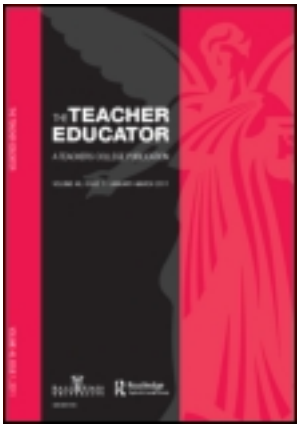

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Principals Judge Teachers by Their Teaching

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RESEARCH ARTICLE

PRINCIPALS JUDGE TEACHERS BY THEIR TEACHING

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This quantitative study investigated the relationship between teacher dispositions, subject content knowledge, pedagogical content knowledge, and reasons that school principals recommend non-renewal of probationary teachers' contracts. Principals in the Southeastern Unites States completed an e-mailed survey. Two nonparametric tests, Kruskal-Wallis and Mann Whitney U, were used to statistically analyze group responses. Principals reported that they observed most a lack of pedagogical content knowledge from ineffective teachers and they prioritized the importance of instructional skills in deciding whether to non-renew a teacher contract. Principals identified teacher integrity, dependability, and honesty as important dispositions. The studies' findings are important for universities that prepare preservice teachers and also for the planning of professional development initiatives. The study findings suggest that principals tend to view dispositions as personality characteristics rather than as teacher competencies and that teacher expertise in both subject content and pedagogy must be woven together.

Quality teaching is the crucial component needed for student learning (Darling-Hammond, 2006; Kane, Rockoff, & Staiger, 2007; Marzano, 2006). More specifically, both subject content knowledge and pedagogical content knowledge are essential components of successful teaching. What is less clear, however, is the association among teacher contract nonrenewals, teacher dispositions, subject content knowledge, and pedagogical content knowledge. In this quantitative study, school principals in Alabama, Georgia, North Carolina, and South Carolina responded in three general areas: (a) ineffective teacher behaviors, (b) the importance of specific dispositions, and (c) teacher criteria for contract nonrenewal.

Teachers enter the teaching profession with at least four knowledge bases: their disposition, knowledge of pedagogy, subject matter knowledge, and context. One presumption is that teachers begin preparation with some level of subject content knowledge (SCK) and as they begin to learn to teach, they transform and develop pedagogical content knowledge. SCK is related to teacher effectiveness and teacher contract non-renewals. Almost 50 years ago, James Conant (1963) argued that strong subject content knowledge with limited

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exposure to pedagogical knowledge constitutes a sufficient basis to prepare teachers. A search of the literature finds no shortage of advocates calling for the deregulation of teacher certification to allow college graduates who lack course work in education to qualify for teaching certificates based on their content knowledge alone (Hess & Finn, 2004; Podgursky, 2005). Podgursky (2005) confidently reported, ''the most basic academic requirement is knowledge of the relevant discipline'' (p. 75).

Subject Content Knowledge

Subject content knowledge refers to the concepts and constructs within a field and the relationships among them. Subject content knowledge includes knowledge of the content of a subject area or discipline as well as knowledge of the substantive and syntactic structures of the discipline (Schwab, 1964). Shulman (1986) noted that subject matter knowledge ''is the comprehension of the subject appropriate to a content specialist'' (p. 26). This view includes conceptualizations of how the field is organized and questions which guide inquiry. Without knowledge of the aforementioned structures within a field, teachers may misrepresent and impact the level of classroom discourse.

Arzi and White (2008) found that the ''required school curriculum is the single most significant factor affecting teacher content knowledge'' (p. 242). This impact manifests itself through the curriculum that teachers previously learned as school students and the curriculum that teachers currently teach. These factors determine priorities for new subject matter learning. Content knowledge does not begin or end in the university, but rather is a complex interactive process.

Subject content knowledge is often measured by the number of university subject-matter course credits for both pre- and inservice teachers (Arzi & White, 2008). Yet, this characteristic of university-based teacher subject content learning has modest effects on student achievement (Wayne & Youngs, 2003). According to Arzi and White (2008), this view of earning subject matter credits ''conceptualizes teacher knowledge as a unidimensional static entity, ignoring variety within and changes that it may undergo over time ... beyond the boundaries of tertiary institutions'' (p. 222). They noted that the school curriculum serves as both knowledge organizer and source of teacher subject content knowledge. They also suggested that there is a three-phase model that represents how teachers acquire subject content knowledge: ''phase 1 includes the acquisition of academic details, phase 2 is curricular aggregation, and phase 3 is characterized by intra- and inter-disciplinary linking and pattern construction'' (p. 245). They claimed that the lines between the phases are not sharp and that transitions are gradual. They suggested that phase 2 is probably a point where pedagogical content knowledge begins. It was Shulman (1986) who succeeded in linking SCK and PCK.

Pedagogical Content Knowledge

Shulman (1986) pulled together disparate views regarding subject content knowledge and pedagogical knowledge by noting that there are missing questions about the content of lessons taught. Related, more content knowledge is useless without the instructional skills (or pedagogical knowledge) to deploy it. Shulman (1986) drew attention to the value of both subject content knowledge and knowledge of pedagogy. Zeidler (2002) noted that

the analysis of several studies leads to the inference that teacher subject content knowledge is a necessary but insufficient condition for the transfer of central ideas (p. 31).

A prevailing view is that teachers must possess a level of general pedagogical knowledge and knowledge of teaching regarding areas such as knowledge and skills about learning, knowledge of general principals of instruction, and knowledge and skills about classroom management; all of which underscore the importance of teachers' pedagogical knowledge for student learning (Darling-Hammond, 2006; Doyle, 1986). Shulman (1986) noted that pedagogical knowledge ''goes beyond knowledge of subject matter per se to the dimension of subject matter knowledge for teaching'' (p. 9). Content in this sense refers to its teachability. In essence, pedagogical content knowledge (PCK) relates to the idea that teachers must be aware of students' common misperceptions and subject-specific difficulties; and knowledge of useful representations and appropriate instructional techniques for teaching the content (Shulman, 1986).

Pedagogical content knowledge lacks a precise definition in the literature (Ball, Thames, & Phelps, 2008). Attempts at definitions appear so broad that the concept seems to include nearly everything a teacher might know in teaching a concept. Many definitions, directly or indirectly, describe the attributes that PCK would encompass. Definitions include ''the intersection of knowledge of the subject with knowledge of teaching and learning ...'' and ''that domain of teachers' knowledge that combines subject matter knowledge and knowledge of pedagogy'' ... or ''the product of transforming subject matter into a form that will facilitate student learning'' (Ball et al., 2008, p. 394). Nilsson (2008) noted that pedagogical content knowledge is a ''way of understanding the complex relationship between teaching and content through the use of specific teaching approaches and is developed through a process rooted in classroom practice'' (p. 1283). Geddis and Wood (1997) called PCK a ''broad category of those kinds of knowledge involved in pedagogical transformations of subject matter'' (p. 612). They included the learner's prior concepts, subject matter representations, instructional strategies, curriculum materials, and curricular saliency. Curricular saliency refers to the teacher's understanding of the role and place that the topic fits into the curriculum.

Pedagogical content knowledge application is the activity of a teacher shifting focus from a general conception of content to a more detailed level. This begins with some method of organizing content in a progressive or logical order. PCK has ''become a way of understanding the complex relationship between teaching and content through the use of specific teaching approaches and is developed through a process rooted in classroom practice'' (Nilsson, 2008, p. 1283).

Gess-Newsome (1999) reviewed studies on teachers' knowledge and beliefs about subject matter and the relationship to teaching. Gess-Newsome took the position that there is a distinction between an integrative and transformative model of teacher cognition. With the integrative view, PCK does not exist and teacher knowledge is explained by the intersection of subject matter, pedagogy, and context. Knowledge from all three domains is integrated as needed. In the transformative model, PCK is a well-structured and easily accessible form through which something new and different in the way the three domains combine; consequently the new knowledge itself is transformed into PCK.

Grossman (1990) conceived of pedagogical content knowledge as composed of four central components: knowledge and beliefs about the purposes for teaching a subject at different grade levels; knowledge of the students' understanding, conceptions, and misconceptions of particular topics in a subject area; knowledge of curriculum materials available to teach a particular subject matter; and knowledge of instructional strategies

and the skill to implement them. As Shulman noted (1986), teachers must also draw upon knowledge that is specific to teaching particular subject matters. In effect, this represents the dimension of subject matter knowledge for teaching. Within this realm we see the most useful forms of representation of concepts, analogies, illustrations, demonstrations, among others (Shulman, 1986, pp. 9–10).

Torff and Sessions (2009) noted, ''The test-score research suggests that teachers' content knowledge and pedagogical knowledge both appear to be positively associated with student outcomes, but which has the greater effect remains in dispute'' (p. 129). Two studies by Torff and Sessions (2005, 2009) found that the most frequent causes of teacher ineffectiveness were deficiencies related to pedagogical knowledge. Deficiencies in content knowledge were the least common perceived cause. Results suggest that lack of pedagogical content knowledge is the most common underlying cause of problems of teacher quality, and Manizade and Mason (2011) developed a comprehensive table, which includes a synthesis of PCK-related literature (pp. 185–187).

Dispositions

Much current interest in dispositions stems from the National Council for Accreditation of Teacher Education (NCATE, 2011) and Interstate New Teacher Assessment and Support Consortium Principles (INTASC, 2011) mandates to incorporate dispositions into teacher candidate assessment. Borko, Liston, and Whitcomb (2007) claimed that NCATE standards have set the stage for a major debate about the role of dispositions in teacher preparation.

For over seven decades, the importance of teacher candidate dispositions has been evident in the literature (Albee & Piveral, 2003). A prevailing view is that effective teaching requires teacher knowledge, skills, and appropriate dispositions (Danielson, 2002). Due to the limitations of measurement tools, integrating dispositions into teacher education programs has lacked widespread systematic and intentional effort (Albee & Piveral, 2003). NCATE (2011) describes dispositions as ''the values and commitments'' that define teacher performance. NCATE standards call for dispositions that are consistent with the idea of ''fairness'' and ''the belief that all students can learn.'' NCATE refers to dispositions as teacher behaviors toward students, families, colleagues, and communities that affect student learning, motivation, and development as well as the educator's own professional growth.

Character-Related Dispositions

There are numerous and divergent efforts in the literature to describe teacher dispositions. Because definitions and conceptions of dispositions fall into several broad, general categories, it is useful to look at dispositions on a continuum that ranges from concepts that are not unique to teaching (character-related) to those that are essential components of effective teaching (competence-related).

Some researchers refer to dispositions as certain temperaments, attitudes, beliefs, and personality characteristics. These might best be described as character-related dispositions (Jung & Rhodes, 2008). This point of view tends to hold the personal characteristics of individuals as their dispositions rather than their competencies as professionals. This interpretation is furthest removed from the teacher's classroom dispositions, due to its general nature. The character-related viewpoint is of dispositions as values, beliefs, personalities,

morals, and ethics contrasted by professional competencies which exist in areas such as technology, assessment, instruction, or leadership. The character-related dispositions include characteristics such as meeting deadlines, respecting differences, and good citizenship. None of the aforementioned characteristics are particularly unique to the teaching profession yet they are essential to effective teaching (Jung & Rhodes, 2008). Teacher education programs or school principals cannot likely help teachers become better people or to change their character-related dispositions, but they can influence awareness and promote a self-assessment reflective component of professionalism.

A similar character-related conception of dispositions often includes a moral or ethical aspect, characterized by descriptors such as ''fairness, being democratic, empathy, enthusiasm, thoughtfulness, and respectfulness'' (Rike & Sharp, 2008, p. 151). Because dispositions are often viewed as beliefs, personal values, and commitments, they also may be conceptualized as components of a moral compass and ethical strand that provides direction to teacher decision making over time. A similar view is to look at dispositions as a dimension of personality. According to Damon (2007), disposition development mirrors personality development. Damon calls dispositions a ''deep-seated component of personality going back to the origins of our temperaments . . . '' (p. 367). Although certain character-related dispositions are prerequisites of effective teaching, alone they still fall short of ensuring teacher competence in the disposition realm. Wasicsko (2002) reviewed the earliest disposition literature from the 1960s and divided teacher categories of perceptions into five character-related groups that differentiate effective teachers from ineffective ones: (1) about subject matter, (2) about self, (3) about other people, (4) about the teaching task, and (5) general frame of reference.

Another view is of dispositions as a pattern of behavior. Katz and Raths (1986) provided a useful explanation, calling dispositions ''the trend of a teacher's actions across similar contexts'' (p. 2). More than mere mindless habits, dispositions are viewed as employing a conscious pattern of behavior that is directed to a goal (Katz, 1993). Similarly, Borko et al. (2007) said that dispositions are ''predictive patterns of behavior'' (p. 361). A related conception of teacher dispositions is of a reflective practitioner. Reflective practice falls into the realm of a disposition as an area of expected or desired teacher competence. A mechanically competent teacher falls short of the archetype expert who has developed the desirable intellectual disposition to reflect (Goodlad, 1990). Dispositions are acts that are chosen in a particular context and at a specific time, that when called upon require skillful behavior. Or conversely, a disposition may include failure to act or to employ the knowledge or skills that the teacher possesses. Simply possessing a disposition does not ensure that it will be employed for the benefit of students. Although character-related teacher dispositions provide a necessary foundation for teacher success, they alone are insufficient. When viewed as competence-related framework, however, teacher dispositions have the potential to become useful and powerful.

Competence-Related Dispositions

Competence-related dispositions, unlike character-related, can be more readily observed and influenced by school principals. Training and relevant educational experiences can be used to advance dispositional aspects in the practice of teaching. Rather than observing a teacher's personality to see if the person is collaborative, a teacher can be led to employ collaborative work in classroom settings through professional learning and principal expec-

tations. In addition, describing dispositions in more of a competence-related framework provides a better opportunity to assess preservice and inservice teacher performance (Jung & Rhodes, 2008).

A genuine benefit to viewing dispositions as competence-related is the improved opportunity to identify and evaluate specific desirable teacher dispositions. Jung and Rhodes (2008) proposed that dispositions can be generalized toward any instructional strategy by the teacher's: (a) willingness and intention to embrace the recommended strategy, (b) belief in the value of the strategy including a positive attitude regarding its use, (c) intention to increase the capability of the strategy, and (d) confidence in using the strategy (p. 656). This framework moves from the mindset of dispositions as an abstract character of personality to dispositions as an element of effective teaching. Additionally, assessment of dispositions becomes more palatable as it progresses beyond a teacher's personality characteristics to the measurement of specific teacher competencies.

Schussler, Stooksberry, and Bercaw (2010) provided a useful structure for understanding dispositions in a classroom setting. They refer to intellectual, cultural, and moral dispositional domains. Intellectual dispositions entail the learning expectations that teachers establish for all students, including what and how to teach, beliefs about how students learn, and an understanding of one's role as a professional. This domain includes areas such as pedagogy and content. The intellectual framework requires continually reflecting on one's practice, a behavior that principals can observe and measure.

The cultural disposition domain refers to the teacher tendency and desire to meet the needs of all learners in the classroom. This includes the teachers' inclination to make necessary modifications to meet the needs of diverse learners and includes an awareness of their own culture and its effect on their teaching. Teachers also need to be aware of the students' culture and its effect on learning. This domain includes areas such as ''knowing your students'' and ''meeting students where they are at'' and motivating students by making the content relevant. Although not easy to measure, principals have a reasonable chance to gauge cultural dispositions.

Moral dispositions involve the inclination to think through one's moral values and how one relates to others. In practice, this domain may consider items such as how to handle inappropriate behavior, how to motivate students, and grading fairly. As the teacher supervisor and leader of instruction, the school principal is best positioned to help teachers reflect on moral dispositions.

The school principal can practically and legally examine these competence dispositions in practice (as described by Schussler et al., 2010). A school principal who consistently monitors classroom instruction denotes each teacher's ''disposition trend'' with respect to planning, interactions with students, collegiality, and interest in their own professional growth. This trend provides an open window to the teacher's level of effectiveness with students, and affords a reasonable basis to determine, in part, teacher contract nonrenewals (Nixon, Dam, & Packard, 2010).

Teacher Contract Non-Renewal

Teacher contract non-renewals are legal procedures that are defined in courts, by hearing examiners, through state statutes, and by means of master contracts and local policies and procedures. All states differentiate between the requirements for ending the employment of teachers depending on their tenure status. Most importantly, a tenured teacher must be

afforded certain procedural rights prior to dismissal or termination. These rights generally include notice of the grounds for the action and the opportunity for a hearing. Depending on the statutory protections of the state granting tenure, tenured teachers often must be provided with names of witnesses, the power of subpoena to compel production of documents and testimony of witnesses, the right to counsel at all stages of the process, and the right to appeal. Non-tenured or probationary teachers are considered ''at will employees'' and not generally afforded the same due process rights as tenured teachers. They may have their contracts non-renewed without cause at the option of the employer, upon proper notice of the intent not to renew by the employing school board at the end of any contract year.

Even though probationary teachers may have their contracts non-renewed without cause, emblematic reasons exist for both tenured and probationary teachers. The most common legal reasons are defined in state statutes and often include incompetency, insubordination, immorality, good cause, reduction in force, and contract violations. The legal reasons manifest in behaviors such as excessive absenteeism and tardiness, neglect of duty, abusive language, administering corporal punishment, unethical conduct, sexual misconduct, abuse of a controlled substance, theft or fraud, misuse of a school computer, criminal misconduct outside the work setting, and conduct unbecoming a teacher, among others (Lawrence, Vashon, Leake, & Leake, 2005).

Several of the emblematic reasons have face value with respect to teacher dispositions, subject content knowledge, and pedagogical content knowledge. Insubordinate behavior and immorality are two common reasons for contract non-renewal that might also be related to teacher character dispositions. In fact, reviewing the list of common reasons for contract non-renewal and it is relatively easy to conceive of both character-related and competence-related reasons that school principals recommend non-renewal of teacher contracts. As the understanding of dispositions continues to evolve to include competence rather than just character, additional relevance and the relationship of dispositions to contract non-renewal will be more evident.

The study answered four overarching questions: (a) Which behaviors do principals report observing most frequently from ineffective teachers?; (b) As reported by school principals, which teacher dispositions are most important to success in the classroom?; (c) Which teacher criteria (disposition, subject content knowledge, or pedagogical content knowledge) are most important to school principals in deciding whether to recommend contract non-renewal of a non-tenured teacher?; and (d) Are there significant differences in responses based on three demographic variables: level of school, location of school, and principal years of experience?

Research Methods

Participants

Principal e-mail addresses were accessed in the four selected states using either state department of education websites or third party websites. The databases were imperfect, however, because they typically contained data a year or two old, leaving recently appointed principals out of the population. Additionally, school district filters and spam controls prevented some principals from receiving the e-mail. Also, some school district policies forbid research participation without specific permission. Additionally, some of the e-mail

addresses were simply not accurate or had changed as 968 e-mails were returned to the researchers as undelivered. Of the 6,932 e-mails sent, 544 school principals from Alabama, Georgia, North Carolina, and South Carolina completed the survey.

Fifty-three percent of participants identified that they were located in a rural school, 30% in a suburban school, and 18% in an urban setting. Sixty-six percent said that they had less than 10 years of experience as a principal, 29% between 10 and 20 years of experience, and only 5% had more than 20 years' experience as a principal. Forty-eight percent reported that they were elementary principals, 19% middle school, 23% high school, and 10% other. All except three of the respondent principals work in public schools. Forty-five percent of responses were from Georgia, 29% North Carolina, 21% Alabama, and 6% South Carolina.

Instrumentation

The study's research questions and our interests led to the development of a descriptive survey (Mertens, 2005). The initial survey instrument was piloted as a paper survey mailed to 60 principals in the four selected states. Revisions to the instrument were made after additional analysis and feedback. The instrument has been modified several times and builds on three related studies (Nixon et al., 2010; Nixon, Packard, & Dam, 2011; Nixon, Packard, & Douvanis, 2010). Survey development was guided by the design considerations offered by Creswell (2005) and Mertens (2005).

Survey questions and answer choices were created after extensive review of the literature concerning teacher contract non-renewal, teacher dispositions, pedagogical content knowledge, and subject content knowledge. Each respondent provided demographic information regarding their years of experience as a principal; the size and level of school; state information, and whether their school was rural, urban, or suburban. Responses were collected November of 2010 using *Survey Monkey software*. A second e-mail was sent in December of 2010 to encourage additional participation. A Web survey was used because it can achieve a comparable response rate to mailed surveys (Cook, Heath, & Thompson, 2000; Kaplowitz, Hadlock, & Levine, 2004), and it is substantially less expensive.

A survey question asked, ''Which behaviors do you observe most frequently from ineffective teachers?'' The three answer choices included: (a) lack of subject content knowledge; (b) lack of instructional skills; and (c) unacceptable disposition.

A second question was ''Which teacher dispositions are important to success in the classroom,'' and included the following answer choices: collaborative, integrity, reflective, knowledgeable, initiator, flexible, relationship-builder, creative, honest, dependable, and other (please specify). In another question, principals rated the importance of subject content knowledge, instructional skills, and disposition to non-renewal decisions on a scale from 1 to 3.

Analysis Procedures

Survey results were analyzed and are reported descriptively and by statistical significance. The ordinal nature of the data gathered dictated comparisons between groups using two nonparametric tests: Kruskal-Wallis and Mann Whitney U. These tests are similar to their parametric counterparts which allows for comparison for multiple and two independent

TABLE 1 Number of Principals Reporting Ineffective Teacher Behaviors by Rank Order

Answer criteria	Rank order			
	Least	Second most	Most	Mean (*SD*)
Lack of subject content knowledge	219	253	58	1.70 (.66)
Lack of instructional skills	12	129	398	2.72 (.50)
Unacceptable disposition	299	152	85	1.60 (.73)

samples respectively, but do not rely on normality distribution assumptions. The number of tests run did increase the possibility of Type I error rate.

Results

Ineffective Teacher Behaviors

Principals identified behaviors they observed most frequently from ineffective teachers. The answer choices provided included *lack of subject content knowledge, lack of instructional skills,* and *unacceptable disposition* (see Table 1). Principals identified that they most frequently observed *lack of instructional skills. Lack of instructional skills* was significant, $H(2, N = 480) = 6.09$, $p = .05$, by level of school. High school principals, M *rank* $= 206.46$, $n = 122$, identified the criterion as significantly more observed, $z = 2.47$, $r = .13$, $p = .01$, than elementary principals, M *rank* $= 183.72$, $n = 259$.

Teacher Dispositions

Principals were asked to ''Identify which teacher dispositions are important to success in the classroom'' (see Table 2). *Integrity, dependable,* and *honest* were the three most identified criteria. Four answer criteria were statistically significant: *dependable, honest, collaborative,* and

TABLE 2 Teacher Dispositions Rated Most Important to Success in the Classroom

Disposition	Mean (*SD*)
Integrity	3.61 (.53)
Dependable	3.58 (.52)
Honest	3.56 (.53)
Knowledgeable	3.47 (.56)
Relationship-builder	3.42 (.66)
Collaborative	3.30 (.62)
Flexible	3.24 (.66)
Reflective	3.08 (.67)
Creative	2.84 (.71)
Initiator	2.81 (.67)

knowledgeable. *Dependable* was statistically significant, $H(2, N = 525) = 8.42$, $p = .02$, by school location, as suburban principals, *M rank* = 238.75, $n = 159$, placed more importance than rural, *M rank* = 207.70, $n = 278$. The disposition of *collaborative* differed between school grade levels, $H(2, N = 482)$, $p = .04$, with a significant difference, $z = 2.54$, $r = .13$, $p = .001$, between elementary principals, *M rank* = 210.29, $n = 121$, who placed more importance on this criterion than high school principals, *M rank* = 182.79, $n = 261$.

The disposition of *knowledgeable* was significant, $H(2, N = 541) = 6.69$, $p = .04$, as the criterion was more important, $z = 2.51$, $p = .01$, $r = .13$, to rural, *M rank* = 197.67, $n = 285$, than urban principals, *M rank* = 168.99, $n = 95$. Also, *knowledgeable* was significantly more important, $z = 2.20$, $r = .14$, $p = .03$, to suburban principals, *M rank* = 135.32, $n = 161$, than urban, *M rank* = 116.94, $n = 95$.

The *honesty* disposition was significant among the years' of principal experience, $H(2, N = 538) = 7.17$, $p = .03$). Honesty was significantly more important, $z = 2.59$, $r = .19$, $p = .009$, to principals with 10–20 years of experience, *M rank* = 95.67, $n = 155$, than to principals with more than 20 years of experience, *M rank* = 71.66, $n = 28$. Likewise, honesty was more important, $z = 2.63$, $p = .008$, $r = .13$, to principals with less than 10 years of experience, *M rank* = 195.59, $n = 355$, than to principals with more than 20 years of experience, *M rank* = 71.66, $n = 28$.

Teacher Criteria for Contract Non-Renewal

In another question, principals ascribed the level of importance of certain criteria in deciding whether to recommend contract non-renewal of probationary teachers. Answer choices provided were *subject content knowledge, instructional skills,* and *disposition* (see Table 3). *Instructional skills* was the most often selected criterion reported in deciding whether to recommend contract non-renewal.

A significant difference existed regarding the importance of *instructional skills* among rural, suburban, and urban principals, $H(2, N = 539) = 7.01$, $p = .03$. Differences were significant, $z = 1.98$, $p = .05$, $r = .09$, between suburban principals, *M rank* = 235.42, $n = 162$, who placed more importance on instructional skills than rural principals, *M rank* = 215.08, $n = 282$. A significant difference, $z = 2.568$, $r = .16$, $p = .01$, was also found with suburban principals, *M rank* = 136.41, $n = 162$, who ranked the importance of ''instructional skills'' higher than urban principals, *M rank* = 116.36, $n = 95$. Significant differences, $H(2, N = 531) = 8.71$, $p = .01$, were found among principals by school locations regarding the importance of *subject content knowledge*. Urban principals were

TABLE 3 Number of Principals Reporting Each Rank Order of Criteria for Contract Non-Renewal

	Rank order			
Answer criteria	Least	Second most	Most	Mean (*SD*)
Subject content knowledge	124	280	130	2.01 (.69)
Instructional skills	15	168	359	2.63 (.54)
Disposition	388	96	55	1.38 (.66)

significantly different, $z = 2.84$, $p = .004$, $r = .17$) and placed stronger importance, M *rank* = 141.72, $n = 92$, than principals in the suburban districts, M *rank* = 116.90, $n = 159$. A comparison of the responses from the different grade levels was significant, $H(2, N = 481) = 7.95$, $p = .02$) regarding *dispositions*. Elementary principals, $z = 2.698$, $r = .14$, $p = .007$) placed stronger importance, M *rank* = 199.80, $n = 260$, on dispositions than high school principals, M *rank* = 173.80, $n = 122$.

Discussion

Teacher Behaviors

Principals selected lack of instructional skills as the most common behavior that they observe from ineffective teachers. This finding elevates the importance of teacher pedagogical knowledge and supports the findings of Torff and Sessions (2005; 2009). Compared to high school principals, elementary principals' responses indicated that they observed non-instructional concerns more frequently from their ineffective teachers. This may mean that elementary principals are satisfied with their teachers' PCK, or another explanation may be rooted in a later response in which elementary principals stressed the importance of teacher dispositions. We expected secondary-level school principals to elevate the importance of SCK; however, it was urban principals who identified the importance of SCK in the behaviors of ineffective teachers. Perhaps high school principals were suggesting that there may be too much emphasis on SCK, hence they reported their observations of high levels of lack of instructional skills.

Teacher Dispositions

Principals identified a preference for those dispositions that can be readily branded as character-related. Integrity, dependability, and honesty, each arguably a character trait, were the highest rated dispositions. This suggests that principals view dispositions as a characteristic of personality and that they define their importance as a function of personality rather than professional competence. An example comes from the disposition *knowledgeable*. In one survey question, urban principals placed high importance on teacher subject content knowledge. In a different question response, however, urban principals downplayed the importance of knowledge. Urban principals were willing to embrace the context of knowledge when phrased as more of a teacher competence versus knowledge as a character-disposition. However, knowledgeable in this sense may not be viewed as subject content knowledge but rather demonstrates the intermingling of the various constructs in the answer selections of principals.

Elementary school principals embraced the importance of collaboration as a disposition more readily than their high school counterparts. The size and subject content-driven nature of high schools offer an explanation that different dispositions may be more valued at the secondary level. Perhaps this suggests additional evidence that principals view dispositions from the lens of character and personality with the notion that elementary teachers need to be more collaborative with students who are younger, parents, and colleagues.

The other criteria, which tested as significant, were honesty and dependability, and are difficult to explain. Suburban principals placed more importance on dependable than rural

principals, perhaps suggesting higher teacher performance expectations from suburban principals and communities. The honesty results are perplexing, as principals with more than 20 years of experience placed less importance on the criterion than both principals with less than 10 years of experience and principals with between 10 and 20 years of experience. Perhaps to these veteran principals the notion of honesty is just taken for granted as a given.

Teacher Criteria for Contract Non-Renewal

Consistent with Torff and Sessions' (2005; 2009) findings, principals selected instructional skills as the most important criterion in contract non-renewal considerations. Suburban principals seemed to have a higher set of expectations regarding expected teacher pedagogical content knowledge than both urban and rural principals, as they placed statistically significant importance on the criteria. A possible explanation is that there are higher expectations and pressures from suburban families and communities regarding the standards that they hold about classroom instruction and school performance generally.

Urban principals placed statistically significant emphasis on subject content knowledge compared to suburban principals. It is possible that urban schools have struggled to hire highly qualified teachers in several subject content areas, so, consequently urban principals have a heightened sense of the importance of subject content knowledge. Also, more urban schools may be struggling to meet the requirements for Adequate Yearly Progress (AYP) as mandated by No Child Left Behind (NCLB) and state assessments, so principal responses may reflect pressures from accountability requirements. It appears that based on school location, principals face different challenges when working with teachers and issues of contract non-renewal.

Elementary principals placed significant emphasis on teacher dispositions more than high school principals. One interpretation is the belief that elementary teachers are expected to be more nurturing and sensitive to students than high school teachers. Additionally, it suggests that dispositions are viewed as an element of personality and attitude, and that elementary teachers are expected to exhibit specific nurturing character dispositions.

Conclusions

Issues related to teacher contract non-renewals, teacher behaviors, dispositions, subject content knowledge and pedagogical content knowledge are complex and interrelated. From the perspective of teacher contract non-renewals, this study affirms the literature that each is consequential. Expertise in both subject content and pedagogy must be woven together, yet overall principals in this study selected pedagogical content knowledge as the most relevant criteria for teacher contract non-renewal issues. As noted by Torff and Sessions (2009), the only way to genuinely determine the most consequential criteria is to improve the teacher evaluation process to ascertain whether teacher effectiveness is best attributed to dispositions, subject-content knowledge, or pedagogical content knowledge.

The demographic differences found in this study need additional investigation. The literature is scant regarding demographic differences to these important issues, yet we have found that teacher development and teacher preparation may need to differ based upon these variables. Teachers and principals from different demographic groups are apparently not facing the same concerns. The requirements for professional development for both

teachers and principals apparently contrast based on demographic differences. Context seems to matter significantly.

As found in this study, teacher deficiencies are most evident in pedagogical content knowledge. This finding suggests several important propositions. The implication of this finding for teacher preparation and professional development suggests the need for pedagogical emphasis compared to subject content knowledge. It also calls into question alternative teacher certification programs that emphasize the importance of subject content knowledge at the expense of the pedagogical content knowledge. It seems logical to suppose that more alternative certification routes may lead to additional teacher contract non-renewals and further attrition in the profession. The finding also raises questions about teacher certification renewal requirements which reward teachers for additional courses in the subject content areas. Similarly, a legitimate question includes whether policies such as NCLB's definition of highly qualified teachers is on target.

Only 10% of principals reported that a teacher's disposition is the most important criterion in determining whether to recommend contract non-renewal. Given the importance of dispositions by NCATE and teacher preparation programs, this low percentage seems incongruous. The incongruity may be explained by the vague and murky understanding of dispositions. Each principal who completed the questionnaire had a unique understanding and denotation of dispositions, but evidently a preponderance of the respondent principals viewed dispositions through the eyes of a teacher trait or personality characteristic (character disposition), rather than as a competence-related criterion. The character view probably led to principals seeing less relationship between effective teaching and dispositions than for other answer choices (instructional skills and subject content knowledge). It seems apparent that the construct of teacher dispositions is less well developed than SCK and PCK; therefore much more investigation is needed in this area.

The need to continue to work to develop methods that validly and reliably assess teacher dispositions is evident. Following the suggestions of Jung and Rhodes (2008), to generalize dispositions toward an instructional strategy provides a useful starting place for that conversation. In time, teacher competence dispositions will be viewed very similarly to the body of skills and strategies that we expect from teachers, and may be viewed as something akin to ''teacher professional responsibilities.'' Content, pedagogy, and teacher dispositions each contribute to the variance in student outcomes. Continuing to consider these relationships and attributing relative weights to their importance is a worthwhile endeavor.

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