Quality Teaching and Teacher Education: A Kaleidoscope of Notions

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For generations, the kaleidoscope has captivated children and adults alike. The kaleidoscope viewer puts one end of the tube to her eye, points the other toward a light source, then rotates the tube, producing colorful symmetrical patterns formed by the tiny, tumbling objects inside. Beautiful though they are, these patterns are evanescent, disappearing with the twist of the wrist. The kaleidoscope maker cannot predict what patterns might emerge from the individual bits of colored glass, beads, or stones placed inside the tube. We believe that it is not too great a stretch to suggest that teacher educators are similar to kaleidoscope makers. Teacher educators put together programs of course work and experiences with the goal of educating teachers whose knowledge, skills, and habits of mind will intermingle to create pleasing patterns of practice called *quality teaching*. Unfortunately, neither decades of research nor volumes of policy documents on quality teaching and teacher education have yielded a definitive way to make those patterns consistent across contexts with different students, teachers, subject matter, and curricula, among other characteristics.

It is generally assumed that quality teaching plays a major, if not the most important, role in shaping students' academic performances (Darling-Hammond & Youngs, 2002). It is further assumed that quality teaching is sorely needed, but lacking especially in urban school contexts, in order to help close achievement gaps and level the educational playing field for marginalized groups (Banks et al., 2005; Hollins & Guzman, 2005). These assumptions about quality teaching form a significant part of the conceptual base that has been driving the reform of teaching over the past 20 years and are evident in influential teaching reform and policy documents, legislation, and curriculum and teaching standards.

These teaching reforms, in turn, are shaped by and shape the direction of teacher education and professional development through policy making and the development of standards for program accreditation, coalition and alignment of state-level teacher education policies, interstate policy and assessment consortia, and the certification of effective teachers. Teaching reforms are also influenced by and influence teacher education practice at the classroom level through images of teaching projected by various professional organizations in specific subject content areas, such as mathematics and literacy.

Such reform policy and initiatives in teaching and teacher education may lead people to think that there is a unified image of quality teaching and a particular reform target. However, upon closer examination, there appears to be an uneven understanding of, and an assortment of notions related to, quality teaching and teacher education. It is not always clear what quality teaching means nor how it works—a problem that deserves further conceptual and empirical exploration.

Three Perspectives on Quality Teaching

In the existing literature, teaching quality is neither a widely agreed upon nor uniformly accepted concept. Instead, it is defined very differently or is grounded in different assumptions. These differences can be seen in at least three perspectives associated with teachers' cognitive resources, their performance, and their effect (Kennedy, 2008). Empirical support for the conception of quality teaching for each of these is often weak, inconsistent, or even contradictory.

Quality teaching from a cognitive resource perspective is related to the knowledge, beliefs, attitudes, and dispositions teachers bring into the profession. From this perspective, we can trace several notions that appear central to policy debates related to teaching.

First, quality teaching is linked to one's competence as demonstrated on academic and professional tests, and such competence is presumably one of the central predictors for how effective a teacher becomes. This competence as evidenced by test scores is an important premise underlying the debate around whether teachers from alternative programs like Teach for America, who generally have compiled impressive dossiers of high test scores and GPAs, are of higher quality than those who enter and complete traditional teacher education programs (Darling-Hammond & Youngs, 2002; Labaree, 2008).

Second, quality teaching is associated with the credentials one holds for teaching. This notion surfaces especially during

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discussions of whether all students have been taught by teachers who hold licenses in the fields that they are teaching. It is also a factor in debates about whether or not the teaching profession needs to be opened for easy entry (Cochran-Smith & Fries, 2001; Darling-Hammond, 2000).

Another notion about quality teaching from a cognitive resource perspective assumes that teachers' knowledge, skills, and dispositions are central predictors for quality teaching (Ball, Thames, & Phelps, 2008; Pajares, 1992; Shulman, 1987). This view of quality teaching has been infused into the standards through which accomplished teachers are certified (National Board for Professional Teaching Standards, 2002) and teacher education programs are accredited (National Council for Accreditation of Teacher Education, 2000, 2002). Indeed, enhancing teachers' knowledge, skills, and dispositions has been the focus of numerous teacher education and professional development offerings over the past 20 years (Zeichner & Conklin, 2005).

However, empirical support for the above conceptions of teaching quality from a cognitive resource stance is often weak. Wayne and Youngs (2003) found the evidence of the influences of teachers' test scores, course work and degrees, and certification status on student achievement gains to be minimal and, in many cases, conflicting. Other research on the effects of teachers' content knowledge on their students' performance also showed either a weak or insignificant relationship (Hill, Rowan, & Ball, 2005; Kersting, Givvin, Sotelo, & Stigler, 2010).

A second perspective on quality teaching is that of performance—what teachers do in their practice (Lampert, 2010). We see this perspective in prevailing notions about quality teaching. For example, it is assumed that the particular things that teachers do in their classroom teaching contribute to expected student learning. This has been a central assumption underlying the process–product research on teacher effectiveness (Brophy, 1989). The observation of teachers' classroom performance is also an important factor in evaluating and certifying teachers (Ladson-Billings & Darling-Hammond, 2000; Silvestro, Freeborne, Hunsberger, Lake, & Mackey, 1993).

Another notion linking teacher performance to quality teaching is that the myriad of experiences that teachers have, both in and outside of their classrooms, contributes to the quality of student learning. Comprehensive teacher mentoring programs and long-term professional collaborations and supports for teacher learning (Feiman-Nemser, 2001; Hiebert, Gallimore, & Stigler, 2002) are based partly upon this notion. In such programs, teachers are engaged in learning and refining different kinds of teaching activities in and outside of classrooms supported by teaching models, resources, logistical changes, emotional assistance, and collegial culture (Carver & Feiman-Nemser, 2009; Feiman-Nemser, 2001; Feiman-Nemser, Schwille, Carver, & Yusko, 1998; Wang & Odell, 2002).

An additional example of how quality teaching is manifested in teacher performance surfaces when scholars contend that no one pedagogical or managerial behavior is effective for teaching all types of students (Fenstermacher & Richardson, 2005; García, Arias, Murri, & Serna, 2010; Ladson-Billings, 1997) or for teaching different kinds of content knowledge (Ball et al., 2008; Shulman, 1987). Thus, the features of quality teaching differ depending on who the students are, what they bring into the learning context, and how these factors are related to the content knowledge that they will learn. With this conception of quality teaching as a base, culturally responsive teaching was proposed to teach students with differing cultural and racial backgrounds or socioeconomic status (Gay, 2000; Ladson-Billings, 1995), and subject-specific pedagogy was developed for teaching different subject content (Ball & Bass, 2001; Grossman, Schoenfeld, & Lee, 2005).

However, empirical support for each of these notions of quality teaching from a performance perspective is scant. A meta-analysis of research on teaching effectiveness (Seidel & Shavelson, 2007) showed that the culminating effect size of the influence of general classroom teaching behaviors (e.g., time use, structured teaching, cooperative learning, feedback, reinforcement, and differentiated instruction) on student learning outcomes was very small. Although the meta-analysis showed that the effects of subject-specific teaching and learning activities on student learning were larger than the effects of general classroom teaching behaviors, these subject-specific effects were diverse across subject areas (Seidel & Shavelson, 2007). In addition, the findings of a recent large-scale experimental study on the influence of comprehensive teacher mentoring programs on novices' teaching and their students' performance showed statistically insignificant results, at least in the short term (Isenberg, Glazerman, Johnson, Dolfin, & Bleeker, 2010). Finally, studies on the effects of teachers' culturally responsive teaching on the academic performance of students with different social, cultural, and racial backgrounds are underdeveloped empirically despite an improved understanding of culturally responsive teaching practices (Ladson-Billings, 1994; Young, 2010). It should be noted here that the cognitive perspective and the performance perspective of quality teaching cannot be neatly partitioned in the practice of teaching. Clearly, cognition and performance are interactive and interdependent such that an instance of quality teaching cannot be readily ascribed to either the knowledge or skill of the teacher alone. Said otherwise, the manifestation of the teacher's knowledge is seen through the teacher's performance, and in turn, the teacher's performance is dependent on the teacher's knowledge.

The third perspective—quality teaching as effect—assumes that quality teaching is defined in terms of teaching outcomes. Again, several notions arising from this perspective are apparent in debates about teaching reform and policies. One reflects discussions about quality teaching in relation to the knowledge, skills, and values that students need to develop according to existing curriculum and assessment standards (Cochran-Smith & Fries, 2001; Darling-Hammond &

Youngs, 2002). These assessments include state- and district-level accountability tests, national report cards (National Center for Education Statistics, 2010a, 2010b), and international assessments, like the Trends of International Mathematics and Science Study (Gonzales et al., 2008). At times, advocates for this notion of quality teaching conclude that quality teaching necessarily occurs when assessment scores increase without explicit consideration of what the test instrument is assessing or the inherent value of the content being tested.

Another notion grounded in a view of quality teaching as effect is that teachers can and should influence the knowledge, skills, and values that students need in order to participate in a global economy (Loomis, Rodriguez, & Tillman, 2008; Spring, 1998; Tatto, 2007; Zhao, 2010). This is also an argument made by policy makers to hold teachers accountable for gains in student achievement. Although this notion of quality teaching is not clearly articulated at the classroom and program level, it is often assumed that students who demonstrate high performance on relevant measures have been exposed to more effective teaching that has prepared them well for the future. The Programme for International Student Assessment (PISA; Fleischman, Hopstock, Pelczar, Shelley, & Xie, 2010; Programme for International Student Assessment, 2001, 2004) espouses this notion. An alternative notion that emerges from a perspective on quality teaching as effect assumes that teaching is effective when it influences the knowledge, skills, and dispositions that students need to become responsible citizens who think critically and participate actively in constructing a just and equitable society (Burbules & Torres, 2000; McLaren & Farahmandpur, 2001).

The empirical support for the above notions of quality teaching as effect is also underdeveloped. Evidence to support what counts as teaching-related factors in places where students had higher curriculum-based academic performance is either unclear or inconsistent (Darling-Hammond & Youngs, 2002; Walsh, 2001). Also, the corresponding teaching behaviors and activities associated with the high student academic performance necessary for serving the global economy as assessed in international assessments, such as PISA, have not been carefully measured and identified. Further, studies on the effects of teaching for social justice on relevant outcomes of student learning are also underdeveloped, despite some anecdotal evidence at the individual, class, and school levels (Sleeter & McLaren, 1995).

Some scholars also have proposed that approaches to identifying quality teaching are problematic because quality teaching in one cultural context may differ from or even be contradictory to that in other contexts (Fenstermacher & Richardson, 2005). In addition, it is argued that quality teaching consists of at least two dimensions: good and successful teaching, in which *good* refers to teaching practices that uphold some standards in the profession and is normative, whereas *successful* refers to teaching that yields student learning. When teaching is both good and successful, the definition of quality teaching begins to form (Fenstermacher & Richardson, 2005). However, the concept is yet to be clearly defined, and without this, evaluation of quality teaching is even more complicated. Some have proposed that quality teaching can be evaluated based on whether teachers teach the curriculum. However, this is again problematic since there is not an agreed-upon curriculum for teachers to implement, which makes the evaluation of quality teaching impossible (Cohen, 2010).

As the Kaleidoscope Turns: Shifting Patterns in Teacher Education

Teacher education programs are traditionally not developed based on one well-formulated, concrete, and unified conception of quality teaching (Sykes, Bird, & Kennedy, 2010). Rather, like kaleidoscopes, teacher education programs typically form beguiling patterns composed of disparate bits of course work and experience. Instead of providing clarity of purpose, these various notions further complicate the transformation of teacher education programs into purveyors of quality teaching.

From the perspective of quality teaching as cognitive resource, some teacher education programs focus on changing prospective teachers' beliefs through engaging them in reflections about their own learning and teaching experiences and challenging them with alternative ideas and models of teaching (Kennedy, 1991; Wideen, Mayer-Smith, & Moon, 1998). Research on the effects of such teacher education practices in engendering prospective teachers' conceptual transformation has shown mixed and weak results (Richardson, 1996). Other programs evidence a cognitive resource perspective by focusing on the development of prospective teachers' subject and pedagogical content knowledge and engaging students in thinking and analyzing the situations of teaching where such knowledge is put into practice (Ball & Bass, 2001; Sherin & van Es, 2009). Indeed, some literature suggests that enhancing pedagogical content knowledge enhances the subsequent effectiveness of teachers (Ball et al., 2008; Grossman et al., 2005). However, based on survey and assessment data collected from preservice teachers and teacher educators working in various programs in different countries, a recent comparative study suggested that coherence in teacher education course work and field experience is not necessarily correlated with gains in preservice teachers' content and pedagogical content knowledge (Hsieh et al., in press).

From the performance perspective on quality teaching, some programs focus on the development of prospective teachers' core teaching practices (Grossman, Hammerness, & McDonald, 2009) by situating prospective teachers in the context of teaching with the support of an experienced mentor teacher and fostering focused discussions of and reflections on each other's teaching, a model aligned with situated learning theory (Borko, 2004). However, as mentioned

above, the integration of teacher education course work and field experience is not necessarily associated with gains in preservice teachers' content and pedagogical content knowledge (Hsieh et al., in press). The relationships among teacher education programs with core practice as a focus, prospective teachers' teaching, and the academic performance of students are understudied.

Using critical pedagogy or critical race theory as a base, some teacher educators align teacher education to quality teaching based on effects. They engage prospective teachers in considering their personal dispositions and in analyzing and critiquing any of their problematic beliefs, experiences, and observations. In doing so, teacher educators who adhere to critical pedagogy or critical race theory hope to help preservice teachers identify potentially damaging consequences of their personal dispositions for student learning and then to use what they have learned to reinvent schooling and enhance student learning (Grumet, 2010; Ladson-Billings, 1999; Zeichner, 1992). Some case studies offer support for the effects of these teacher education practices on prospective teachers' knowledge and dispositions necessary for the purposes of social justice and transformation among students (Ball, 2009; Gutiérrez & Vossoughi, 2010). However, consistent evidence such as that found in larger samples regarding the effectiveness of teacher education for social justice on teachers' teaching and their students' learning has not been established.

Hence, we are faced with an uneven understanding about quality teaching and an assortment of reform efforts in teacher education. The empirical support for the influences of each approach to teacher education on prospective teachers' conceptions and teaching practices is limited, and a linear relationship linking teacher education, prospective teachers' teaching, and student learning based on each approach has not been traced.

Patterns of Quality Teaching and Teacher Education

In this issue, we present six articles. Three explore some of the assumptions related to the characteristics, contextualized nature, and notions of quality teaching. The other three identify challenges, propose conceptual maps, and explore empirically the development of teacher education programs that focus on improving teaching quality.

In "What Makes Good Teachers Good? A Cross-Case Analysis of the Connection Between Teacher Effectiveness and Student Achievement," James Stronge, Thomas Ward, and Leslie Grant compared the classroom teaching practices of effective teachers (those whose students made gains on achievement tests of reading and mathematics) with those of teachers whose students did not perform as well. The authors identify the important characteristics of effective teaching based on a meta-review of the literature. During the initial phase of their study, they used hierarchical linear modeling to analyze student achievement data from 307 fifth-grade teachers in three school districts in the southeastern United States and assessed teacher effectiveness in terms of student learning gains during a school year. In the second phase, they used survey and observational data and compared the instructional and classroom management practices of 17 teachers who taught the top-quartile-performing students and 15 teachers who taught the bottom-quartile-performing students from the initial phase. The study reported that the higher quartile teachers had fewer classroom disruptions, better classroom management skills, and better relationships with their students than did the lower quartile teachers. Neither group showed significant differences in their instructional beliefs, foci, or practices.

This study was based on two assumptions: (a) that one of the major contributing factors to student achievement is teacher performance and (b) that the classroom practices of effective teachers can be important predictors of greater student achievement gains. It is noted, however, that such assumptions can be limiting because they tend to treat what students bring into classrooms as neutral or less influential and restrict the definition of quality teaching to what teachers do in their classrooms.

In "Moving Beyond Our Progressive Lenses: Recognizing and Building on the Strengths of Teachers of Color," Thomas Philip argues that a definition of quality teaching should include consideration of the teacher's racial identity. It is also important to take into consideration the social, political, and historical contexts of schooling. Simply defining quality teaching as cognitive resources, performance, or effect is problematic, especially for teachers of color. Drawing on interviews with experienced teachers of color, the study highlighted the practice of one African American teacher, Veronica. Veronica's case showed that viewing an accomplished teacher of color through the lens of progressivism can lead to a negative characterization of a teacher as authoritarian and teacher-centered. Defining quality teaching as the implementation of progressive practices does not adequately represent teachers like Veronica, who was both successful and effective in supporting students of color to access the "culture of power" as a means to racial justice in society. The author alerts us to the challenges and complexity of characterizing quality teaching in the same way for all groups.

Philip's assumptions about quality teaching differ from those of Stronge, Ward, and Grant. In contrast to their assumption that quality teaching should look the same from teacher to teacher and from classroom to classroom, Philip shows that quality teaching differs because of differences in the characteristics and backgrounds of teachers and students, as well as their preparation for and dispositions toward schooling. What defines quality teaching in one context may be contradictory in other contexts (Fenstermacher & Richardson, 2005). If this notion holds true, teaching assessment policies based on the general characteristics of quality teaching and research efforts to capture these general characteristics may be problematic.

In "Do We Know a Successful Teacher When We See One? Experiments in the Identification of Effective Teachers," Michael Strong, John Gargani, and Ozge Hacifazlioglu studied another important issue related to quality teaching, namely, the assumption that effective teachers can be identified based on observations of practice. The authors conducted three experiments to examine three questions. First, can professional educators identify effective mathematics teachers (i.e., those who were able to raise students' achievement) based on the observation of short videos of these teachers teaching and videos of teachers whose students did not make adequate gains in achievement? Second, what criteria do judges use to identify quality teaching? Third, how useful are those criteria in predicting teacher effectiveness? The findings suggested that there were high degrees of agreement among the judges about the criteria they used to evaluate videotaped teaching. Nevertheless, no group of judges was able to identify effective teachers based solely on videos of practice.

This study raises questions about the assumption that quality teaching can be recognized through performance. First, it challenges the widely held notion that there are shared and observable defining features of effective teaching practice across different contexts of teaching (Fenstermacher & Richardson, 2005; Ladson-Billings, 1997). Second, it problematizes the notion that classroom teaching can be the single, defining influence on student performance without adequate consideration of the social and cultural backgrounds of students and other teaching- and learning-related activities outside of classrooms.

Among the three articles that examine the challenges, contents, structures, and characteristics of teacher education programs focused on improving quality teaching, Suzanne Wilson, Jeff Rozelle, and Jamie Mikeska identify several challenges for teacher educators. In "Cacophony or Embarrassment of Riches: Assembling Our Knowledge of Teacher Learning," the authors state that there are no coherent and systematic teacher education and professional learning opportunities in this country. Instead, they characterize the "(non) system" as "carnivalesque: crowded, noisy, incoherent, with both attractive and seedy options" (p.). In this environment, teachers may meander from one option to another—attending a teacher preparation program with one focus and curriculum, and then joining an induction program with an entirely different focus and curriculum. Such variability of teacher learning opportunities produces some serious unintended consequences for teacher educators. The authors further noted that the knowledge base about teacher learning is equally uneven, although it has been assumed that cumulative and coherent research on teacher learning is important in supporting the development of a systematic effort to develop quality teachers. The "carnivalesque and patchy" nature of research on teacher learning seriously challenges scholars and educators who seek to assemble an understanding of how to develop quality teachers.

Wilson and her colleagues highlight a paradox facing teacher educators. The design of coherent teacher education and professional development programs is impossible without a sound and coherent theory of learning to teach as its base. But capturing the patterns and characteristics of quality teaching is difficult when a consistent and unified system of teacher education and professional development programs does not exist.

In "Teacher Preparation for Quality Teaching," Etta Hollins addresses some of the challenges that Wilson and her colleagues identify by developing a coherent conceptual map for what prospective teachers need to learn and how they should learn it in their teacher education programs. She first proposes a set of knowledge, skills, and habits of mind that are essential in order for prospective teachers to develop quality teaching. These include an understanding of human development, as well as individual and group differences; learning processes as defined by the new learning sciences; deep disciplinary knowledge and the ability to connect it to student everyday experiences; pedagogical knowledge necessary for designing learning experiences and assessing students' progress; and the ability to conduct self-directed professional development in professional communities in different contexts. Hollins then describes several processes that enable prospective teachers to develop the requisite knowledge and skills. These include the integration of theories of learning, pedagogy, human differences, and social contexts for learning; development of consistent core learning experiences focusing on inquiry, directed observation, and guided practice; and ongoing monitoring and improving the program through faculty collaboration, collective responsibility, and transparency throughout the program. Ultimately, Hollins argues that practices in the preparation of teachers for quality teaching mirror those of quality teaching in PK-12 classrooms.

In "Teachers as Civic Agents: Toward a Critical Democratic Theory of Urban Teacher Development," Nicole Mirra and Ernest Morrell examine the content and processes of preparing teachers to act as civic agents who enable schools to function as spaces to facilitate a critical democracy. The authors argue that quality teaching should prepare students for performing the complex responsibilities of citizenship rather than for finding a niche within the existing economic system. Drawing on ethnographic data, work products, and interviews with teachers from an established teaching and learning community, the Council of Youth Research, the researchers describe a model of powerful teacher learning that positions both teachers and students as public intellectuals and action researchers. In this model, teachers investigate conditions in their schools and communities and use their research to advocate for social and educational justice. The article proposes a persuasive new rationale for democratic teacher education, but inevitably questions arise as to whether such teaching practices will produce the type of student learning outcomes expected by policy makers and the public.

Should We Stop Turning the Kaleidoscope?

Although it is popularly believed that quality teaching is a major factor in affecting student performance and that teacher education should be held accountable for developing quality teachers, there appears to be a lack of conceptual clarity about what constitutes quality teaching and how particular notions of quality teaching are related to specific teacher learning opportunities. A number of scholars, teacher educators, and policy makers are calling for the identification of a single, effective pattern for producing quality teachers. Yet, as several of the articles in this issue suggest, research continues to illuminate factors that complicate this quest. Just as the fascinating patterns viewed inside a kaleidoscope change when the kaleidoscope is turned, the otherwise stable image of quality teaching changes with shifts in individuals, contexts, ideologies, and other factors. Given this situation, is it possible or desirable to attempt to identify or impose one specific pattern? Perhaps it is the case that after all is said and done, quality teaching is too complex and too nuanced to be amenable to measurement. On the other hand, perhaps a unified pattern of quality teaching will be deduced ultimately from yet-to-be described comprehensive theories of teaching and teacher learning. We hope this issue will inspire more, deep, and continued discussions and research about the complex relationships between quality teaching, student performance, and teacher learning.

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