Teacher Quality or Quality Teaching? Eighth Grade Social Studies Teachers’ Professional Characteristics and Classroom Instruction as Predictors of U.S. History Achievement

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ABSTRACT

Using data from the 2010 National Association of Education Progress eighth grade test of U.S. history (NAEP-US8), the current study explored the intersections among traditional indicators of teacher quality and competing dimensions of quality teaching on students’ history knowledge. Findings indicated that eighth grade social studies teachers with academic backgrounds in history and secondary education were associated with increased use of disciplinary practices valued by the field (i.e., reading across multiple source materials, discussion, and writing in the content area) and performance-based assessment. Furthermore, when accounting for both teacher characteristics and instructional decision-making, alternatively licensed middle grades teachers were associated with lower average student achievement on NAEP-US8. Holding other conditions constant, eighth grade teachers with backgrounds in secondary education were associated with higher average student performance. Results further suggest that middle grades teachers who focus instruction on disciplinary practices are associated with increased student learning outcomes as measured by NAEP-US8. Findings from this study have potential implications for middle grades social studies teacher education as well as curricular and certification policies.

Keywords: social studies, history education, middle grades education, teacher qualifications, instructional decision-making, NAEP

The concept of teacher quality draws mixed responses from various education stakeholders. An allusive construct, education policymakers and researchers have tenaciously sought to understand the value of teachers in the education process (Cochran-Smith & Villegas, 2014). Perhaps, not surprisingly, the research...
borne out of these studies has contributed to competing visions of quality (i.e., effective) teachers and teaching. One side associates quality with credentialing, professional knowledge, and expertise (Darling-Hammond, Darling-Hammond, 2000, 2010). From this vantage point, teacher quality is associated with the professionalism of teaching—a vetting of the classroom practitioner for the purpose of guaranteeing a sufficient education experience for learners. Others take a dimmer view of traditional quality initiatives, finding them needlessly technocratic while hamstringing efforts to place capable and diverse teachers in classrooms (Sleeter, 2008; Zeichner, 2003). Because the goal of teacher quality ultimately is to support student learning, numerous studies in education policy (e.g., Béteille & Loeb, 2009; Wilson, Floden, & Ferrini-Mundy, 2002) have explored the question: What teacher characteristics are associated with student learning outcomes? Yet, these analyses often simplify complex dimensions of teacher quality into discriminate and easy to measure variables such as content background and advanced degree status (Goldhaber & Brewer, 2000; Wang, 2010) and tend to underestimate the complex work of teaching. Interestingly, social studies studies has mostly avoided scrutiny in this line of research, which typically has emphasized other subjects (Goldhaber & Brewer, 2000; Wayne & Youngs, 2003).

Curiously ignored in the research literature on teacher quality is the classroom instructional decision making associated with quality teaching. Wenglinsky (2002) posited that policy researchers have neglected teachers’ pedagogical moves because of scalability difficulties and their failure to fit into favored education production-function models of research. He further suggested that researchers interested in policy should turn toward qualitative studies, which have a long tradition of examining classroom practices and their association with student learning. A tendency to rely on one-dimensional teacher traits that purportedly represent a host of classroom practices and intentions further complicates teacher quality research. Forsaking complexity for parsimony, such analytical approaches run the risk of attribution error whereby researchers misrepresent teacher qualities as proxies for the quality of instruction (Kennedy, 2010).

In social studies, a rich tradition of qualitative study of classroom practice and its connection to student learning dominates the literature (Barton & Levstik, 2004; Good & Brophy, 2000; VanSledright, 2011). With slight variability, researchers and scholars in the field largely agree upon a concept of quality teaching practices that emphasize inquiry-driven instruction and promote civic engagement (Barton & Avery, 2016; Crocco & Lvingston, 2017). Research specific to middle grades, historically recognized as a specialized area of early adolescent education (AMLE, 2010; Alexander, 1995; Faulkner, Howell, & Cook, 2013), has suggested that social studies teacher preparation pathways emphasizing an intersection of adolescent development, content, and pedagogical knowledge affords teachers the most appropriate instructional tools and, thereby, gives learners the greatest learning opportunities (Faulkner et al., 2017; McEwin & Greene, 2011; Reisman & Fogo, 2016; Wilson & Wineburg, 1988).

Collectively, these studies offer important, entrenched insight into the lives of teachers and their work with students. Lacking, however, are broader, more generalizable analyses of the relationship among middle grades teachers’ classroom practices, professional characteristics, and student learning outcomes in social studies content. Using data from the 2010 National Association of Education Progress eighth grade test of U.S. history (NAEP-US8), the current study explored the intersections among traditional indicators of middle grades teacher quality and competing dimensions of quality teaching identified in extant qualitative research on students’ history knowledge.

**Review of the literature**

**The search for teacher quality**

Researchers have consistently recognized teachers as the single-most important within-school predictor of a student’s future academic success (Konstantopoulos & Chung, 2011; Rivkin, Hanushek, & Kain, 2005; Rockoff, Jacob, Kane, & Staiger, 2010). As such, education policy analysts expend substantial effort to examine and extrapolate the appropriate mixture of qualities and traits associated with an effective teacher (Béteille & Loeb, 2009). Yet, while experts rarely question the importance of teachers, tying specific teacher characteristics to student learning has proven complex and contentious.

In separate literature reviews examining teacher characteristics and student learning outcomes, Wayne and Youngs (2003) and Cochran-Smith and associates (2016) noted that the relationship among teacher qualities and student outcomes are largely inconclusive. Yet an emphasis on teacher preparation background, or pathway, remains notable throughout teacher quality studies. Research conducted by Darling-Hammond and colleagues (Darling-Hammond, 2000; Darling-Hammond, Chung, & Frelow, 2002) indicated that teachers from traditional
pathways (i.e., a combination of content background and teacher education) were associated with significantly higher achievement in mathematics and English/language arts. These findings have been supported in subsequent research (Béteille & Loeb, 2009; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006; Cochransmith & Villegas, 2014) and observed in middle grades teacher preparation (Cook, Howell, & Faulkner, 2013; McEwin, Dickinson, & Jenkins, 2003). However, contrasting studies assert that teacher content knowledge is a more robust predictor of student learning than teacher training counterparts (Goldhaber & Brewer, 2000; Telese, 2012). This research line has posited that teachers who have subject-specific coursework and degrees in mathematics are associated with higher student test scores compared to less math-oriented educators, and the effects of teacher preparation were indeterminable.

Wading deeper into the contentious waters of teacher quality, research has also examined the role of teacher professional development (PD) exposure and intervention on student learning outcomes. Borko (2004) noted that the effects of professional development on teacher and student learning is a “slow and uncertain process” due to variability in what teachers gain from the experience. This uncertainty is evident in the scholarship surrounding professional development. Research has suggested that teachers exposed to well-structured programs demonstrated improved practice and educator effectiveness (Cohen & Hill, 1998; Garet, Porter, Desimone, Birman, & Yoon, 2001). However, other studies have found that teachers’ exposure to professional development masked content knowledge deficiencies the PD, thus, served as a form of remediation. Examining eighth grade mathematics NAEP data, Telese (2012) found that teachers with less exposure to mathematics PD were associated with an increase in class average scores.

**Complications with examining teacher quality**

As intimated from the previous sections, researchers often tenuously tie educator qualities to practice, and analytical parsimony frequently overshadows the situational and contextual subjectivity in the policy analysis and evaluation of teachers and teaching (Weimer, 2009). Consequently, large-scale policy-related research on teacher quality and its relationship to student learning has traditionally utilized education product-function models (Hanushek, 2008; Monk, 1989) that operationalize teacher quality inputs—including various teacher characteristics such as teacher licensure, content knowledge, and experience— as producing various student learning outcome outputs (e.g., student achievement scores; Béteille & Loeb, 2009).

Conceptually, production-function models of teacher quality may suffer from what Kennedy (2010) called an “attribution error” whereby teacher characteristics or traits misrepresent behaviors. For example, researchers who use production-function theory typically recognize content area background as a predictor of teacher quality and posit that teachers with strong command of subject knowledge will more adeptly plan lessons and facilitate student learning (e.g., Wang, 2010). Missing from these equations are situational contexts (e.g., planning time and structure of the school day) and instructional decision making that shape learning opportunities. In other words, traditional education policy studies place little emphasis on what constitutes quality teaching and, instead, highlight credentials and characteristics.

**Emphasis on quality teaching**

Hiebert and Morris (2012) contended that the fixation on teacher qualities undercuts a more essential measure—quality teaching. Myopically concentrating on teacher qualifications makes two potentially specious assumptions: 1) effective instructional strategies are inextricably tied to the credentials and qualities of the educator, and 2) the disciplinary field whereby student learning is measured has an established set of instructional practices. Though recent research and advancements in teacher education suggest a movement toward core (or high leverage) practices (Ball & Cohen, 1999; Forzani, 2014; McDonald, Kazemi, & Kavanagh, 2013), the overall research in this area remains somewhat sparse outside of mathematics education (Béteille & Loeb, 2009; Hill, Rowan, & Ball, 2005). Conversely, qualitative research has an established tradition of investigating teachers’ instructional behaviors and provides exemplars of quality teaching rather than constraining teacher quality through one-dimensional teacher traits (Brustein, 1996; Good & Brophy, 2000; Goodlad, 2004; Lortie, 1975). Drawing inspiration from qualitative research, education policy researchers (see Weimer, 2009; Wenglinsky, 2002) have suggested placing increased emphasis on teachers’ instructional decision making for the purposes of examining what constitutes quality teaching rather than relying on professional credentials. Research inclusive of both teacher practices and qualifications has found substantial correlations between instructional decision
making and student learning (Goe, 2007; Palardy & Rumberger, 2008).

**Teacher quality and quality teaching in middle grades social studies**

Large-scale research on teacher quality and quality teaching in social studies is even scarcer in middle grades social studies (Conklin, 2010). Yet, theoretically, social studies education has a substantial foundation from which to draw. In their review of the research on teacher education and development in the social studies, Crocco and L invingston (2017) referenced Shulman’s (1986) pedagogical content knowledge (PCK)—a confluence of instructional know-how and disciplinary background—as a reference point for quality teaching. Yet, as noted by Conklin (2007, 2008, 2010)), PCK and the path toward middle grades social studies teaching can take numerous turns that may influence teachers’ views of younger adolescents’ cognitive capabilities as well as instructional decision-making.

Qualitative research examining middle grades social studies teachers (particularly in history education) has acknowledged PCK as a vital component toward discipline-specific lesson planning (Monte-Sano & Cochr, 2009; Reisman & Fogo, 2016). Further, unlike mathematics education, social studies is a multidisciplinary field, which means that teachers might bring various social science background to their instruction (Wilson & Wineburg, 1988). The necessity of a specific disciplinary alignment between one’s academic background and one’s subject area has been frequently debated. One side contends that a teacher with a content background aligned to the subject matter will more effectively engage students in discipline-specific practices (i.e., Monte-Sano & Cochr, 2009; Wilson & Wineburg, 1988). Other social studies educators argue that the purpose of the field is to prepare a democratic citizenry and argue that history’s place in the grammar of schooling is co-dependent with the aims of social studies (Thornton & Barton, 2010). Interestingly, few studies specifically have examined the relationship between middle grades teachers’ credentials and backgrounds on achievement or test outcomes, leaving much uncertainty over how social studies teacher qualifications connect to student learning.

While the research on quality and effectiveness remains under researched, the field is ripe with substantive, empirically based exemplars of good teaching (Grant, 2003; Hess, 2002; Van Hover, 2006; VanSledright, 2011). Social studies, drawing heavily from qualitative modes of analysis, has normalized various methods of practice. In their recent review of social studies research, Barton and Avery (2016) put forth three overlapping areas of social studies instruction that positively impact student learning: “inquiry, discussion, and source analysis” (p. 1002). Cumulatively, these studies valorize pedagogy requiring the use of multiple texts, structured discourse, and student-oriented rather than traditional teacher-centered practices (Hess & McAvoy, 2015; Hicks, Doolittle, & Lee, 2004; Torney-Purta & Richardson, 2003; VanSledright, 2002). Research in the field has also highlighted students’ engagement in creative, product-based assessments and practices (Breakstone, 2014; Parker et al., 2013) that break the bubble of traditional multiple-choice mindset of many social studies assessments. These activities seek to assess students’ disciplinary skills associated with the social studies (i.e., sourcing, contextualizing, and corroboration in history). The Career, College, and Civic Life (C3) Framework (National Council for the Social Studies, 2013) and the recent National Standards for the Preparation of Social Studies Teachers (Cuenca et al., 2017) further engenders these practices and champions the use of disciplinary thinking toward inquiry-based instruction and civic-minded educational aims both in curriculum development and teacher preparation.

To what extent are middle level social studies teachers’ professional background and practices associated with student learning outcomes and assessment performance? To be sure, this question lies at the heart of what social education researchers and scholars examine, debate, and theorize. Though social studies scholarship ultimately seeks to address and improve upon what and how students learn, large-scale examination of teaching and learning remain largely absent. With the exception of Saye (2013), few recent studies have quantitatively examined the association among high-quality teaching practices and student learning in social studies classrooms. Moreover, research in the middle grades has emphasized links between the middles grades philosophy and teacher effectiveness (Cook et al., 2013; McEwin & Greene, 2011; McEwin, Dickinson, & Jacobson, 2005) without questioning content-specific pedagogical preparation differences of educational pathways. In the current study, we used data from the 2010 grade eight National Assessment for Education Progress U.S. History test (NAEP-US8) to examine the relationship between social studies teacher quality and student learning outcomes from traditional means (e.g. professional characteristics). We also examined the extent that tools for quality
teaching (e.g. instructional decision making) were associated with student learning in the social studies. Two research questions guided our exploratory analysis:

1. Are traditional indicators of eighth grade teacher quality associated with eighth grade social studies teachers’ instructional decision-making?
2. Holding student characteristics constant, to what extent are variables of eighth grade social studies teacher quality and quality teaching associated with students’ social studies academic achievement as measured by NAEP-US8?

In research question one, we sought to ascertain if traditional views of middle grades teacher quality are associated with pedagogy championed in social studies education and research, thereby determining if various professional markers potentially mask instructional decision-making. In an attempt to disentangle the complexity of teacher characteristics and practices (Cochran-Smith et al., 2016), we examined the relationship among conventional teacher quality indicators, instructional practices, and student learning in the second question.

**Methods**

**Sample**

To answer the aforementioned research questions, we used data from the National Assessment of Educational Progress (NAEP) eighth grade U.S. history test administered to a nationally representative sample of eighth grade students and social studies teachers. The assessment, administered to students during fourth, eighth, and twelfth grade, is considered low-stakes because the student performance on the assessment is not used to formally evaluate students’ in-grade competence. For the purpose of this study, we chose the eighth grade U.S. history assessment (NAEP-US8) for two reasons: 1) the social studies curriculum remains dominated by history and 2) the eighth grade data afforded us the opportunity to analyze student performance associated with teachers.

NAEP-US8 includes 118 multiple choice items, 37 short answer items, and 11 extended response items (Lazer, 2015). The test measures students’ historical knowledge, and to a minimum degree, their historical reasoning skills—the latter of which has been much debated (M. D. Smith, 2017; M. D. Smith & Breakstone, 2015; VanSledright, 2011)—in four dimensions: 1) change and continuity in American democracy, 2) interactions of peoples, cultures and ideas, 3) economic and technological changes and their relationship to society, ideas, and environment, and 4) the changing role of America in the world (National Assessment Governing Board, 2010). The content of the test includes items from pre-colonial America to the present. Because of the length of the exam, NAEP-US8 is divided into content-themed blocks. Students are only assigned two blocks, which takes approximately 50 minutes to complete (Lazer, 2015). Rather than obtaining a total score of assessment performance, test-takers receive a series of five plausible values (PVs), which estimate how the individual would have performed if completing whole test given their block performance and compared to a similar student population. Using item-response theory, five PVs are generated with scores ranging from 0 to 500. The PVs are used as dependent variables and analyses average statistical results across each of the values.

In addition to measuring students’ history knowledge, NAEP-US8 asks the students and schools to provide demographic information on the student, teacher, and school. For this study, we selected for public school students because curricular variability among private and independent schools potentially confounds students’ exposure to U.S. history. Because teacher-level effects were the focus of this study, we limited our analyses to teachers with greater than five students completing the assessment. These steps allowed us to more accurately measure for the teacher-level associations with mean student achievement. On average, 12 students were nested per teacher (n_{student} = 8,570; n_{teacher} = 720).1

**Materials**

Even though student demographics were not predictors of interest in this study, previous research found that student characteristics were substantially associated with performance on various NAEP assessments (Fitchett & Heafner, 2017; Fitchett, Heafner, & Lambert, 2017; J. Smith & Niemi, 2001). Therefore, we included the following student-level variables as covariates: non-white/non-Asian indicator, no parental college experience, English language learner, IEP/504 accommodation, and older than modal age—an accepted representation of prior academic experience (Schmidt, Burroughs, Zoido, & Houang, 2015). Approximately, 44% of the students in this sample indicated being non-white, non-Asian (see Table 1). Half of the students identified as female and slightly over half reported having parents without college education.

At the teacher level, NAEP also included an inventory of items measuring professional characteristics and
instructional decision making. For the purpose of this study, we delineated these items into two categories: teacher quality indicators and quality teaching measurements. Mirroring aforementioned studies focusing on teacher education pathway and experience (Borko, 2004; Cochran-Smith & Villegas, 2014; Darling-Hammond et al., 2002; Teske & Schneider, 2001), teacher quality items indicators included: beginning teacher status (< 6 years), National Board Certification, indication of secondary education major/minor/advanced degree, licensure, and alternative certification. We also collapsed scales measuring teachers’ exposure to professional development (PD) into two indicators: PD including conference participation (PD-conference) and PD including reading of history/social studies-related material (PD-reading).

For more nuanced analyses of quality teaching, we used survey items that reported teachers’ frequency of instructional processes. To create meaningful scales from the data, we employed a principal component analysis (PCA) with varimax rotation. Eigenvalues and scree plots were calculated to determine the adequate number of component factors. We removed items from the analysis that did not adequately load onto component factors (> .40) or were not conceptually sound. Two constructs emerged from these exploratory analyses of the NAEP-US8 teacher survey: read/talk/write and performance-based assessment (see Table 2). Read/talk/write (RTW; α = .716) included Likert-type items: use books, newspapers and magazines; use materials from other subjects; use primary source documents; discuss current events; assess with an essay; use film strips/videos; assess with paragraph responses; students participate in debates; and students write letters of opinion. Performance-Based Assessment (PBA) (α = .758) included items: assess with individual projects, assess progress with projects, assess with individual presentations, and assess with group presentations. Both RTW and PBA aligned with what previous research has validated in social studies education (Barton & Avery, 2016; Parker et al., 2013). Standardized scores (z-scores) were calculated for ease of interpretation.

We built into the analytical models single-item indicators of traditional teaching that did not load onto composite factors as covariates: use of lecture, use of textbook, use of multiple-choice assessment, and use of fill-in assessments. The items were standardized (z-scores) for interpretation purposes. We also included an additional covariate, class organization, as a dummy variable (i.e., teach social studies as standalone, teach social studies as part of an instructional team with teach all subjects as the comparison category) because middle level education professional organizations have suggested that subject area organization is associated with student learning outcomes (AMLE, 2010; Faulkner et al., 2017).

Analysis
To answer research question one, we conducted a comparison of means (using t-tests) to examine the association among teachers’ profession teacher quality characteristics (e.g., alternative licensure, content area background, experience) and instructional decision-making on scales associated with quality teaching (e.g., RTW and PBA). To answer research question two, we developed a two-level hierarchical linear plausible-values model with HLM software to examine the

| Table 1. Descriptive Statistics (n_student = 8,570; n_teacher = 720) |
|---------------------|------------------|
| Variable                      | %                |
| Student-Level Demographics    |                  |
| Non-white/non-Asian           | 44%              |
| Female                        | 50%              |
| Parents did not attend college| 56%              |
| English language learner      | 6%               |
| Educational accommodation (IEP/504) | 10%            |
| Older than modal age          | 39%              |
| Teacher-Level Professional Characteristics |          |
| Beginning teacher (0 to 5 years) | 32%            |
| National Board Certification  | 12%              |
| Teach social studies alone    | 83%              |
| Teach social studies as part of a team | 5%               |
| Licensed                      | 94%              |
| Alternative certification program | 13%            |
| Secondary education major/minor | 79%           |
| History major/minor           | 70%              |
| Professional development—conference attendance | 55%           |
| Professional development—reading social studies | 77%        |
association between eighth grade teachers’ professional characteristics and instructional decision-making with student history knowledge as measured by NAEP-US8. Student-level fixed effects (i.e. covariates) were held constant and mean-centered, so that outcomes at level two could be interpreted as the average scores per group (i.e. teacher). Because teacher characteristics and instructional practices were the focus of these analyses, student-level (level one) fixed effects are not reported in this study.  

For Model I, we included the teacher quality variables (e.g., beginning teacher, alternative certification, and National Board Certification) in the analysis. In Model II, we included the two quality teaching scales (RTW and PBA) as well as the classroom structure covariates (e.g., teach alone and with a team) and the instructional covariates (e.g., frequency of lecture and use of the textbook). Sampling weights were included in the analyses of research question two and robust standard errors were calculated to account for clustering of students to teachers.

### Results

#### RQ1: Variability of instruction across teacher quality indicators

To answer research question one, we compared means scores on the two constructs of quality teaching (RTW and PBA) across traditional teacher quality inputs (e.g., alternative licensure, content background). Figure 1 illustrates the significant variability across traditional teacher quality indicators and the RTW construct. Comparisons were made between teachers with (e.g. Yes) and without (e.g. No) each qualification characteristic (e.g., beginning teacher,

| Item | Factor (% contributed to overall inventory variance) | Extracted Communalities |
|------|--------------------------------------------------|--------------------------|
| Four-point Likert items | Read/Talk/Write (26.83) | Performance-Based Assessment (13.32) |  
| Use books, newspapers, magazines | .645 | 13.32 | .417 |
| Use material from other subjects | .629 | 13.32 | .409 |
| Use primary source documents | .597 | 13.32 | .358 |
| Student discuss current events | .528 | 13.32 | .282 |
| Assess progress with essay/paper | .528 | 13.32 | .387 |
| Use film, video, filmstrips | .507 | 13.32 | .271 |
| Assess progress with paragraph length response | .483 | 13.32 | .278 |
| Participate in debates | .425 | 13.32 | .279 |
| Write letters to share an opinion | .421 | 13.32 | .264 |
| Assess with group projects | .812 | 13.32 | .661 |
| Assess with group presentations | .808 | 13.32 | .657 |
| Assess progress with individual projects | .678 | 13.32 | .478 |
| Assess with individual presentations | .657 | 13.32 | .478 |
licensed teacher, and alternative licensure). Teachers with National Board Certification reported approximately .40 standard deviations (SD) more RTW than their counterparts \(t(720) = 3.59, p < .001\). Teachers with history concentration backgrounds (i.e., major/minor) and secondary education backgrounds (i.e., major/minor) were associated with .22 SDs \(t(720) = 2.91, p < .01\) and .20 SDs \(t(720) = 2.27, p < .05\) more RTW than teachers who did not have these characteristics. Teachers who participated in conference-related PD were associated with .40 SDs more RTW than teachers without these experiences \(t(720) = 5.36, p < .001\), while respondents who reported PD related to reading social studies literature were associated with a .32 SD increase \(t(720) = 3.79, p < .001\).

Figure 2 shows that frequency of PBA varied across teacher characteristics. Beginning teachers reported slightly more frequent use of PBA (approximately...
.17 SDs) compared to more experienced teachers \( t(720) = 2.40, p < .05 \). Moreover, alternative licensure was associated with .24 SDs more PBA compared to traditionally licensed teachers \( t(720) = 2.25, p < .05 \), and teachers attending PD at conferences was associated with .17 SDs more PBA \( t(720) = 2.38, p < .05 \). In examining these findings, it is important to note that these analyses do not suggest causation. Instead, they indicate that teachers’ qualities often used as markers for teacher quality are significantly associated with the frequency of instructional practices valued in the social studies. In the subsequent section, we further examined the association among conventional teacher quality variables, valued dimensions of instruction, and student learning outcomes as measured by NAEP-US8.

**RQ2: Teachers’ professional background and instructional decision-making associated with student achievement on NAEP-US8**

To answer research question two, we developed a hierarchical linear model to examine teachers’ unique contribution on average student NAEP-US8 performance—an indicator of student learning. Tests of intra-class correlation found that 26.2% of the variance in student scores could be attributed to the teacher level, justifying the use of multilevel modeling. In Model I, we included only the traditional teacher quality inputs. Results in Table 3 indicate that beginning teacher status (< 6 years) and alternative teacher preparation were significantly associated with lower average student performance on NAEP-US8. Teachers with a major/minor in secondary education were significantly associated with a positive increase in average student test performance. Exposure to PD (both conference and reading) approached statistical significance with average student performance on NAEP-US8 \( (p < .10) \). These variables contributed to approximately 3% of the total variance.

In Model II, we added composite scores of quality teaching to the model as well as traditional instructional practices and structure of the academic day covariates. This model accounted for approximately 5% of the total between-teacher variance. Holding all other variables constant, students with teachers who reported one standard deviation more on the RTW scale were significantly associated with increased average performance on NAEP-US8 (.07 SDs). As with the previous model, students with beginning teachers and alternatively certified teachers scored significantly lower on average their students with more experienced, traditionally certified teachers (.15 and .18 SDs, respectively). Results also indicate that, when controlling for the quality teaching variables, students assigned to teachers with secondary education backgrounds scored significantly higher on average (.20 SDs). Teachers’ use of PBA as well as the structure of the classroom (i.e. team-teaching or teaching social studies alone) were not significant when accounting for other variables.

**Discussion and implications**

Findings from this study both confirm existing analyses related to teacher quality and offer evidence that quality teaching dimensions are important components of students’ academic success in the social studies. Results indicate that middle grades social studies teachers’ qualifications and other frequent indicators of quality were associated with instructional decision-making—suggesting a correlation between professional background and pedagogical emphasis. However, more complex analyses indicate that these qualities should not be used as a proxy for instructional practice. Results from the multilevel model suggest middle grades teacher qualities (e.g. secondary education major/minor; alternative certification) and quality teaching (e.g. read/talk/write) uniquely contribute to students’ performance on NAEP-US8.

**What’s in a name? Examining the relationship among teacher qualifications and quality teaching**

Results from the study illustrate that eighth grade teachers with both history content and secondary education backgrounds are more likely to engage in multidimensional interdisciplinary practices of reading, talking, and writing with the content. Conversely, teachers without these characteristics were associated with significantly lower frequency of these practices. In their seminal work on the importance of instructional background, Wilson and Wineburg (1988) noted that middle grades teachers with subject area backgrounds outside of history were less likely to engage in practices associated with the discipline. Subsequent studies found similar results, noting that teachers (frequently middle grades practitioners) struggled with discipline-specific instructional demands (Monte-Sano & Cochran, 2009; Reisman & Fogo, 2016). Previous research suggests that these differing views characterize the complex world of middle grade teacher preparation. Conklin (2008, 2010) referred to an “educational black hole” that complicates social studies teacher education for middle grade teachers.
teachers—because of the many divergent perspectives and pathways toward licensure (Cook et al., 2013; McEwin & Greene, 2011). Furthermore, middle grades professional organizations often champion teacher education that takes into account the whole child, including psychological development and socio-emotional development (Association for Middle Level Education, 2010; Faulkner et al., 2013; Goleman, 2005). With so many competing areas, it is perhaps not surprising that middle grades educators have a diverse exposure and training in the disciplines that they teach (Faulkner et al., 2017). Given recent calls toward more research on effective social studies teacher education (Crocco & Linvingston, 2017; Cuenca et al., 2017), future studies should examine which teacher education pathways are associated with the practices valued in social studies education, as well as the association of social studies practices and grade bands. Specifically, research should investigate the extent that backgrounds in specific disciplines align with subject-specific instructional practices as well as the unique demands of middle level learners (AMLE, 2010; Faulkner et al., 2013). Furthermore, National Board certified teachers were associated with increased frequency of valued RTW practices in the social studies. While it is beyond the

### Table 3.
Level Two Estimates for Teacher Quality and Quality Teaching Predictors of Average Student Performance on NAEP-US8

|                                      | Model 1                | Model 2                |
|--------------------------------------|------------------------|------------------------|
|                                      | B (SE)                 | B (SE)                 |
| Level I Intercept                    | 259.04*** (3.34)       | 258.47*** (3.77)       |
| **Traditional Teacher Quality Inputs** |                        |                        |
| Beginning teacher                    | −3.19* (1.33)          | −3.43* (1.40)          |
| National Board Certification         | −2.24 (1.99)           | −2.39 (2.12)           |
| Secondary ed. major/minor            | 4.56** (1.62)          | 4.40** (1.70)          |
| History major/minor                  | 1.96 (1.44)            | 1.47 (1.52)            |
| Licensed teacher                     | 1.20 (2.67)            | 1.26 (2.67)            |
| Alt. certification program           | −4.01* (1.97)          | −4.13* (2.00)          |
| PD-conference                        | 2.38† (1.31)           | 1.70 (1.45)            |
| PD-reading                           | 2.70† (1.49)           | 1.85 (1.64)            |
| **Quality Teaching Variables**       |                        |                        |
| Read/talk/write                      | 1.57* (0.77)           |                        |
| Performance-based assessments        | −0.03 (0.69)           |                        |
| Teach social studies alone           | 2.78 (2.24)            |                        |
| Teach social studies as part of a team | −2.82 (3.65)       |                        |
| Use the textbook                     | 0.28 (0.75)            |                        |
| Lecture to students                  | 0.74 (0.70)            |                        |
| Use multiple choice assessments      | −0.20 (0.76)           |                        |
| Use fill-in the blank assessments    | −0.49 (0.71)           |                        |

Note. †p < .10; *p < .05; **p < .01; ***p < .001
The complex relationship among teacher qualifications, instruction, and student learning outcomes

Complementing previous production-function studies (Darling-Hammond, 2000; Goldhaber & Brewer, 2000), our results suggest that experience and teacher education are associated with student learning outcomes in middle grades social studies. These findings add currency to the importance of teacher education initiatives in the social studies and also challenge the more abbreviated forms of teacher preparation provided in alternative licensure programs. Moreover, when accounting for potential attribution bias by including instructional decision-making variables, indicators of teacher licensure and preparation were significantly (and uniquely) associated with eighth grade students’ performance on NAEP-US8 signifying implications for middle grades teacher preparation.

Results suggest that students with alternatively licensed teachers performed significantly lower (on average) compared to classmates with traditionally certified teachers on NAEP-US8. This finding might reflect the lack of preparation and increased out of field teaching assignments of alternatively licensed educators. In their longitudinal study of Teach for America (TFA) teachers, Donaldson and Johnson (2010) concluded that up to 31% of TFA social studies educators were teaching out of field in a given year. Dee and Cohodes (2008) found that students with alternatively licensed, out of field social studies teachers performed significantly lower on standardized tests. The current study questions the efficacy of alternatively certified programs, which often short-change teacher preparation and content-specific course requirements for the sake of expediency. While substantial variability exists among alternatively licensed programs (Cochran-Smith et al., 2016), the findings should give pause to education stakeholders seeking to liberalize regulations on social studies teacher certification. Results suggest that blanket policies supporting the establishment and recognition of non-traditional licensure programs might
be detrimental to student learning outcomes in the social studies. Furthermore, middle grades scholars (Cook et al., 2013; McEwin & Greene, 2011) have documented differences in the effectiveness of middle grades teachers based on their preparation as a content area generalist or a content area specialist. While this study only examined social studies, these results highlight the need to examine if this middle grades preparation concern exists for other content areas as well.

Conversely, findings suggest that teachers with a secondary education major/minor were associated with higher average performance on the NAEP-US8. This finding supports the work of social education researchers championing both the content and pedagogical components of middle grades history/social studies teacher education (Barton & Levenskik, 2004; Crocco & Linvingston, 2017; Reisman & Fogo, 2016). Analyses suggest that, when controlling for history content background and experience, students with teachers who have a more comprehensive, PCK-oriented preparation outperform their counterparts on measures of U.S. history knowledge and understanding. Results expose the complexity of the subject area and the value of teachers with content experience in both history and the social studies as well as middle grades training. These analyses evidence the importance of both content and pedagogical professional exposure and offer insight into how teacher education might illuminate the dark, uncertain place of middle grades social studies teacher preparation.

Interestingly, National Board certified teachers were not significantly associated with average student learning outcomes. Moreover, the directionality of their relationship with the outcome variable was negative. This finding may be less of a critique of National Board Certification and more of an indicator of the differences in middle level schools where National Board certified teachers are employed. According to a study of National Board certified teachers, McEwin et al. (2000) found that National Board certified teachers do not work in a uniform school type—two-fifths work in middle schools, one-third work in elementary schools, and the remaining proportion work in other grade organizational types (i.e., K–8 and 7–2). Given that there is a broad range of middle level school types across the country (e.g., grades K–6, 6–8, 6–9, K–8, 7–12; Faulkner et al., 2017), the success of these middle level school structures is debatable (e.g., the K-8 model; Booth, Sheehan, & Early, 2007; McEwin et al., 2005).

Furthermore, middle level schools that serve a higher percentage of racially and ethnically diverse students as well as a greater percentage of students receiving free and reduced lunch are less likely to employ teachers who received specialized middle grades training (McEwin & Greene, 2011). These schools are more likely to report greater frequencies of lecture, lower expectations for students, and limited engagement in critical thinking as compared to other schools (McEwin & Greene, 2011). The links between National Board Certification and middle level school type need close examination to determine if school structure moderates the positive effects of National Board certificated teachers who challenge middle level students with high-leverage social studies practices (i.e. RTW).

Results from this study also indicate that teachers who engaged in the work associated with read/talk/write, which conceptually aligned with highly valorized practices in social studies (Barton & Avery, 2016), were associated with increased student performance on NAEP-US8. This finding, also found in prior studies of NAEP US history 4th and 12th grade assessments (Fitchett & Heafner, 2017; Fitchett et al., 2017), bolsters smaller-scale, qualitative studies that have perpetuated the importance of multiple ways of knowing history and social studies content. Interestingly, performance-based assessment was not significantly associated with NAEP-US8. However, one should note that NAEP U.S. history tests do not sufficiently measure the disciplinary skills associated with historical thinking nor do they mimic the performance-based assessments valued by the discipline (Gaudelli, 2002; Smith, 2017; Smith & Breakstone, 2015). These findings illustrate an important distinction between what NAEP-US8 measures and the assessment practices valued in social studies and in middle grades (AMLE, 2010). Specifically, NAEP-US8, measures historical content knowledge (Lazer, 2015; VanSledright, 2011), but it does not accurately assess students’ historical thinking. As the field of history and social studies education continues to place greater (re)emphasis on disciplinary thinking, large-scale assessments need to keep pace. The Stanford History Education Group’s recent attempts to develop valid and reliable assessments of students’ ability to engage in historical thinking tasks offers a potential avenue for large-scale assessments like NAEP-US8 (Smith, 2017). State and national assessment programs should consider adopting such measures to help researchers, policymakers, and educators more accurately assess
how and to what extent students learn social studies content and concepts. State agencies might look to VanSledright (2014) for more authentic and valid dimensions of historical thinking.

**Limitations**

Teacher-reported data were used to examine instructional practices in the middle grades classroom. While the anonymity and low-stakes climate of NAEP-US8 testing should minimize self-reporting bias, all results should be interpreted with caution. Furthermore, the frequency of quality teaching predictors do not necessarily guarantee the quality of teaching. In other words, the more that a teacher uses an instructional strategy is not the same thing as how well they do it. The nature of the data limited our ability to evaluate the landscape of instruction, which should be taken into account. Lastly, the research design for this study was non-experimental and therefore causal inferences from these analyses would be inappropriate. However, findings, as pointed out earlier, continue a trend from prior research indicating that teachers who incorporate discussion, use of multiple sources, and discipline-focused writing are associated with higher average student performance on NAEP-US8.

**Conclusion**

So, which is it: teacher quality or quality teaching? Findings from this study of eighth grade student and teacher data from NAEP-US8 suggest a bit of both. Middle grades teacher qualities were significantly associated with valued practices in the social studies and the middle grades philosophy. Moreover, in a more complex analytical model, both teacher qualifications (licensure and teacher education background) and instructional practice were associated with students’ NAEP-US8 performance. Findings from this study suggest that education policies focused on improving the quality of instruction are perhaps not enough, nor are policies focused on making sure all teachers check certain qualification boxes. Instead, middle grades social studies educators and policy stakeholders should strategically advocate for both aims.

**NOTES**

1 All sample sizes were rounded to the nearest 10 per the NCES data disclosure agreement.

2 Student-level fixed effects were held constant in each model. Though student backgrounds are important predictors of test performance, they were not the focus of this study. For a complete reporting of results, please contact the authors.

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