved from http://epicpolicy.org/publication/teach-for-america

Hoff, L. (2013, April). *Cooperating teacher selection criteria: Are the most effective teachers recruited to train student teachers?* Paper presented at the AERA annual conference, San Francisco, CA.

Kahn, B. (2001). Portrait of success: Cooperating teachers and the student teaching experience. *Action in Teacher Education, 22*(4), 48–58.

Killian, J. E., & Wilkins, E. A. (2009). Characteristics of highly effective cooperating teachers: A study of their backgrounds and preparation. *Action in Teacher Education, 30*(4), 67–83.

Koerner, M. E. (1992). The cooperating teacher: An ambivalent participant in student teaching. *Journal of Teacher Education, 43*, 46–56.

Kumashiro, K. K. (2010). Seeing the bigger picture: Troubling movements to end teacher education. *Journal of Teacher Education, 61*, 56–65.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.

Leatham, K. R., & Peterson, B. E. (2010). Secondary mathematics cooperating teachers' perceptions of the purpose of student teaching. *Journal of Mathematics Teacher Education, 13*, 99–119.

Lit, I. W., & Lotan, R. (2013). A balancing act: Dilemmas of implementing a high-stakes performance assessment. *The New Educator, 9*, 54–76.

Mead, S., Aldeman, C., Chuong, C., & Obbard, J. (2015). *Rethinking teacher preparation: Empowering local schools to solve California's teacher shortage and better develop teachers*. Boston, MA: Bellwether Education Partners.

National Center for Education Statistics. (2015). Table 209.10. Number and percentage distribution of teachers in public and private elementary and secondary schools, by selected teacher characteristics: Selected years, 1987–88 through 2011–12. *Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d14/tables/dt14_209.10.asp

Peck, C. A., Gallucci, C., & Sloan, T. (2010). Negotiating implementation of high-stakes performance assessment policies in teacher education: From compliance to inquiry. *Journal of Teacher Education, 61*, 451–463.

Sayeski, K. L., & Paulsen, K. J. (2012). Student teacher evaluations of cooperating teachers as indices of effective mentoring. *Teacher Education Quarterly, 39*, 117–130.

Stalmeijer, R. E. (2015). When I say . . . cognitive apprenticeship. *Medical Education, 49*, 355–356.

Stalmeijer, R. E., Dolmans, D. H. J. M., Wolfhagen, I. H. A. P., Muijtjens, A. M. M., & Scherpbier, A. J. J. A. (2010). The Maastricht clinical teaching questionnaire (MCTQ) as a valid and reliable instrument for the evaluation of clinical teachers. *Academic Medicine, 85*, 1732–1738.

Torrez, C. A. F., & Krebs, M. M. (2012). Expert voices: What cooperating teachers and teacher candidates say about quality student teaching placements and experiences. *Action in Teacher Education, 34*, 485–499.

Tunney, J. W., & van Es, E. A. (2016). Using video for teacher-educator professional development. *The New Educator, 12*, 105–127.

Valencia, S. W., Martin, S. D., Place, N. A., & Grossman, P. (2009). Complex interactions in student teaching: Lost opportunities for learning. *Journal of Teacher Education, 60*, 304–322.

Villegas, A. M., Strom, K., & Lucas, T. (2012). Closing the racial/ethnic gap between students of color and their teachers: An elusive goal. *Equity & Excellence in Education, 45*, 283–301.

Wang, J., & Odell, S. J. (2002). Mentored learning to teach according to standards-based reform: A critical review. *Review of Educational Research, 72*, 481–546.

Wright, S., McNeill, M., Tan, S., Tan, C., Fry, J., & Schempp, P. (2006). Participant evaluation of a mentor training workshop: Implications for faculty development. *The ICHPER-SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance, 1*(2), 27–34.

Zanting, A., Verloop, N., Vermunt, J. D., & Van Driel, J. H. (1998). Explicating practical knowledge: An extension of mentor teachers' roles. *European Journal of Teacher Education, 21*, 11–28.

Zeichner, K. (2005). Becoming a teacher educator: A personal perspective. *Teaching and Teacher Education, 21*, 117–124.