What Makes Effective Teachers Effective?

By James H. Stronge and Xianxuan Xu

From Aristotle and Socrates to Montessori and Piaget to Bruner and Hanushek, philosophers, physicians, psychologists, cognitive scientists, and economists have each attempted to characterize the attributes, dispositions, knowledge, and instructional skills that define effective teachers. The rationale for this 2,000-year search is that better teachers produce better learning. (Schacter and Thum 2004, 411)

Why Should We Care About What Makes a Teacher Effective?

Considering the human capital invested, teaching is one of the biggest professions in America and, indeed, in almost every developed and developing country in the world. In 2002 alone, the United States invested $192 billion in teacher pay and benefits (Rice 2003). Additionally, billions of dollars are spent each year on teacher professional development, bailouts of ineffective teachers, high rates of teacher turnover, and a variety of other ways and means for us to spend our educational dollars. And yet, considering its importance, remarkably little is known about what qualities make an effective teacher and what constitutes effective teaching. Without a strong and solid foundation of educational research, critical decisions regarding whom to hire, whom to retain, and what to include in teacher professional development could only be made on the quick-sands of untested intuition (adapted from Stronge 2010).

It is well established that teachers vary in their capability of improving student achievement; however, there is a lot to learn regarding what explains this variability in teacher quality. If we are to move beyond merely identifying the impact of effective (and ineffective) teachers on student learning, it is essential that we go inside the classroom and figure out how these highly effective teachers are teaching. What are they doing differently? How are they engaging students? Why do students work so hard for them? How do they sustain—day after day and year after year—a
focus on what matters most for student success? If we are to understand how teachers affect student learning, we must open the black box of the classroom and peer inside.

How Do Teachers’ Skills and Practices Affect Student Achievement?
Among the factors that repeatedly have been found to be predictive of increased student achievement are three interconnected teacher practices: instructional planning, instructional delivery, and assessment of/for learning (figure 1). While there are other teacher background qualities (e.g., content knowledge), dispositions (e.g., caring about students’ well-being), and practices (e.g., classroom management) that positively affect student achievement, this article will provide a brief exploration of what we know about each of the three above-noted vital teacher qualities.

Instructional Planning
A solid planning process is integral to a teacher’s efforts in identifying appropriate curriculum, instructional strategies, and resources to address the needs of all students. Good teachers simply don’t walk into the classroom with a blank slate in terms of what to do, how to do it, and when to do it. Furthermore, teachers’ instructional planning influences the content of instruction, the sequence and cognitive demands of subject topics, learning activities and students’ opportunities to learn, and the pacing and allocation of instructional time.

Interestingly, research evidence indicates a difference in planning behaviors adopted by effective and less effective teachers. Researchers in Wake County Public Schools (WCPSS), North Carolina, used a multiple regression analysis on state tests to identify the effectiveness of their teachers. Haynie (2006) examined practices of the ten most effective and ten least effective biology teachers in WCPSS, who were identified by residual gain scores on standardized state testing results. The findings revealed that most of the top teachers collaborated with one or more teachers while planning lessons; however, the bottom teachers reported they always plan lessons alone. The top teachers also were not restricted by pacing guides, and they reached beyond prepared resources to plan their own activities, while most bottom-performing teachers used resources already prepared. Top teachers also used student assessment data in the planning of instruction. In particular, on the basis of data drawn from frequent assessments, they made data-driven decisions about what goals and objectives to address.

Allington and Johnston (2000) also found that the instructional planning of effective teachers was multisourced. Exemplary teachers were inclined to stretch the reading and writing plans and practices beyond the textbooks. Although effective teachers often did dip into prescribed textbooks, they hardly ever followed traditional plans for these materials. For instance, while planning for a lesson in social science, the effective teachers usually used historical fiction, biographies, information from the Internet and magazines, and other nontraditional content sources.

Borko and Livingston (1989) investigated the pedagogical expertise in instructional planning by comparing novice teachers and experienced teachers. They found that novices showed more time-consuming, less efficient planning. While implementing the planned lessons, their attempts to be responsive to students were likely to lead them away from scripted lesson plans. Additionally, the novice teachers were less successful in translating their instructional plans into actions than expert teachers. The expert teachers, on the other hand, were better able to predict where in a lesson the students were likely to have problems, and then predict misconceptions the students would have and areas of learning these misconceptions were likely to affect. Figure 2 summarizes key aspects of effective teachers’ instructional planning practices.

Instructional Planning Qualities of Effective Teachers
- Collaboration in planning with other teachers
- Planning not limited to traditional resources (e.g., curriculum, textbooks)
- Data-driven planning
- Efficiency in translating plans into actions
- Ability to predict in planning troublesome areas for student learning

Figure 1. Three Interconnected Qualities of Effective Teachers.

Figure 2. Selected Findings Regarding Instructional Planning and Student Achievement.
Instructional Delivery
An array of studies have found that the actual practice of teaching is a critical factor for student learning. (See, for example, Palardy and Rumberger 2008; Rowan, Correnti, and Miller 2002; Stronge, Ward, Tucker, and Hindman 2008.) Teachers with the same background qualifications and same schooling resources do different things in their classrooms and, consequently, enable their students to achieve at different levels. To discover what makes a teacher effective, we need to look closely into the classroom and see how teachers translate their content knowledge, pedagogical skills, instructional resources, and even their planning, into opportunities for student learning.

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Cohen, Raudenbush, and Ball (2003) argued that instructional delivery has the most immediate causal effect on student learning of all the teacher’s background, dispositions, and practices. A similar point was made by Palardy and Rumberger (2008) when they noted that of three aspects of teachers (background qualifications, personal dispositions such as attitudes, and instructional practices), instructional practices have the most proximal association with student learning. That is, “instructional practices are theorized to influence student learning directly, whereas teacher background qualifications and teacher attitudes are theorized to influence learning indirectly through their association with instructional practices” (115).

On the basis of a synthesis of thousands of studies on student achievement, Hattie (2003) suggested that teachers account for 30 percent of student achievement variance. Most of these factors are related to instructional quality. Thus, teachers’ practices inside classrooms have not only statistical but also practical significance in terms of student learning. Figure 3 summarizes aspects of the literature review conducted by Hattie (2003; 2009) on teacher-related factors that relate to student achievement. Of 42 factors we considered from his review, 26 are directly related to the influence of the teacher, with the remaining factors spread across school-, family-, and student-related factors. Indeed, all but one of the most powerful influences on student achievement are teacher factors.

Assessment of/for Learning
The practice of assessing student progress is essential for effective instruction and learning. It provides teachers with information regarding the extent to which students have attained the intended learning outcomes, and it informs teachers’ instructional decision making (what to teach and how to teach) as well. The goals of assessment are to provide teachers with day-to-day data on students’ mental preparedness for certain learning targets and to facilitate teachers in making data-informed decisions for instruction modification. These student assessment data can come from small-group discussion, whole-class discussion,
Teachers who monitor their students’ progress exhibit greater concerns about student learning and higher academic emphasis in their instruction.

Fuchs, Deno, and Mirkin (1984) used an experimental design to investigate the effects of frequent curriculum-based assessments. Thirty-nine special-education reading teachers were randomly assigned to a curriculum-based assessment group and a conventional assessment group; each teacher selected three or four students for the project. Over the 18-week implementation, pedagogical decisions were surveyed; instructional structure was observed and measured; and students’ knowledge about their learning was assessed through an interview. Analyses indicated the following:

- Teachers in the experimental group, who adopted systematic assessment procedures, yielded greater student achievement than those who used conventional monitoring methods.
- Teachers in the experimental group had more improvement in their instructional structure.
- Experimental teachers’ pedagogical decisions reflected greater realism and responsiveness to student progress.
- The students taught by experimental teachers were more knowledgeable of their own learning and more conscious of learning goals and progress.

**Figure 4. Selected Findings Regarding Monitoring Student Progress and Student Achievement.**

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<th>Student Assessment Practices of Effective Teachers</th>
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<tr>
<td>• Uses frequent assessment</td>
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<td>• Provides constructive feedback</td>
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<td>• Informs instructional decision making</td>
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<td>• Uses data-based decisions for instruction modification</td>
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<td>• Leads to differentiated assignments</td>
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<td>• Assesses instructional effectiveness</td>
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Effective teaching is much more than implementing a number of pedagogical principles and content knowledge. It involves a dynamic interplay among content to be learned, planning for instruction, pedagogical methods to be applied, characteristics of learners, the context in which the learning is to occur, and then assessing the actual learning.

So What Makes Good Teachers Good? Putting the Evidence Together

Studies on teacher effectiveness have provided important insights into the qualities that connect teacher effectiveness and student achievement (Stronge 2007). Generally, effective teachers plan carefully, use appropriate materials, communicate goals to students, maintain a brisk pace, assess student work regularly, reteach material differently if students have trouble, and so forth. They use class time well and have coherent strategies for instruction. They hold expectations that their students can learn, and they believe they have a large responsibility to help (Cohen, Raudenbush, and Ball 2003). This list is far from complete. In essence, teaching is highly complex work with a multitude of teacher-related, as well as other, variables affecting student success. Although there is abundant research on teacher effectiveness, there still remain many unanswered questions. Some of these include the following:

- Are some teachers more effective in certain subject areas?
- Are some teachers more effective at certain grade levels?
- Are some teachers more effective with students from different backgrounds?
- Are some instructional strategies more effective with students of different learning abilities? (Rowan, Correnti, and Miller 2002)

The answer for all these questions likely is yes. Although teacher instructional practices within the walls of a classroom are believed to be more proximally associated with student learning, this association is moderated by certain aspects of the classroom, such as classroom demographic composition, student prior achievement, and peer effects. Schalock, Schalock, Cowart, and Myton (1993) noted that simplistic conceptions of a teacher as an artist, an applied scientist, a decision maker, or a reflective practitioner fail to portray the complexity of teaching. Effective teaching is much more than implementing a number of pedagogical principles and content knowledge. It involves a dynamic interplay among content to be learned, planning for instruction, pedagogical methods to be applied, characteristics of learners, the context in which the learning is to occur, and then assessing the actual learning.

Further complicating our understanding of effective teachers is the target of the teaching—the students. Rowan, Chiang, and Miller (1997) found that the varied levels of ability of students in a school has an impact on the effect sizes of both teachers and school-level variables. This suggests that there is an interactive relationship between student ability and teacher effectiveness qualities. Specifically, they found that the effects of classroom practices (such as planning, instructional delivery, and assessment) had only a moderate degree of consistency across different content areas (i.e., reading and mathematics in this case), with correlations ranging from .30 to .47. This means that a given teacher varies in effectiveness when teaching different academic subjects, or even different content areas within the same subject. Rowan, Chiang, and Miller also found that classroom effects are influenced by different groups of students. Student background variables (socioeconomic status, gender, and minority status in this study) had different effects on annual gains in achievement across classrooms, with these random effects being larger in lower grades (especially in reading) than in upper grades.
Despite the solid evidence on the important teacher qualities of instructional planning, instructional delivery, and assessment of/for learning that so many researchers have assembled over the past several decades, there is no single set of teacher attributes that we can definitively point to and say, If a teacher has Quality X, then she will be an effective teacher. Nonetheless, we do know—without doubt—that if we are to improve our schools and positively influence student success, we have no choice but to look into classrooms, for it is in the hard work of teachers in classrooms where our greatest hope for success lies.

References


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