

Emerging Qualities of Effective Teaching:  
Traditional, Responsive, and Transformative

A Review of Literature by

The University of Northern Iowa's TQP Research Team

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## **Introduction**

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The world is changing rapidly and the knowledge base is expanding exponentially. To be successful in this environment of the future, learners will need a rich base of content knowledge focused on innovation/creativity, critical thinking, complex communication, and collaboration. Educational systems will need to be transformed to meet the demands for the next generation learner.

The State of Iowa is fully committed to the belief that each student will learn at high levels, graduating prepared for career, college and citizenry. The single most important element in improving student learning and achievement is providing highly effective teachers for each Iowa student. To realize this belief that each student can excel in learning requires a commitment to support and foster a wide array of partnerships to reform and enhance Iowa's education system.

A quality education is essential to a successful democracy, lifelong learning, and a vibrant economy. For Iowa to achieve the goal of providing a world-class education for each learner, new methods for educator and leader preparation must be implemented. To provide the transformed learning environment for future generations, educators must also engage in ongoing professional growth throughout the lifespan of their career.

In the spring of 2010, the Iowa Department of Education received a Teacher Quality Partnership (TQP) grant with the University of Northern Iowa as a major partner . The mission of the TQP Grant is to increase the learning and achievement of Iowa PK-12 students by developing more highly effective teachers. The first priority for the grant is to analyze research to identify the emerging "attributes" of effective teaching. Due to the use of the term "attributes" by another Iowa educational entity, the team chose to term these components as "qualities." Thus defining the emerging qualities of effective teaching. These qualities will provide a lens with which to reevaluate both pre-service and in-service programs, and help to define professional development needs for beginning and new practicing teachers. The second priority is to develop a performance assessment system that uses the qualities as the foundation of the process to systematically gather and

evaluate artifacts which are then used to assist Iowa's preservice students and inductive level teachers in implementing effective teaching.. The process of documenting qualities of effective teaching will be supported by an integrated technology platform.

### **The Research Team**

One goal of the grant was to engage a research/study team in identifying and analyzing the emerging literature on teacher effectiveness. This review will serve as the basis for development of a statewide assessment system for use in pre-service and in-service programs. This team included faculty members from UNI, Drs. Iradge Arabi-Farb, Christine Curran, Nadene Davidson, Mary Herring, and Jody Stone; Deborah Humpal from the Iowa Department of Education (IDE); Stacey Snyder and Daniel Mourlam, TQP staff. TQP doctoral assistants, Ksenia Zhbanova and Zenia Yousof, also provided research support and documentation.

The research team surveyed past, present, and futuring documents dealing with qualities of effective teaching. The team reviewed resources, research, reports from the Iowa Department of Education as well as from professional organizations such as American Colleges of Teacher Education (AACTE), Partnership for 21<sup>st</sup> Century Learning (P21), National Council for Teacher Accreditation (NCATE), and National Center for the Analysis of Longitudinal Data in Education Research (CALDER) and contributions by learned professionals in the field of education.

The research team used references to (1) expand their knowledge and understanding of qualities of effective teaching in order to develop the descriptive components and indicators, (2) develop a rationale for selection of specific qualities, and (3) select those qualities to be used to support the development of an Iowa teacher performance assessment system. Covering the broad spectrum of resources on effective teaching is intended to give validity to the process and assurance that the selected qualities were grounded in research or learned opinion. In addition, the committee's work was vetted through a ½ day workshop at the American Association of Colleges of Teacher Education as well as UNI Research Symposium Poster Presentation, Iowa Association of Colleges of Teacher Education, and assorted TQP advisory committees, prior to submission.

## **The Emerging Qualities of Effective Teaching Continuum**

From the review of literature, the research team identified *The Emerging Qualities of Effective Teaching Continuum*. The touch points on the continuum are as follows: Traditional Teaching, Responsive Teaching, and Transformative Teaching. To provide a deeper understanding of emerging qualities of effective teaching, components and indicators were developed for each touchpoint.

The first touchpoint was *Traditional Teaching*. It contains three components: (a) one stable pedagogy; (b) one type of student; (c) one static content. Historically, the activity known as teaching revolved around an individual teacher as the central, authoritative expert who offered little variation in curriculum or pedagogy for individual students. Generally there was a standard curriculum offered to a standard student in a standard lecture format. Seat time was the usual measure of student achievement with little if any attention devoted to needs of the individual student. This system offered an education system that met the needs for a majority of people for the time that it existed.

A second touchpoint, *Responsive Teaching*, grew out of the research from the past few decades. In response to changing policies, practices, and societal and student needs, a responsive teacher model has developed. Responsive teaching is characterized by knowledgeable, self-aware and reflective educators who design and implement quality, challenging curriculum for all children. Five inter-twined areas encompass the knowledge, skills, and dispositions that effective responsive educators utilize in engaging students and forwarding learning and achievement. These include: (a) a development and refinement of responsive dispositions along with self-awareness and self-efficacy; (b) a sound knowledge of children and adolescent development, as well as the unique perspectives and contexts of individual children; (c) robust content knowledge; (d) responsive, student-centered, informed and differentiated pedagogical skills fostering understanding and rigor; and (e) engagement in collaborative, leadership and advocacy endeavors in support of students and their learning. This construct of teaching is multifaceted and has held promise for students. Responsive teaching has necessitated new roles and responsibilities for teachers. Yet, continued issues and challenges have remained in fully realizing the potential of this model.

The third touch point was identified –*Transformational Teaching*. While the traditional means may have worked at one time and the responsive teaching reaches more children than the traditional, it is the responsibility of educators to reach each student. The adolescents and young adults of tomorrow will enter classrooms digitally connected, emotionally responsive to immediacy and electronically engaged and entertained. While students will be addressed as individuals, they will share a collection of common traits and attributes. Students will arrive at school with a new profile of academic, cognitive and social skills requiring teachers to teach much differently. Transformative teaching integrates the teacher and learner at the heart of the learning environment with four key components integral for learning in an increasingly complex context. The key components are as follows: (a) global citizen development, (b) rapidly changing content, (c) multiple ways of teaching and learning in multiple contexts, and (d) leadership, collaboration, and advocacy. The next generation learner requires educators to be change agents and to approach classroom teaching in a transformed way. Teachers and students collaborate in a dynamic landscape of learning in teaching that leads the way into the unknown future. Iowa has identified this landscape within their Universal Constructs (See <http://bit.ly/ageL0v>) of creativity, complex communication, critical thinking, collaboration, adaptability/flexibility, and productivity/accountability. Transformative teaching integrates these constructs into each of its components. It is in this transformative model of education that the student is the center of the learning experience.

Each of the three touchpoints, Traditional, Responsive, and Transformational, will be expanded upon in following chapters. Beginning with the end in mind, it is intended that this work will support Iowa’s development of a performance assessment process that assists in creating and supporting highly effective teachers who provide a world-class education for each Iowa PK-12 student.

### **Preparing Effective Teachers**

As calls for educational reform to put effective teachers in the Pk-12 classrooms increase (Alliance for Excellent Education (Alliance), 2008; Darling-Hammond, 2010b; National Academy of Education, 2009) those entities that are in the teacher preparation pipeline are also called upon to reexamine and reform their programs (Darling-Hammond, 2006; Farkas & Duffett, 2010; Levine, 2006; NCATE Blue Ribbon Panel

(NCATE), Rubin, 2009). Secretary Arne Duncan states that teacher preparation programs have had little to no accountability for turning out effective teachers and that the accountability gap needs to close. He offers that teacher preparation programs should emulate the model of medical education. They should be fully grounded in clinical practice, with “evidence-based knowledge interwoven with academic content and professional courses” (Duncan, 2010, ¶9). Others give specifics about accountability needs suggesting that states develop data systems that present a picture of the quality and effectiveness of teacher preparation programs (e.g., where teachers are trained, where they are placed, their performance in the classroom) (Azordegan & Coble, 2004).

In its *Blueprint for Reform*, The U.S. Department of Education (2010) calls for effective teachers in every school. This is a shift from No Child Left Behind’s call for highly qualified teachers who meet a criteria checklist (i.e., has at least a bachelor’s degree, has full state licensure or certification and demonstrates competence in each subject he or she teaches [Azordegan & Coble, 2004]) to a call for highly effective teachers who elicit growth in student achievement and receive comprehensive support at all stages of their careers. Reform of teacher education programs to meet these demands has never been more urgent (Duncan, 2010)

Research on the views of education faculty point to concerns about the alignment between the views of faculty and the reality of the public schools system. In *Cracks in the Ivory Tower*, researchers went to teacher education faculty across the nation to survey their opinions on teacher education and school reform issues (Farkus & Duffett, 2009). The key findings identified in the study demonstrate in several areas a conflict between the views of teacher educators and the policies of school districts and states and with the express needs of teachers themselves.

1. Idealism, good intentions, and progressivist thinking suffuse what education professors strive to impart to prospective teachers. Teacher educators show only modest concern for real-world challenges such as managing classrooms and student discipline, implementing differentiated instruction, and working with state standards—even though K–12 teachers often say these are among the most difficult elements of teaching.

2. Most professors of education believe their field needs to change. Sizable majorities point to serious deficiencies with teacher-preparation programs, prospective

teachers, and even their colleagues. Yet they are ambivalent about alternatives that recruit teachers through nontraditional paths. Teach For America is one exception to this ambivalence.

3. Professors of education offer some support for a number of policy initiatives aimed at improving the teaching corps—e.g., holding educators more accountable, changing salary structures and incentives, and loosening tenure protections. They evince support for academic standards and even tepidly endorse *national* standards. Overall, however, professors oppose the use of student assessment data to evaluate teachers (p. 9-10).

The linking of teacher education programs and the school districts who hire their graduates is a key method to assist in strengthening programs to best prepare effective teachers who make a difference in students learning and lives and prepare teachers for the demands of an ever more diverse and demanding work setting.

The National Council for Accreditation in Teacher Education (NCATE) established a Blue Ribbon Panel charged identifying a national strategy to prepare effective teachers. The report recommends that teacher preparation needs “sweeping changes in how we deliver, monitor, evaluate, oversee, and staff clinically based preparation to nurture a whole new forms of teacher education” (p. iii). It calls for a clinically based preparation with integrated content, pedagogy, and professional coursework around a core of clinical experiences. This integration will allow programs to understand what schools really need and schools to hire new teachers prepared to be effective in their classrooms and thus more likely to stay in the school and the profession. The report also addresses the need for accountability within teacher preparation programs. It suggests that a data network should be developed, including data on clinically based programs to identify program effectiveness. Programs should be recognized that prepare the most effective teachers and lead to higher teacher retention and student results. So others can emulate them, documentation of their efforts should also be provided (NCATE, 2010). This call and Duncan’s (2010) remarks identify a high stakes setting for teacher education programs that must be heeded.

Some programs produce graduates who support stronger learning gains for students than others. A study examining seven exemplary teacher education programs that

produce graduates who are very well prepared for their first days in the classroom finds that the programs had common features, including:

- a focus on the work of the classroom with opportunities for students to study what they will be doing in the classroom
- careful oversight of student teaching experiences or a capstone project
- a focus in courses on helping candidates learn actual practices and tools that are applied in their clinical experiences;
- candidates' opportunities to study the local district curriculum;
- strong content preparation in areas they will be teaching
- congruence between student teaching and candidates' later teaching assignments, in terms of grade levels, subject matter, and type of students (Boyd et al., 2009)

In her discussion of 21<sup>st</sup> century teacher education, Darling-Hammond (2006) supports the National Academy of Education Committee on Teacher Education's framework of knowledge that is found in many statements of teaching standards and in this document's *Emerging Qualities of Effective Teaching Continuum* model:

- knowledge of learners and how they learn and develop within social contexts
- understanding of curriculum content and goals
- understanding of and skills for teaching, including content pedagogical knowledge and knowledge of diverse learners (p. 303).

The interactions between learners, content and teaching provide the novice teacher with knowledge for teaching. Strong programs should have both a clinical curriculum and a didactic curriculum thus allow candidates to apply that which they are learning in real life settings. Following these opportunities with an opportunity to reflect on student learning and detailed feedback tie more tightly the knowledge and its application. To do this, teacher preparation programs must have strong partnerships with the state of the art schools within which clinical experience take place. This partnership offers broader institutional context for teaching and learning and assists in the development of skills needed by novice teachers to effectively participate in collegial work throughout their careers (Darling-Hammond, 2006).



The following chapters provide the reader with an overview of key issues that have flowed through effective teaching discussions and research. Using this information to strengthen teacher education and induction programs can serve to position schools to have effective teachers creating effective teaching environments for enhanced student learning.

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# **Historical Perspective of Effective Teacher**

## **Creating Effective Learning Outcome**

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### **Introduction**

In an effort to research the prominent characteristics of effective teacher it is important to explore the historically accepted attributes and their transformation to the contemporary status. Sedlak and Schlossman (1986), addressing change in desirability of teaching profession, emphasized the necessity of addressing the historical perspective of teaching profession. They stated that the knowledge of historical perspective provides chronological, conceptual, and empirical framework to guide future researches. Any educational research effort is enhanced by the awareness of the past trends leading to present status. Historical perspective provides valuable opportunity to analyze the causes, effects and processes of change in the teaching and transformation of teaching profession considering times and conditions (Sedlak & Schlossman). It is the present that we try to understand and describe, the past provides a vision to understand more clearly the present (Hinsdale, 1894). It has been suggested that learning from the past mistakes as one of the important advantages of knowing the history of education (Sedlak & Schlossman, 1986). Therefore, learning about history of teaching quality and past teachers' preparatory programs leads to better understand the present transformational status and enhance the efforts to design and implement programs influencing the quality of teaching in future. Unfortunately, there are not many valid research efforts examining the cause and effect of past historical educational efforts. Most available documents are testimonial and based on the authors understanding and biases of the circumstances.

Teacher education was not a formal teacher training program before a number of teachers were needed to teach at public schools. Prior to the nineteenth century, public education system was localized and mostly available and affordable to wealthy and affluent people. Formal education in the United States gained national support in the nineteenth century. Jefferson is recognized as the first American leader to promote and support the establishment of public school system. Massachusetts passed a law that required

appointment of a teacher for reading and writing and establishment of Latin grammar schools as early as 1647 (Marsh, C. & Willis, G., 2007 p. 30). The Massachusetts law of 1852 promoted the control of public schools by the state. This law influenced state-by-state acceptance and implementation of compulsory attendance laws (Marsh, C. & Willis, G., 2007 p. 34). By the end of the nineteenth century free public education at the elementary level became available to all children. (Cubberley, 1919; Marsh & Willis, 2007). From 1900 to 1996 the percentage of teenagers who graduated from high school increased from about 6 percent to about 85 percent. As the twentieth century progressed, most states enacted legislation extending compulsory education laws to the age of 16. The Home School Legal Defense Association (HSLDA, n.d.), commenting on America's compulsory education, suggests "Proponents of compulsory attendance hoped that the disparity between the poor and the wealthy would be "leveled" (§ 4). Some saw compulsory state education as a way of "Americanizing" the great waves of immigrants. Compulsory state education was also seen as a way to improve the situation of children following the passage of laws prohibiting child labor. Following the endorsement of compulsory education law, based on the need for mass number of educators, teachers' preparatory programs addressed the quality of teaching efforts. Adaptation to compulsory education vastly increased the number of students, forcing prompt attention to preparing large number of individuals who could teach a designed set curriculum. This was the first stage to prepare teachers with certain qualities to educate the public (HSDLC).

There have been many historical transformations to improve teaching efforts. However, in this document the focus is on the quality of traditional teaching efforts as a sequential connecting segment to the current teaching quality as responsive teachers, culminating with a futuristic outlook of maintaining teaching effectiveness. There is not a specific period of history that is identified as the period of traditional teacher. A traditional teacher refers to the teaching style from couple of centuries to few decades ago. At that era, transformation based on research efforts and new findings was slow. For a very long period of time, there was more similarity of teachers expected behavior than improved changes. Information advancement was slow while following traditional models and cultural endorsement of traditional teaching behavior was strong. Therefore, the attributes

and quality of traditional teaching efforts can be assigned to teachers of the past until few decades ago.

### **Traditional Teachers**

Compulsory education had a significant influence on teacher education programs and preparation of teachers. Lack of formal training in pedagogy was not unique to teaching profession. Before the twentieth century, most professionals did not receive educational preparation or learn their craft by enrolling in an educational program. Rather, they participated in an apprenticeship and experienced as a practitioner. After the student enrollment explosion due to compulsory education, teacher education programs were caught in a classic bind between quality of teachers' preparation program and needed quantity of teachers. The unique feature of preparing teachers was lack of formal instruction or informal apprenticeship. Instead, the practice was simply: take classes and teach the same class (HSLDA, n.d.).

Sedlak stated that the criteria for hiring teachers varied suggesting that perhaps the most important required characteristic was the ability to maintain order among the students (as cited in Labaree, n.d.). Teachers were the sole authority to maintain order and control the learning environment. Initial efforts to establish a formal public school teacher preparation system came with the development of the common school system. The *summer teacher institute* became prominent in the middle of the twentieth century. It was an innovation aimed at developing the pedagogy and subject skills of teachers. A demand for teachers and for higher teacher qualifications was a result of the common school movement (Labaree, n.d.)

The leaders of normal schools chose relevance over rigor, preserving academic rigor would have meant opting for professional purism over social need. Mass teacher preparation would have been left to less qualified providers which would have deprived their institutions of the funding, power, and expansion opportunities. The same debate about the role of teacher education continues even today. In some advanced universities the preference of relevance over rigorous was reversed at a later date. Levine (2006) stating that "*Educating school teachers*, is only the latest in a long line of polemics that lambaste the university school of education for being both academically weak and professionally irrelevant." (as cited in Labaree, n.d., ¶ 10 ).

Traditional teachers had specific roles to fulfill which was confirmation within the role that was expected from them. Somehow they were locked into a certain teaching behavior without much scholarly effort to change. In this document, traditional teaching qualities are divided into three major components: *one stable pedagogy, one static content and one type of students*. These three components are examined in this chapter.

### **One stable pedagogy**

The sentiment of authority in society, absolute control of situations and the culture of hierarchy relation of the time were influential forces to empower teachers with outright responsibility of dictating and managing teaching agenda. Thus, teachers' decision making, action and behavior were the center of preparatory curricula to produce big quantity of needed teachers. Specifics of traditional teaching style will be examined in the following paragraphs.

**Teacher as the ultimate authority.** The debate regarding the role of authority in education has a long history with two opposing traditions of thought primarily cited. One tradition of thought identifies that educational settings can and should be authoritarian in nature. Buzelli and Johnson (2001) offer "Spring (1999) identified this tradition with thinkers from Plato (in *The Republic*) through Adam Smith (1776) and his *Wealth of Nations* to the Soviet educational theorist Makarenko (1995)" (p. 874). The role of education was seen as preparing individuals to sacrifice for the common good. In the vast majority of classrooms, the teacher possesses authority (Buzelli & Johnston, 2001).

**Lecture delivery.** Teachers were the active providers of information, whereas learners' responsibilities included recording the information and learning it verbatim. The traditional delivery system especially at higher education was a controlled classroom for learners with a professor lecturing and disseminating information while students listening and taking notes. According to O'Malley and McCraw (1999), interaction between the professor and student was viewed as an essential learning element within this arrangement. They further noted "for centuries, knowledge was passed from a master to a pupil in a one-to-one or one-to-few arrangement (apprenticeship form of education)" (¶ 6).

**One approach to learning.** The idea of teacher's responsibility to recognize individual differences and plan for learner needs was recognized in early twentieth century. The report entitled *Cardinal Principles of Secondary Education* published in 1918 revealed

the need for change in educational system. According to Marsh and Willis, one out of three 3 students who entered the 1<sup>st</sup> grade, reached the 1<sup>st</sup> year of high school. Out of three students who entered high school only one graduated. This disparity was one of the reasons for a needed change in educational theories of learning, resulting in teachers' awareness of individual's learning differences opposing the previous practice of considering only on one type of learner (Marsh & Willis, 2007).

**Reward and punishment approach.** The practice of reward for good deed and acceptable work and punishment for failing efforts was a common exercise by the authorities. This approach, which was the primary corrective measure to the assessment results, was also practiced at all educational units. The reward and punishment approach was applied not only to individuals but also to groups who were involved in a cooperative task.

Students' personal hygiene including clean uniforms groomed hair, clean and trimmed fingernails were the subject of daily evaluation. Usually students were put in groups and their deeds were evaluated collectively. Commonly the entire group would be punished or praised regardless of a poor performance of a single individual. Often extra duties were the consequence of poor performance (Manning & Bucher 2003). Reward and punishment were recognized as a method of providing an incentive for group members to improve or risk provoking the anger of the group members who do well. Group could be punished for one person's actions. There was little regard for the positive influence of reward for compliance. Even corporal punishment was applied to facilitate learning (Cubberley, 1920).

**Direct teaching style.** Kohn (2000) states "In 1979, John Goodlad conducted what is still regarded as one of the most comprehensive studies of American classrooms, visiting more than a thousand in all. He found virtually nothing but traditional instruction all over the country: the overwhelming majority of classrooms were "almost entirely teacher dominated with respect to seating, grouping, content, materials, use of space, time utilization, and learning activities." Moreover, "teachers out-talked the entire class of students by a ratio of three to one," and when students did talk, it was usually to give factual answer to a teacher's question" (p. 7). Teachers, who practiced inducement of formal environment, exercised sole power and disseminated all the knowledge and



information where internally refused by the students and sometimes ignored by them. “I’ve come to believe, that this aspect of traditional classrooms – formality - helps to explain why those classrooms are so unsuccessful” (p. 139).

Kohn believed that the application of traditional teaching behavior, resorting to inhibit thinking by mere memorization and rehearsal practices resulted in unsuccessful outcomes. He alleged that in order to motivate students learning “traditional teachers tend to see minimal student efforts as evidence of limits of students’ abilities – or simply of a paucity of motivation. Teachers with this attitude quickly find themselves relying on artificial inducements, bribing students with A’s or threatening them with F’s...” (p.71). He was convinced that the stricter traditional teaching behavior resulted in troubling mood of learners.

### **One static content**

The teacher chose the content of the course. Sometimes in this type of teacher influencing curricula, their strengths would be emphasized and weaknesses deemphasized. Availability of outside sources was limited. Teachers would choose the content of learning and even the specifics of what to read outside classroom. Materials that were selected by the instructors would typically be library books which usually would be placed on reserve for students’ reference reading.

**One learning resource.** Teachers dominated and monopolized classroom with verbal exchanges. They determined what activities and interactions would occur. The length of the activities and students opportunity to participate was determined by the teacher. The pattern of instruction was students often worked alone at their desk while the teacher lectured and either supervised or worked with another group (Good, 2000). The most obvious observation of the historical content of instruction is the slow tempo of change. Absence of quantity of research efforts resulted in articles and books based on the expertise of the authors. The direct affect was repetition of content with occasional upgrade of information. Cubberley (1920) noted that instruction in schools was meager. Curoe (1921) stated that schools were narrow in content and mechanical in method. Also that education was basically the imposition of adult standards on little children.

**Learning by listening.** Traditional teaching put the burden of acquisition of information on learners' shoulder by mean of listening, recording and repeating. Children who were unable to record were forced to repeat collectively in order to remember. Far from the current concept of diverse mode of learning and experiencing, the only means of comprehension came from hearing the lecture and taking note for further study reference. Good (2000) noted that classroom talk was teacher-centered; whether the teacher worked with the whole class, small groups, and individuals it was all referred to as group instruction. Students were supposed to stay at their desks for the most part; their movement was limited.

**One content learning.** Marsh and Willis (2007) described that the curriculum of the Latin grammar schools was presented as vehicle of religious training and moral elevation. Until the end of nineteenth century elementary schools were using curriculum inherited from the Latin Grammar school. Formulated curriculum was assumed to be suitable for all students, even the students who attended school only briefly. The authors further noted that formal education was intended to harmonize pupils for conformity with some prevailing ideal of what an educated person should be. Individual differences were ignored in order to have educated people utter the same message as was appropriate.

**One type of students.** Current education regards the learner as a crucial part of learning. In the past, learners' behavior and expected actions were formulated and dictated to them. Good (2000) reported that most schools restricted students' autonomous movement around the school. Cuban, while studying schools during the period of 1890-1940, found that "Students' desks were commonly bolted to the floor, assuring that the teacher remained the focus of attention and in total control. In this way teacher-centered instruction became a long-standing and taken-for-granted the way teaching and learning should take place" (as cited in Good, p. 11).

Traditional teachers were not exposed to a prevalence of diversity thus lacked sensitivity to individual differences. It was assumed that all learners were the same. Thus, they were treated without much sympathy for their physical and cognitive differences, as evident by use of common learning techniques described below.

**Students' learning effort.** Rote learning is a learning technique focused on memorization. The major practice involved in rote learning is learning by repetition.

Students were commonly expected to learn by repetition and memorization of the content. Rote learning was common practice, as was reliance on texts, and large class sizes made both rote learning and reliance on texts necessary. This was complicated further due to lack of formalized training (Good, 2000).

**Content and life relevancy.** Even though education purpose is to enhance life experiences traditional teacher emphasized deeds that would secure salvation. Marsh and Willis (2007) stated, “education was directed more at eternal life than life in this world. The result was the development of the widespread belief that the activities of schooling, directed at cultivating the mind and the soul, were separate from the practical activities of life outside the school”. This kind of restriction could have been one of the causes of students’ lack of contribution to the tempo of information change and transformation.

### **Conclusion**

This chapter indicates the expectation of a rigid and authoritative role of teachers who were prepared with limited pedagogical skills. They were in charge of selecting content, enforcing learning and controlling learning environment with absolute responsibility. Information improvement was limited with slow rate of advancement. Research activities were not prominent and required. Learners were forced to attend the lecture content, record and repeat to memorize verbatim. Not much attention was devoted to individual differences or variety of instructional strategies to reach the entire diverse learners population.

Even though at the present, with so much research efforts and information explosion the traditional teachers’ approach seem deplorable, but it served their time appropriately and provided so much incidental documentation to promote the current understanding of the nature of teachers’ effectiveness for the benefit of the contemporary society.

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# **The Present Landscape for Teaching Effectiveness: Six Spheres of Responsive Teaching**

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As highlighted in the previous section, historical constructs of teacher qualities were centered on a fixed construct of teacher knowledge and pedagogical practices. This traditional orientation situated the teacher as the central, expert authority, designing content delivered in a standard manner. Little differentiation for individual students or differing community, school, cultural, and familial contexts occurred. In contrast, more contemporary discussions on teacher effectiveness address a responsibility for the educational outcomes of all students in response to education mandates, as well as an acknowledgement of the need for sensitive, responsive, challenging, and equitable classroom and school practices.

## **OVERVIEW**

For the past few decades, accountability has been at the forefront of education reform efforts (Alliance for Excellent Education, 2008; National Academy of Education, 2009). Across policy and professional discourse, the quality of teachers in the improvement of student achievement and school success is prominent. In *Great Teachers and Great Leaders*, one of six research summaries supporting the proposed *Blueprint for Education Reform of the Elementary and Secondary Education Act (ESEA)*, the U.S. Department of Education underscored that, “*the key to student success is providing an effective teacher in every classroom and an effective principal in every school.*” (2010, p. 1). There is presently a shift in public policy from a primary focus on ensuring “*teacher quality*” through credentialing to one focused on “*teaching effectiveness*” (U.S. Department of Education).

Considerable concern and widespread acknowledgement of an enduring achievement gap for students from racial and minority groups and those living in poverty remains (Barton & Coley, 2009). Additionally, significant educational outcome, opportunity, and achievement disparities also exist for a number of vulnerable students,

including English Learners (ELs) and students with disabilities (Alliance for Excellent Education, 2009; Fry, 2008). Policy makers, professionals, business leaders, and community members have supported increased standards for learning and teaching. More recently a call to expand the core standards has occurred, with a growing recognition to include 21<sup>st</sup> century skills in school curricula and pedagogy (Partnership for 21<sup>st</sup> Century Skills, 2008). With a need to ensure equitable, relevant, and successful educational outcomes for all students and growing expectations for significant increases in diversity within schools (Childtrends, 2011), attention to teacher effectiveness has never been greater (Dwyer, 2007).

Discussions on “*what*” constitutes teacher effectiveness, however, are varied. Teaching effectiveness is often viewed by policy-makers and implied in research studies “*in terms of gains in student achievement*” on standardized test scores (Goe, Bell, & Little, 2008, p. 7). Little and colleagues (2009) underscored problems with defining teaching effectiveness in this manner, highlighting several critiques in support of a broader definition, including:

- (1) Teachers are not exclusively responsible for students’ learning;
- (2) Consensus should drive research, not measurement innovation;
- (3) Test scores are limited in the information they can provide; and
- (4) Learning is more than average achievement gains (p. 2).

There is no single definition of teaching effectiveness. One recent comprehensive definition of effective teaching characteristics forwarded from researchers from the National Comprehensive Center for Teaching Quality (NCCTQ) was based upon a review of policy documents, professional literature, and research. This five-point definition included the following characteristics:

- (1) Effective teachers have high expectations for all students and help students learn, as measured by value-added or other test-based growth measures, or by alternative measures.
- (2) Effective teachers contribute to positive academic, attitudinal, and social outcomes for students such as regular attendance, on-time promotion to the next grade, on-time graduation, self-efficacy, and cooperative behavior.

- (3) Effective teachers use diverse resources to plan and structure engaging learning opportunities, monitor student progress formatively, adapting instruction as needed; and evaluate learning using multiple sources of evidence.
- (4) Effective teachers contribute to the development of classrooms and schools that value diversity and civic-mindedness.
- (5) Effective teachers collaborate with other teachers, administrators, parents, and education professionals to ensure student success, particular the success of students with special needs and those at high risk for failure. (Goe, et al., p. 8).

Teaching effectiveness is currently characterized as a multifaceted construct. Effective teaching knowledge, skills or dispositions are conveyed in various teaching standards [e.g., Council of Chief State School Officers (CCSSO), 1992; 2010; National Board for Professional Teaching Standard (NBPTS), 2002]]. Professional research, literature and conversations have also provided grist and guidance on teaching effectiveness (e.g., Darling-Hammond & Baratz-Snowden, 2007; Hattie, 2009; Marzano, Pickering & Pollock, 2001).

The purpose of this section of the monograph is to broadly review and summarize literature on qualities and characteristics of teaching effectiveness during the present era of teaching. For purposes of this review, the author has termed the present era as *“responsive teaching.”* The review includes summary points of key research and literature related to teaching effectiveness and classroom instruction from the 1980’s to present. Appendix A includes a description of the review procedures. The intent of this chapter is to portray present conceptions of effective teaching characteristics in order to bridge discussion from the present to future considerations of teaching effectiveness for the work of the Iowa Teacher Quality Partnership (ITQP) Advisory Board.

Commonly, teaching effectiveness and responsibilities are often associated with classroom instructional skills. This review extends into a larger, often interrelated body of literature. Through analysis, five essential spheres of teaching effectiveness were selected by the author from ongoing personal research (Curran, n.d.) which was extended to the present review. The themes or spheres were subsequently validated by the ITQP research team. These five spheres represent major domains of teacher qualities and skills related to effective teaching. Representative characteristics or attributes of effective teaching within

each sphere were identified from the author’s ongoing research and were further extended during the present review of literature. The author sought to integrate within this review the *Characteristics of Effective Instruction* identified by the Iowa Department of Education (IDOE) (2010a), given valuable input from consultant D. Humpal from the IDOE. These spheres of teaching effectiveness and representative characteristics and qualities as signified in the literature frame the remainder of this chapter. They include:

- (1) Dispositions, Self-Awareness, and Self-Efficacy;
- (2) Developmental and Contextual Knowledge of Learners
- (3) Content Knowledge Domains (Content Knowledge, Pedagogical Content Knowledge, Academic and Multiple Literacies)
- (4) Responsive Pedagogy and Effective Instruction (Learner-Centered Instruction; Teaching for Understanding; Rigorous and Relevant Curriculum; Formative and Balanced Assessment; Differentiated Instruction for Learner Differences; Organized, Well-Designed Learning); and
- (5) Collaboration, Leadership, and Advocacy.

## **FIVE SPHERES OF TEACHING EFFECTIVENESS**

### **Sphere 1: Dispositions, Self-Awareness, and Self-Efficacy**

#### **Dispositions, Self-Awareness and Self-Efficacy<sup>1</sup>**

Teaching is personal. Teaching effectiveness requires educators to put into action supportive dispositions, or beliefs, related to effective teaching and quality learning for all students. Self-awareness of beliefs, values, knowledge, and skills related to teaching, learning, and diversity is central to this process. Self-awareness is developed through reflection. Positive self and collective efficacy can drive and support teaching effectiveness in classrooms and schools.

<sup>1</sup> From Curran, n.d.



Teaching is a personal endeavor. Educators bring a number of inputs to their profession and practice which can more or less favorably impact student learning. Teaching inputs include “*what a teacher brings to his or her position*” (Goe, et al., 2008, p. 4). Specific beliefs, values, and critical thinking practices of educators are viewed as essential to good teaching and are entwined in daily instructional practices. Moreover, these qualities may change with practice and experience in the field in ways that support, improve, or impair effective teaching and student learning.

### ***Dispositions***

Professional and public attention has centered on teacher character and quality related to personal and professional beliefs, values, and orientations that impact teaching (Birmingham, 2009). Together these constructs are referred to as dispositions. There is no single or universal definition of disposition, nor consensus on their measurement to support effective teaching. (Borko, 2007; Thornton, 2006). Nevertheless, significant discussion, research, and literature has identified that dispositions can influence teaching and student learning in both positive (and at times negative) ways (Diez, 2007; Ginsberg & Whaley, 2006; Koeppen & Davison-Jenkins, 2006; Rike & Sharp, 2008). Educator standards recognize dispositions as an important element of effective teaching for novice and practicing educators (CCSSO, 1992; 2010).

Disposition(s) have been defined as:

- “*...an internal filter that affects the way a teacher is inclined to think and act on information and experiences that are part of his/her teaching contexts*” (Schussler, Bercaw, & Stooksberry, 2008, p. 103).
- *The values, commitments, attitudes, and professional ethics that influence behaviors toward students, families, colleagues, and communities, and affect student learning, motivation, and development as well as the educator’s own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example they might include a belief that all students can learn, a vision of high and challenging standards, or a*

*commitment to the safe and supportive learning environment* [National Council for Accreditation of Teacher Education (NCATE), 2002, p. 53].

Dispositions frame and influence teaching decisions and actions and are important reflections of how teachers teach (Knowles, 1992; Ritchhart, 2001). Schussler and colleagues posited three areas of dispositions – all of which are related to effective teaching: the *intellectual* (thinking/acting on content and pedagogy issues); *cultural* (thinking and acting on needs of diverse learners, including cultural beliefs and values of both teachers/students); and *moral* (thinking/acting past personal values to assist others) (2008).

Dispositions vary depending on personal experiences, beliefs and contexts. For example, novice teachers' dispositions are frequently encased by their own experiences in the classroom as students themselves (Darling-Hammond & Bransford, 2005; DePaepe, Lambert, Curran & Shorr, 2010). Educators may also rely primarily on one dimension (e.g. intellectual) to the exclusion of others that also affect teaching effectiveness (Schussler, et al, 2008). Dispositions must be both technical and responsive (Thorton, 2006).

A number of dispositions have been proposed as necessary for effective teaching: professional work-oriented dispositions (e.g., preparation, punctuality, etc.); pedagogical (e.g., critical thinking); self-reflection (e.g., inquiry); social justice (e.g., equity), caring (e.g. learner-centered), etc. (Brandes & Cowson, 2009; Cruickshank, 1991; Davis, 2003; Grant & Gillette, 2006; Noddings, 1992; Trent, Kea, On, 2008)

### ***Self-Awareness and Reflection***

Self awareness is the conscious knowledge of one's own beliefs, attitudes and practices (West, 2008). It is an inquiry process which involves "*disentangling the various threads that comprise one's dispositions.... essential if teachers are to understand what drives their thinking and action*" (Schussler, et al., 2008; p. 106).

Recognition and awareness of teaching practices provides educators a process to evaluate their value in promoting student learning and well-being (Depaepe, et al, 2010; Sachs, 2004). Educators can then critically examine personal beliefs and existing biases that influence interactions and teaching practices that leverage student learning

opportunities. Because the life experiences, socioeconomic and cultural backgrounds of educators are often different than that of many of their students (Aud, Fox & KewalRamani, 2007), the processes of self-awareness and reflection are proposed to assist educators in being more responsive to the students that they teach (Howard, 2003). Once equipped with awareness, effective educators ask critical questions, engage in an acceptance of multiple differences, and demonstrate a willingness to change practices which do not privilege the unique contributions, perspectives, and experiences of all students through responsive teaching and challenging, meaningful curricula. (e.g., Duncan-Andrade, 2007).

Reflective thinking undergirds self-awareness and provides the means through which teachers critically examine their beliefs, goals and teaching practices. Reflection is *“an internal examination or consideration of an issue of concern, an experience, and an inherently individual process, even though it may take place with others”* (Cruikshank, 1991, p. 19). Howard (2003) stated that critical reflection supports ongoing personal change in *“improving practice, rethinking philosophies and becoming effective teachers for today’s ever changing student population”* (p. 201). Reflective practices can also contribute to problem-solving, resulting in reasoned and supported instructional decisions that support student success and improved instructional practices (Brandes & Cowson, 2009; Risko, Vukelich, Roskos & Carpenter, 2002). A wide body of research supports reflective practice as a personal practice characteristic of teaching important across a teacher’s career span (e.g., CCSSO, 2010; Danielson, 2009; Etscheidt, Curran, & Sawyer, in press; Giovenelli, 2003; Zeichner, 1987).

### ***Self-efficacy***

A final area in this personal sphere of teaching effectiveness is self-efficacy. A number of researchers and professionals have underscored the importance of addressing the self-efficacy beliefs of educators in order to support effective teaching (e.g., Allinder, 1995; Gibson & Dembo, 1984; Guskey, 1988; Protheroe, 2008; Tschannen-Moran & Woolfolk Hoy, 2001).

Teaching self-efficacy is explained as an educator’s belief in his/her abilities to positively influence student learning (Henson, 2001). Tschannen-Moran & Woolfolk Hoy (2001) expressed that *“a teacher’s efficacy belief is a judgment of his or her capabilities to*

*bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated”* (p. 783). Teachers with a high sense of efficacy display a number of consistent qualities. These educators view tasks as challenges instead of threats, are willing to try new approaches or methods, engage in reflective practice; set challenging goals, take calculated risks, plan effectively, and utilize feedback productively (Tait, 2008).

Students of teachers with elevated efficacy beliefs are reported to have higher achievement outcomes than those who do not. (Henson, 2001; NBPTS, 1991; Tschannen-Moran & Woolfolk Hoy, 2001; 2007; Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). A number of additional positive student outcomes and teacher behaviors have been attributed to teachers with a higher degree of self-efficacy beliefs. A few of these include improved student self-efficacy, enhanced student motivation, increased teacher persistence, and improved flexibility and openness to ideas ( e.g., Allinder, 1994; Coladarci, 1992; Darling-Hammond, 2006; Gibson & Dembo; Guskey, 1988; Henson; Jerald, 2007; Margolis & McCabe, 2004; Moore & Esselman, 1992; Siegle & McCoach, 2007; Tschannen-Moran & Woolfolk Hoy, 2001; 2007).

A complementary construct is *collective efficacy* or “*the perceptions of teachers that the efforts of the faculty as a whole will have a positive effect on students*” (Brinson & Steiner, 2007, p. 2). Research has supported that a strong sense of collective efficacy has a stronger effect on student achievement than at-risk factors such as poverty (Brinson & Steiner). A number of personal and school-based factors can impact teaching efficacy (see Tschannen-Moran & Woolfolk Hoy, 2001; 2007 and others for additional discussion).

## **Sphere 2: Developmental and Contextual Knowledge of Learners**

### **Developmental and Contextual Knowledge of Learners<sup>1</sup>**

Effective teaching requires an excellent knowledge-base of how children and adolescents develop in important areas that impact learning and school success: social/emotional;

cognitive, physical, and communication and literacy. This knowledge-base should be updated with new research, understandings, and ongoing personal reflection on how children and adolescents learn. Effective educators use this knowledge in designing potent learning experiences. Successful teachers seek personalized knowledge of individual student's cultural and learning dynamics and use these understandings to create inclusive learning environments and relevant learning opportunities. Effective educators move past the textbook, standards framework, and classroom door. They also understand the unique contexts of learners (families, culture, and communities) and apply this knowledge in their teaching and interactions in classrooms, schools, and communities.

<sup>1</sup> From Curran, 2011, n.d.

Teaching effectiveness is also founded on a professional knowledge-base of the development and learning of children and adolescents. This is well supported in research, literature, and policy documents. Competent knowledge of child and adolescent development (social/emotional, cognitive, physical, communication/language/literacy) as well as a sound understanding of the unique contexts, assets, and experiences that surround individual learners are essential to responsive teaching (Council for Exceptional Children, 2009; CCSSO, 1992; 2010; Leibbrand & Watson, 2010; National Board for Professional Teaching Standards, 2002; National Institute of Child Health and Human Development, 2006; Ostrosky & Jung, 2004). Furthermore, researchers and professionals from the National Institute of Child Health and Human Development (NICHD) and the National Council for the Accreditation of Teacher Education (NCATE) provided substantive research-supported justification for the inclusion and integration of child and adolescent development throughout educator preparation programs (NICHD, 2006).

### ***Developmental Knowledge***

Professional standards for teachers and teacher preparation substantiate the importance of knowledge of children and adolescents' physical, cognitive, and social-emotional development and the application of this knowledge in designing effective instruction in classrooms (CCSSO, 1992; 2010). Leibbrand and Watson underscored that knowledge of development, along with the ability to effectively use strategies based on

developmental principles, results in improved learning outcomes for students (2010). Darling-Hammond (1998) also articulated that understanding of development in cognitive, social, physical, and emotional domains assists educators in interpreting learner responses and in shaping appropriate and beneficial learning experiences. Finally, professional organizations such as the National Association for the Education of Young Children (NAEYC) (2009) and the National Middle School Association (NMSA) (2005) have underscored the importance of *developmentally appropriate practice (DAP)* by teachers in order to successfully address the unique needs that learners display throughout their distinctive stages of physical, cognitive, social-emotional and moral development.

Researchers have connected positive school outcomes (e.g. increased engagement, motivation, self-regulation, goal-setting, achievement) with instructional and school practices that support social and emotional learning and connections. (Elias, O'Brien, & Weissberg, 2006; 2007; Kress & Elias, 2006; National Center for Mental Health, n.d ). Effective educators also engage students intellectually by addressing their unique learning and cognitive development. When students are intellectually engaged student achievement is also positively impacted (Freiderichs, Bluenfeld, & Paris, 2004). Effective teaching promotes reasoned instruction that assists students to intellectually and cognitively develop deeper and more sophisticated understanding of concepts (Bransford, Brown & Cocking, 1999; Meece & Daniels, 2007). The use of metacognitive strategies, scaffolded prompts, guided inquiry, etc. are all founded learning principles resulting from developmental knowledge (Donovan & Bransford, 2005). Finally, an awareness of students' physical development and physiological needs also assists educators in designing effective classroom environments and instruction (Broderick & Blewitt, 2010; Nakkula & Toshalis, 2006). Considerations of states and stages of development concerned with fine and gross motor skills, physical maturation and growth, neurological changes, healthy lifestyle development, as well as sexual development and awareness provide context for educators in designing, selecting and scheduling activities (Santrock, 2005 )

### **Contextual Knowledge**

***Language and Culture.*** An understanding of language development, as well as the linguistic needs of students are important for effective teaching. The U.S. Department of

Education (2010) recently noted that the fastest growing population in the United States is ELs, with 10% of students in schools identified as ELs. In 2008, 21% of children ages 5-17 spoke a language other than English at home (Aud, Hussar, Planty, Snyder, Bianco, Fox, Frolich, Kemp & Drake, 2010) and at least 56% of all teachers will have at least one EL in their classroom (Padron, et al., 2002). There is a growing acknowledgement that all teachers will need an understanding of the linguistic needs of second language learners and a repertoire of instructional strategies to address these needs (deJong & Harper, 2005; WestEd, 2008).

There is also widespread recognition that schools and the nation need culturally competent and responsive educators who utilize effective instruction and pedagogy practices that address student diversity (Cartledge & Kourea, 2008; Grant & Gillette, 2006; Padron, et al., 2002; Ray & Aytch, 2007). Cultural competence is an area of expertise needed by effective teachers [National Education Association (NEA), 2008]. *“Culturally competent teachers contextualize or connect to students’ everyday experiences, and integrate classroom learning with out-of-school experiences and knowledge”* (NEA, 2008, p. 2). Padron and colleagues noted a need for educators to use research-based instructional practices that are meaningful and responsive to students’ needs as well as linguistically and culturally appropriate. Several researchers and advocates have called for educators to use *“culturally relevant pedagogy”* or *“culturally-responsive teaching”* in order to effectively address unique needs for children and adolescents from culturally and linguistically diverse groups (Grant & Gillette, 2006; Irvine, 2010; Richards, Brown & Ford, 2006; Taylor, 2010). These practices are found to better engage students and families from culturally and linguistically diverse groups and result in improved student learning, confidence and self-esteem (Cartledge & Kourea; Kea, Campbell-Whatley & Richards, 2006; Taylor, 2010; WestEd, 2007).

***Personal Learning Dynamics and Needs.*** In addition to growing cultural and linguistic diversity in today’s classrooms, there is also a range of unique student learning strengths and needs resulting from differing learning, behavior, sensory, and physical developmental patterns. This includes approximately 13% of students enrolled in public schools who receive special education services (Aud, et al, 2010). The vast majority of these children and youth are educated in the general education classroom most of the day.

Students identified with disabilities are a heterogeneous group and have varying cognitive, language, social, behavioral and sensory strengths and needs which can impact development, learning and school success (Heward, 2010).

Inclusive education is a philosophy of practice – and recommended way of life in schools that supports the provision of instruction, services and supports in age-appropriate general education classrooms for children. Inclusion *“seeks to develop the full potential of every child”* (UNESCO, n.d.) . Moreover, *“for inclusion to work, educational practices must be child-centered. This means that teachers must discover where each of their students are academically, socially, and culturally to determine how best to facilitate learning”* (Thompkins & Deloney, 1995, para 9). A vast deal of research and literature has been devoted to this topic, which has delineated many academic, social/emotional and civic benefits for general and special education students and teachers resulting from inclusive education practices and pedagogy. Suggestions and cautions for teacher and school practices are available (e.g. Halverson & Neary, 2001; Peterson & Hittie, 2010). Effective educators understand individualized cognitive, learning, social/emotional/ sensory and other needs of students and couple this with effective instructional strategies to support inclusive learning and personal excellence (Rosenberg, Westling & McLeskey, 2011; McLeskey & Waldron, 2000; Salend, 2011).

**Families.** A large body of evidence conclusively supports the value and benefits of successful family involvement across all levels of education. Benefits for families (e.g. increased involvement in school activities; improved information to support educational decisions for children; higher academic expectations for their children) as well as students (e.g., enhanced readiness for school, improved academic outcomes and grades; improved literacy performance and language growth; healthier prosocial behaviors, etc.) have been substantiated (Eccles & Harold, 2003; Hoover-Dempsey, et al., 2005; Kreider, Caspe, Kennedy & Weiss, 2007; Weiss, Bouffard, Brigdall & Gordon, 2009). A host of recommended and evidence-based practices and considerations is available in the literature (Barley & Brigham, 2008; Boethel, 2003; Cartledge & Kourea, 2008; CCSSO, 1992; 2010; Ferguson, 2008; Harvard Family Education Partnership 2006/2007; Kreider et al. 2007; Repetto, Webb, Neubert & Curran, 2006; Weiss, et al.). Researchers recommend



consistent practices instead of “random acts” for family involvement (Eccles & Howard, 1993; Weiss, Lopez & Rosenberg, 2010).

***Urban and Rural Contexts.*** Unique community and school attributes related to demographic, economic, mobility, culture, and ideologies exist. These features distinguish individual schools and communities (Alliance for Excellent Education, 2010; Barley & Brigham, 2008; Grant, Stronge, & Popp, 2008; Hodgkinson, 2001; Sachs, 2004; Thompson, Ransdell & Rousseau, 2005). For example, there is great variability in the capacity of urban and rural schools to equitably and effectively address successful school outcomes for all students. Some of the factors impacting schools include, access to resources, highly qualified status of the school staff; family stressors; poverty, range of curricular options, etc. (Barley & Brigham, 2008; Arnold, 2004; Sachs, 2004; Watson, Charner-Laird, Kirkpatrick, Szczesiul, & Gordon, 2006). Personal skills, cultural competence and cultural pedagogy are necessary for effective educators. Additionally, heightened awareness of the community demographics, strengths, needs and resources available in the school and community, knowledge of the potential impact of these factors on student learning, and relevant decision-making is suggested as a skill needed by effective educators practicing in these unique communities (Ennis & Chen, 1995; Hodgkinson, 2001).

### **Sphere 3: Content Knowledge Domains**

#### **Content Knowledge, Pedagogical Content Knowledge, Academic and Multiple Literacies<sup>1</sup>**

Teaching effectiveness requires deep and flexible knowledge of the content being taught. Effective teachers are able to use their knowledge of the content to enhance their pedagogy and ensure the learning success of all students. They may do this by selecting the most relevant examples, understanding and using content-specific learning progressions, anticipating learning difficulties for specific constructs, enriching content, connecting content across domains, creating interdisciplinary connections, etc. Responsive teachers have knowledge of and use strategies that capitalize on literacy as a tool and process for

learning content deeply and meaningfully (academic literacy, multiple literacies, technological literacy).

<sup>1</sup> From Curran, n.d.

### ***Content Knowledge***

Traditionally, content knowledge has been equated with holding a degree or completing a set of courses in a particular subject domain (Ball, Thames & Phelps, 2007). It has been described as a body of knowledge involving concepts and facts (National Science Teachers Association, 2003). Content knowledge has been clearly established in mandates (e.g., *No Child Left Behind*), policy documents (e.g., Public Education Network, 2003) research literature (Ball & McDiarmid, 1990; Darling-Hammond & Bransford, 2005; National Research Council, 2010) and in professional standards for educators (e.g., International Reading Association, 2010; National Board for Professional Teaching Standards, 2002; 2010; National Council for the Social Studies, 2002; National Science Teachers Association, 2003) as an important element of effective teaching with favorable impact on student achievement.

### ***Pedagogical Content Knowledge***

However, subject matter knowledge *“is not a sufficient foundation by itself for effective teaching”* [National Research Council (NRC), 2010, p.68]. Equally important is *pedagogical content knowledge* (PCK) (Shulman, 1986) or a specialized combination of content and subject specific pedagogy fundamental to competently teaching domain constructs and information successfully. In using PCK, *“teachers draw on understanding of how knowledge develops in a particular domain. They also rely on an understanding of the kinds of difficulties students typically have as their learning progresses and of how to build on students’ gradually accumulating knowledge and understandings”* (NRC, p. 68).

Pedagogical content knowledge involves a host of subject-related understandings, including *“lateral knowledge”* or a grasp of the relationship of the specific content to other curriculum being taught, as well as *“vertical knowledge,”* or a command of *“topics and issues that have been and will be taught in the same subject area during the preceding and later*

*years in school, and the materials that embody them*" (Schulman, 1986, p. 10, cited in Ball, et al., 2007).

Expert teachers utilize PCK (a) in selecting the most appropriate examples, explanations, and representations of subject constructs so that the information is accessible and understandable, (b) in organizing subject-matter for instruction, (c) in making decisions about what concepts may be more straightforward or more difficult for students, (d) in proficiently analyzing student errors, and (e) in selecting strategies to scaffold learning of concepts (Ball et al.; NRC, 2010; Schulman, 1986). Effective teachers *"know what conceptions students bring with them about the subject and what misconceptions are likely to cause them confusion – and they design their lessons to overcome these misinterpretations"* (Darling-Hammond & Baratz-Snowden, 2007, p. 112). In an analysis of research supporting student learning, the NRC concluded, *"that both strong content knowledge (a body of conceptual and factual knowledge) and pedagogical content knowledge (understanding of how learners acquire knowledge in a given subject) are important"* (p. 4).

### ***Academic Language and Literacy***

Widespread acknowledgement exists for a need to address literacy gaps for many students across the grade-span, given data on national measures of literacy, as well as literacy outcome data for specific groups of students, such as ELs and others students who struggle with literacy (Biancarosa & Snow, 2006; Carnegie Council on Advancing Adolescent Literacy, 2010; Grigg, Donahue & Dion, 2007; Gersten, Baker, Shanahan, Linan-Thompson, Collins, & Scarcella, 2007). Moreover, literacy skills involving reading, vocabulary, writing, listening, critical thinking, and comprehension are often identified as major challenges to accessing and understanding key concepts in all content areas, including mathematics, social studies, and science (e.g., Curran & Connery, 2011; Heller & Greenleaf, 2007; Hiebert, Gallimore, Garnier, Givvin, Hollingsworth, Jacobs, et al., 2003; Snow, 2010). Language mediates and supports learning and assists in constructing understanding (Lantolf & Thorne, 2006; Stickland & Riley-Ayers, 2006). The demand to use literacy skills in a more complex manner increases across grade levels (Biancarosa & Snow, 2006). In short, academic literacy supports improved learning and critical thinking

about content and is increasingly considered as essential content throughout the academic grade levels.

Torgeson and colleagues (2007) defined academic literacy as,

*“the kind of reading proficiency required to construct the meaning of content-area texts and literature encountered in school. It also encompasses the kind of reading proficiencies typically assessed on state-level accountability measures, such as the ability to make inferences from text, to learn new vocabulary from context, to link ideas across texts, and to identify and summarize the most important ideas or content within a text...It includes reading, thinking, comprehension skills that lead to new understandings”* (p. 3).

In a review of research and policy literature, researchers from the Center for Applied Linguistics furthered a definition of academic literacy that,

*“includes reading writing and oral discourse for school; varies from subject to subject; requires knowledge of multiple genres of text, purposes for text use and text media, is influenced by students’ literacy in context outside of school and is influenced by students’ personal, social and cultural experiences”* (Short & Fitzsimmons, 2007, p.8)

Academic language is a related area that effective teachers understand and use in their content instruction to support understanding. Zwiers (2007) described academic language as the *“set of words, grammar, and organizational structures used to describe thinking processes and abstract concepts.”* For some students, including ELs, language skills in academic language may be less proficient than those of conversational English, with ongoing instruction and supports needed for academic language to develop over time (Cummins, 1981; Chamont & O’Malley, 1994). Academic literacy includes specialized ways of talking and writing about a subject or discipline.

Educators are also increasingly expected to enhance students’ content specific knowledge and understanding through multiple literacies. Hull and colleagues (2003) clarified that, *“Literacies are tools for reading the world, bodies of knowledge, skills, and social practices with which we understand, interpret, and use the symbol systems of our culture.”* She added, *“Recent developments are broadening this definition by including a wide range of symbol systems. reading, writing, viewing, speaking. Being literate thus means being*

able to combine these systems in complex ways to create meaning” (p.1). Sheridan-Thomas (2007) referred to multiple literacies as multiple ways in which people read and write which include a variety of text mediums (print, nonprint, and digital) as well as technological literacy. As an example, The National Research Council (2007) exemplified the role of multiple literacies in learning science:

*“Students learn science by actively engaging in the practices of science, including conducting investigations; sharing ideas with peers; specialized ways of talking and writing; mechanical, mathematical, and computer-based modeling; and development of representations of phenomena” (p. 251).*

#### **Sphere 4: Responsive Pedagogy and Effective Instruction**

##### **Responsive Pedagogy and Effective Instruction <sup>1,2</sup>**

Effective teaching requires pedagogy which is informed, dynamic, and responsive. Effective teachers are informed about powerful teaching practices that can leverage optimal learning for all students. They examine and make decisions on how best to utilize this information to support effective teaching and learning for their students. Responsive pedagogy requires educators to integrate other spheres of competence in crafting, designing, organizing, differentiating, delivering, and assessing challenging and rigorous content through instruction that is founded on learner-centered principles. Together, six characteristics of effective instruction shape responsive pedagogy for teaching effectiveness. They include: (1) Crafting Learner-Centered Instruction and Classrooms; (2) Teaching for Understanding; (3) Implementing a Rigorous and Relevant Curriculum; (4) Elevating Assessment for Learning [Formative Assessment] and Balanced Assessment; (5) Synchronizing Differentiated Instruction for Learner Differences; and (6) Creating Organized and Well-Designed Learning.

<sup>1</sup>From Curran, n.d.

<sup>2</sup> The Characteristics of Effective Instruction identified by the Iowa Department of Education (2010a) are featured and were utilized in the composition and integration of research and literature in this area.

Discussions on “*what*” constitutes effective pedagogy and “*why*” and “*how*” it impacts individual and collective student learning and outcomes have also been widely discussed in education policy, theory, and research literature (Englert, Apthrop, & Seebaum, 2009; Banks & Banks, 1995; Bransford, Brown & Cocking, 1999; Dalton, 1998; 2007; Entz, 2007; Friere, 2001). Pedagogy is commonly described as “*the art and science of teaching*” (Arends, 2007, p. G-7). Other definitional perspectives of pedagogy are:

- “*Pedagogy is the means by which teachers relay and convey context knowledge and skills, pay attention and respond to student interpretations, and provide ongoing challenge and feedback.*” (Englert, et al., 2009, pp. 6-7)
- “*...effective pedagogy involves three related areas: (1) the instructional strategies used by the teacher, (2) the management techniques used by the teacher, and (3) the curriculum designed by the teacher.*” (Marzano, Pickering, & Pollock, 2001, p. 10)

O’Brien stated that pedagogy is influenced by the experiences educators bring to teaching that “*inform their knowing and their practices*” (2000, p. 284). Yet, Englert, et al. (2009) positioned pedagogy as follows:

*“Teaching is the intersection between content and outcomes that personalizes, nurtures, and propels learning. The blueprint or roadmap for learning is the curriculum. The litmus test for learning is assessment, and in between is pedagogy”* (p. 7).

### ***Informed Pedagogy and Instruction***

One manner that teachers and professionals approach effective teaching is to access and examine powerful pedagogical and instructional practices reported in educational research, literature, and documents that positively impact student learning and achievement (Stanovich & Stanovich, 2003). Effective teachers remain informed and build their pedagogy with deliberate consideration of best-practice or evidence-based information (National Institute for Literacy, 2005; Teacher Leadership Exploratory

Consortium, 2010). Because teaching is highly complex, responsive teachers decide “what,” “how” and “if” this information applies to specific teaching contexts, learning endeavors, and individual students and are able to articulate and support these decisions with sound rationale (Stanovich & Stanovich). Effective teachers use student assessment information gathered during instruction and other data to confirm or adjust their decisions in a cycle of teaching and learning inquiry (Black & Wiliam, 1998). The National Council for Teachers of English (n.d.) advised that teachers study, critique, select, apply, and conduct research in their classrooms to support informed pedagogical practices and teaching.

There are syntheses of research documenting effective pedagogical and instructional skills that provide one source of information to provide guidance for responsive teachers. John Hattie (2003) a renowned educational researcher, concluded that *“excellence in teaching is the single most powerful influence on achievement”* as a result of a research synthesis on student achievement. Hattie found that expert teachers’ practices accounted for major sources of influence in student achievement. Five major dimensions of teaching excellence were distinguished. Hattie reported that expert teachers: (a) can identify essential representations of their subject; (b) can guide learning through classroom interaction; (c) can monitor learning and provide feedback; (d) can attend to affective attributes; and (e) can influence student outcomes. Table 1 includes a summary of powerful instructional techniques from Hattie’s analysis. Hattie has also more recently reported long-term research synthesizing 800 meta-analyses related to student achievement (2009). Other researchers have similarly conducted research syntheses which provide a grounding for educators in adopting and designing pedagogical practices (e.g. Evantia, 2005; Marzano, et al, 2001; National Mathematics Advisory Panel, 2008).

Table 1: Effect Size Influences on Student Achievement (Hattie, 2003) <sup>1</sup>

<b>Teaching Practice or Influence</b>	<b>Effect Size</b>
Feedback	1.13
Instructional quality	1.00
Direct instruction	.82
Remediation/feedback	.65
Class environment	.56
Challenge of Goals	.52

Peer tutoring	.50
Mastery learning	.50
Homework	.43
Teacher Style	.42
Questioning	.41
Advance organizers	.37
Simulation & games	.34
Computer-assisted instruction	.31
Testing	.30
Instructional media	.30
Programmed instruction	.18
Audio-visual aids	.16
Individualization	.14
Behavioral objectives	.12
Team teaching	.06

<sup>1</sup> Note: Table data selectively excerpted from Hattie, 2003. Additional influences on achievement (student, home, peer, and school) are included in the original literature and are omitted in this table.

Frameworks of educational practice that compile research-based information into integrated sets of practices are alternative lenses of information for effective teachers. One example includes five standards of pedagogy developed by researchers from CREDE (Center for Research on Education, Diversity and Excellence). These standards are described as relevant across content and learners (Dalton, 1998). Additional evidence-based frameworks for effective pedagogy and learning have been substantively researched and are included in Appendix B. (Bottoms, 2006; Bransford, et al., 1999; Newmann, King, & Carmichael, 2007; Wiggins & McTighe, 2005). The presented syntheses and frameworks in this review are naturally not exhaustive. It is important to note that educators, researchers, and policy-makers have recognized that access to usable research-based information may be difficult for teachers to obtain in practice (Levin & Read, 2010).

### ***Characteristics of Effective Instruction***

The remainder of this section of the monograph will address key fundamental characteristics of effective instruction identified in the above discussion that were initially framed in the five characteristics identified by the IDOE (2010a) as



*Characteristics of Effective Instruction.* A sixth characteristic of effective instruction was added. These characteristics are supported by additional review and analysis as elements of effective instruction representative of current research supported instructional practice that positively impacts student achievement and learning. These fundamentals are not exclusive, and there is noted overlap across attributes. The summaries that follow are brief representations of the available literature.

***Crafting Learner-Centered Instruction.*** Effective teachers create learner-centered instruction in student-centered environments. Learner-centered (LC) environments have been described by the National Research Council (NRC) as “*environments that pay careful attention to the knowledge, skills, attitudes and beliefs that learners bring to the educational setting*” (Bransford, et al., 1999 p. 121). Learner centered classrooms bridge students’ current understanding and experiences toward valued learning goals. Effective teachers bring their knowledge of how children construct meaning and use students’ prior experiences as a foundation for instruction (Branford, et al.) Responsive teachers are attentive to students’ cognitive and metacognitive development and affective, motivational, and social aspects of learning (Daniels & Perry, 2003). Personal ownership of learning is built through metacognitive learning where a student is able to think about his or her own thinking to guide future learning (Bransford, et al.). Learning is interactively shaped by personal experience and collaborative interactions with peers and the teacher (Apthorp & Clark, 2007; Ryan, Reid & Epstein, 2004; Johnson & Johnson, 2009; Williams, 2009). Social supports build trust, confidence and a feeling of safety and may generate risk-taking in learning, exploration of errors, and willingness to seek assistance (Bransford, et al; Iowa Department of Education 2010h; Lee et al.)

Responsive teaching utilizes scaffolds, or temporary learning supports during instruction to bridge learning and allow learners to reach “*a goal which would have be beyond his unassisted effort.*” (Bruner, Woods & Ross, 1976, p. 90). Constructivist or socio-cultural theories underlie many of the principles of learner-centered classrooms (Connery & Curran, 2010). The Iowa Department of Education (2010d) exemplified student-centered learning environments as ones that “*shift the focus of information integration*” to the student and additionally noted this is “*best accomplished when intrinsically directed and when new information is made available in ways that reflect the unique experiences,*

*background and learning styles of each student”* (p. 1). Cornelius-White (2007) concluded that learner-centered teacher variables (empathy warmth, encouragement of thinking and learning, and learner-centered beliefs) “*have above-average associations with positive student outcomes*” such as participation, critical thinking, satisfaction, math achievement, drop-out prevention, self-esteem, verbal achievement, positive motivation, social connection, IQ, grades, reduction in disruptive behavior, attendance, and perceived achievement.

***Teaching for Understanding.*** Researchers have recommended that teaching must be deliberate and intentional in order to foster deeper student understanding and transfer of knowledge and information (Bransford et al., 1999; McTighe & Seif, 2003; Mestre, 2002). Perkins & Blythe (1994) provided a definition of teaching for understanding often used by educators. Teaching for understanding means “*being able to do a variety of thought-demanding things with a topic – like explaining, finding evidence and examples, analogizing, and representing the topic in a new way... being able to carry out a variety of ‘performances’ that show one’s understanding of a topic and at the same time advance it.*” (pp. 5-6). McTighe and Seif (2003) discussed six facets of understanding outlined in the Understanding by Design framework presented in Appendix B.

Teaching for understanding involves ensuring that *deep* learning and understanding occur. Deep understanding is often portrayed as a process of learning and teaching that promotes quality learning outcomes such as improved initial knowledge acquisition, enhanced retention of information; greater facility in using and applying knowledge in context, and in transfer of concepts to novel content and situations (Bransford, et al., 1999; Grotzer, 1996; Hiebert, Carpenter, Fennema, Fuson, Wearne, Murray, Olivier, & Human, 1997; Iowa Department of Education, 2010e; 2010j; Leithwood, McAdie, & Bascia, 2006; Perkins & Blythe, 1998; Wiggins & McTighe, 2008).

Teaching for understanding also impacts motivation (Barron & Darling-Hammond, 2008; Ngeow, 1994). When an individual is involved in deep learning, researchers and theorists have noted that they move past superficial or discrete factual knowledge to more sophisticated, deep, connected and applied uses of concepts in authentic or real-life contexts (McTighe & Seif, 2003; Newman, King, Carmichael, 2007; Wiggins & McTighe). Understanding also involves developing a deeper knowledge of different types of

knowledge (e.g., declarative, procedural, conceptual, etc.) and flexible ability to use each well (Schneider & Stern, 2010). Transfer of learning, the ability to apply knowledge or procedures from one context to others, underlies deep understanding and learning (Mestre, 2002).

***Implementing a Rigorous and Relevant Curriculum.*** This fundamental characteristic of effective instruction is highly integrated with elements of effective instruction and teaching discussed earlier. High expectations for the achievement of all students have been established as critical for successful student and school outcomes (Goe, et al., 2008). These expectations are fundamental for a rigorous curriculum (Ainsworth, 2011; Barton & Coley, 2009; Bottoms, 2006).

Tony Wagner (2008) in *Rigor Redefined* identified seven skills students should master for success in the 21<sup>st</sup> century: (a) critical thinking and problem solving; (b) collaboration and leadership; (c) agility and adaptability; (d) initiative and entrepreneurialism; (e) effective oral and written communication; (f) accessing and analyzing information; and (g) curiosity and imagination (pp. 21-22). These expectations for rigorous 21<sup>st</sup> century proficiencies and college and career ready skills are often called a rigor agenda.

Rigor, however, is also the actual and intrinsic intellectual challenge provided to students through school curriculum and classroom instruction (Ainsworth, 2011). There is intrinsic challenge, meaningful and relevant lessons, and multiple opportunities to succeed in a rigorous curriculum (Ainsworth). Blackburn and Williamson (2009) noted that rigor involves critical thinking and deep learning, along with a focus on real-world settings. They also cautioned that genuine rigor necessitates supports for each student to learn and demonstrate understanding at high levels.

A rigorous curriculum incorporates higher-order thinking skills in curriculum, instruction, and assessment (Ainsworth, 2011; Iowa Department of Education, 2010c; 2010g; King, Newman & Carmichael, 2007). Critical thinking skills are modeled and fostered in instruction. Research has supported a positive impact of teaching critical thinking skills on student achievement (e.g., Cotton, 1991; Marzano, et al., 2001). One pedagogical framework extensively researched supporting rigorous and relevant curriculum is *Authentic Intellectual Work* (AIW) (Bryk, Nagaoka, & Newmann, 2000;

Newmann, King & Carmichael, 2007). The outcomes of this body of research have been reported to consistently impact higher levels of student achievement across varied ages, gender, race, socioeconomic groups and subjects. A summary of AIW is in Appendix B.

***Elevating Assessment for Learning (Formative Assessment) and Balanced Assessment.*** Teaching effectiveness is tendered by informed and connected teaching and learning. Formative and balanced assessment practices in instruction guide teaching and learning to support student success.

Assessment is essentially the practice of collecting and utilizing information to make decisions that further learning. Student involvement in this process is key to responsive instructional practice. The focus of assessment in this monograph is on the *instructional* use of assessment for teaching and learning, as well as the larger knowledge and skill base of assessment skills needed by educators to effectively promote student learning in a balanced assessment system. There is a well-established base of research that indicates that assessment practices, particularly formative assessment practices, are an integral part of effective teaching and student learning (Black & Wiliam, 1998; Chappius, Chappius & Stiggins, 2009; Hattie & Timperley, 2007; Marzano, et al., 2001; Young & Kim, 2010).

Assessments are often categorized according to their purpose: *summative* (assessments designed and used to judge competence or summarize achievement; assessments used to ascertain if learning has occurred after instruction); and *formative* (assessments designed to be used concurrently during instruction; an ongoing assessment process used throughout teaching to adjust instruction, support learning, and to actively engage students in monitoring their understanding) (Popham, 2009c; Stiggins & Popham, 2008; Sadler, 1989). More commonly, these assessments have been respectively referred to as “*assessments of learning*” and “*assessments for learning*” (Edwards, Turner & Mokhtari, 2008). Because of the wide-body of research and literature supporting the effectiveness of formative assessment, and its value in propelling student learning, achievement, and motivation - a key identified attribute of effective instruction is formative assessment (Black & Wiliam, 1998a; 1998b; Hattie & Timperly, 2007; Heritage, 2010; Iowa Department of Education, 2010a; 2010f; Stiggins & Popham, 2008).

Sadler (1989) highlighted three elements requisite of formative assessment: “*the learner has to (a) possess a concept of the standard (or goal, or reference level) being aimed*

for, (b) compare the actual (or current) level of performance with the standard, and (c) engage in appropriate action which leads to some closure of the gap” (p. 121). Black and Wiliam (1998b) accounted a now classic comprehensive study analyzing the effects of classroom assessment on student performance from more than 250 empirical research studies. Definitively, this work reported that the effects of formative assessment practices on student gains in achievement and performance were “among the largest ever reported for educational interventions” (p. 61).

One of the more recent and comprehensive definitions of formative assessment was generated by a national initiative of the Council of Chief State School Officers (CCSSO) involving two groups [the Formative Assessment for Students and Teachers (FAST) Collaborative and the State Collaborative on Assessment and Student Standards (SCASS)] (McManus, 2008). Unanimous consensus was achieved to render a definition of formative assessment. Corresponding attributes of formative assessment were also identified in this endeavor (Heritage, 2010). The FAST SCASS definition of formative definition follows.

*Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended instructional outcomes.* (McManus, p. 3)

Feedback to support learning and teaching is a core element of the formative assessment process. Hattie and Timperley (2007) conducted a research summary of 12 previous meta-analyses of 196 studies on feedback as an instructional strategy. In their analysis, feedback was found to be one of the top five effective instructional methods and to have a more powerful effect than student’s prior ability. Progress monitoring and student self-monitoring of learning has also been found to have a significant impact on student achievement (Marzano, 2010; Fuchs & Fuchs, 1986).

James Popham (2009c), a noted expert in the field of education assessment recently accentuated the importance of assessment literacy, stating,

*“Today’s educators are being called on, almost hourly, to make important decisions hinging on the results of educational assessments. Yet, in many instances the educators making those assessment-dependent decisions are doing so without a genuine understanding of educational assessment.”* (para 1)

Popham also shared this definition of assessment literacy, “*Assessment literacy is present when a person possesses the assessment-related knowledge and skills needed for the competent performance of that person’s responsibilities*” (2009a, para 4). *Assessment literacy supports teacher-self-efficacy and is important in ongoing instruction, as well as in the larger context of accountability and data-based assessment practices used in schools today that impact students’ learning in the classroom, opportunity in school, and access to services and programs. Popham (2009a) and Mertler (2005) summarized several definitions of assessment literacy and provided characteristics of assessment literate educators.* The current tone in professional and policy circles is for a balanced assessment system (Stiggins, 2006; Darling-Hammond & Pechone, 2010). The results of these conversations and recommendations will likely be part of the future landscape for teacher effectiveness.

***Synchronizing Differentiated Instruction for Learner Differences.*** Responsive teachers synchronize and differentiate instruction so that each learner is cognitively, strategically, and motivationally involved in meaningful learning. This is accomplished through personalized familiarity with each child’ learning patterns, profiles and possibilities. In order to achieve this, effective teachers design and implement flexible and dynamic curriculum, instruction, and assessment for the diversity of learners in their charge.

With vast cognitive, linguistic, cultural, and other experiential differences in a typical classroom, a one-size fits all approach to instruction, curriculum, and assessment for all students, all of the time, is increasingly recognized as insufficient. A recent draft of model core national teaching standards acknowledges the need for educators to use “*understanding of individual differences and diverse communities to ensure inclusive learning environments that allow each learner to reach his/her full potential*” (CCSSO, 2010). The IODE (2010i) has also identified *Teaching for Learning Differences* as one of the key characteristics of effective instruction for all teachers.

An analysis of bodies of literature related to learning diversity revealed four key areas which provide coordinated, validated, and promising rationale, practices, and/or research supporting curriculum, instruction, and assessment practices that more successfully address learning diversity. These practices are reported to improve student learning and boost teaching effectiveness. The approaches include: culturally relevant

instruction and pedagogy (e.g., Gay, 2002; Kea, et al., 2006; Ladson-Billings, 1995; Padron, Waxman & Rivera, 2002); linguistically sensitive and responsive instructional practices for core curriculum instruction, such as the Sheltered English Observation Protocol (SIOP) (e.g., deJong & Harper, 2005; Echevarria, Vogt & Short, 2010); differentiated instruction (e.g., Tomlinson 1999; 2003; 2008; Tomlinson & McTighe, 2006); universal design for learning (e.g., National Education Association, 2008; Center for Applied Special Technology, 2011; Orkwis & McLane, 1997; Rose & Meyer, 2006); and response-to-intervention (e.g., Coleman, Buysse, & Neitzel, 2006; Fuchs & Fuchs, 2006; Hoover, Baca, Wexler-Love & Saenz, 2008; International Reading Association, 2010).

Additionally, a body of compiled research validated instructional practices from Coyne and colleagues (2011), termed loosely high-quality educational tools for diverse learners, offers integrated pedagogical practices to support diverse learners in high-quality, cognitively engaging instruction. For more in-depth information on the practices identified in this review, the sources listed above, and others, offer research support and instructional guidance.

Together, these approaches highlight personal knowledge of each learner's unique cultural, linguistic, cognitive, behavioral, motivational, affective and other learning differences and strengths. Effective educators constantly renew their knowledge of learner differences through the ongoing teaching and learning process. Some of the common practices included in the approaches reviewed include: (a) proactive planning, (b) accessible, challenging instruction; (c) flexible, differentiated, and scaffolded representations, materials, activities, assessments, and learning arrangements to address learner differences; (c) ongoing assessment with data-based progress monitoring; and (d) comprehensive collaboration.

***Creating Organized and Well-Designed Learning.*** A final pedagogical consideration in teaching effectiveness includes sound instructional planning, delivery, and classroom management. Competencies and skills in these areas are common elements of teacher preparation coursework, educator professional standards, and remain valued traits by the public, parents, school administrators, students, and teachers themselves (Allen, 2010; Cushman & Rogers, 2008; CCSSO, 2010; Jacob & Lefgren, 2005; Strangis, Pringle & Knopf, 2006). Freiburg referred to these as "organizing strategies" which include: planning,

lesson design, time use, advance work, and classroom management. Brown (2004) furthered that, “*student learning is contingent on teachers’ ability to create and sustain optimal learning environments*” (p. 266). Organizing strategies contribute to the architecture for effective instruction.

Notably, a majority of research on instructional planning occurred primarily throughout the 1970’s and 1980’s (Earle, 1998). A solid body of research on teacher effectiveness (e.g. Rosenshine & Stevens, 1986) resulted in planning practices that have been linear and focused on mastery learning. These have had documented success for many learners and teachers (Guskey, 1988; Hunter, M. 1982; Hunter, R. 2004).

A number of ongoing changes in teacher role demands, content standards, pedagogical practices, student and community diversity, societal influences, youth culture, technology, and enhanced understanding about how children learn have expanded this seminal research (e.g., Conderman & Johnston-Rodriguez, 2009; Davis, Petish & Smithey, 2006; Vosnaidou, 2001). For example, more contemporary instructional arrangements (e.g., co-teaching and interdisciplinary teaming) instructional approaches (e.g., problem-based learning) and planning practices (e.g. strategic planning, backward planning, and non-linear models of planning) require alternative planning and classroom management practices (Arends, 2007; Bulgren, 2004; Conderman & Johnston-Rodriguez; Friend & Cook, 2009; McCutcheon & Milner, 2002; Price & Nelson, 2007; Superfine, 2010).

Evertson and Neal discussed changing practices in classroom management: “*In the past, research on classroom management emphasized behavior control. Typical classroom management practices remain consistent with this perspective...*” The authors furthered that recent literature reflects, “*an alternative ‘learning centered’ approach to classroom management that is consistent with new knowledge about learning and teaching*” (2005, p. 2). They created benchmarks clarifying these changing classroom management practice,s which are depicted in Table 2.



Table 2: Benchmarks for Classroom Management (Evertson & Neal, 2005, p. 4)

<b>Benchmarks for</b>	<b>Moving From</b>	<b>Moving Toward</b>
Purpose of classroom management	Teachers maintain control as an end in itself	Teachers actively engage students in learning, encourage self-regulation, and build community
Academic purpose of lesson	Students learn discrete facts and skills through sequential development of lesson	Students learn from multiple concepts, facts, and skills often embedded in larger projects and problems
Moral purpose of lesson	Students follow directions and learn compliance	Students develop autonomy, capacity for self-regulation, and sense of responsibility
Social purpose of lesson	Students work alone, conforming to a fixed set of acceptable behaviors	Students are interdependent, may work collaboratively, or alone; teachers allow a wider, more divergent range of acceptable roles and behaviors
Relationship of management and instruction	Management and instruction are compartmentalized, and approaches may be incongruent	Management and instructional approaches are explicitly integrated and seamless

Earlier research conducted on classroom management during the 1970's and 1980's focused on "smoothly operating classrooms" which used time optimally to engage students in learning. A number of teaching behaviors and activities were found to be effective in accomplishing this while also promoting student learning gains [e.g., use of effective transitions, establishing classroom norms and rules, clear expectations, efficient pacing and momentum, allocation of time, active student engagement, minimized disruptions; arrangement of the physical environment; and behavioral structures to promote behavior] (Brophy & Evertson, 1976; Brophy & Good, 1986; Emmer, Evertson & Anderson, 1980; Evertson, 1989; Evertson & Emmer, 1982; 1982; Evertson & Harris, 1992).

Goodwin (2010) reported that meta-analyses research has demonstrated powerful effects on student achievement from classroom management strategies ( $d=.52$ ) and strategies decreasing disruptive behavior ( $d=.85$ ). Donovan & Cross (2002) have noted

that an inability of educators to address the behaviors of at-risk students can lead to inappropriate referrals to special education. Additional research has also addressed student achievement gains and improved learning resulting from cooperative structures for learning (e.g., Barron & Darling-Hammond, 2008; Johnson, Johnson & Holubec, 1994; Slavin & Lake, 2008).

Finally, instructional procedures were studied in two bodies of research occurring throughout the 1970's and 1980's that Roshenshine (2008) referred to as effective teacher research and cognitive strategy research. In the first body of research, specific teacher behaviors were demonstrated to result in improved student learning gains. This has been referred to as explicit or direct instruction (see Roshenshine for a description of the research conducted and specific results). From this work, six teaching functions involved in more explicit instruction were identified (Rosenshine & Stevens, 1986). These functions are: (1) review; (2) presentation; (3) guided practice; (4) corrections and feedback; (5) independent feedback; and (6) weekly and monthly reviews. Cognitive strategy instruction research utilized explicit instruction procedures along with additional instructional techniques (scaffolding, modeling of strategies, thinking aloud, cue cards, dividing the task into smaller components) to teach more comprehensive cognitive tasks (test-taking, comprehension, reflective thinking). Students who received instruction in cognitive strategy instruction were shown to outperform other students (Rosenshine).

### **Sphere 5: Collaboration, Leadership, and Advocacy**

#### **Collaboration, Leadership and Advocacy<sup>1</sup>**

Effective teachers collaborate with families, other professionals, communities, and others to promote student learning and effective teaching. Teaching effectiveness is enhanced through these partnered endeavors which expand perspectives, information, and supports to improve student learning in the classroom and beyond. This collective wisdom promotes cohesion in educational opportunities that optimize teaching and learning for

students and schools.

Effective teachers have requisite communication and interpersonal skills and are provided the necessary supports to engage in successful collaboration. They refine their collaboration skills and knowledge-base of effective teaching and student learning through individual and collective inquiry, reflection, and ongoing study to improve student learning and teaching.

Effective schools and districts provide a continuum of teaching and leadership knowledge and skills through relevant professional learning opportunities and structured support that promote teaching effectiveness. Teachers are provided informal and formal leadership opportunities that are valued. Teachers and teacher leaders assist in the broader mission of inculcating ongoing renewal of effective teaching practices for the learning of all students in classrooms, schools, districts, and communities.

Effective teachers are progressive. They are advocates for student learning and for their profession in accessing, using, promoting, and communicating effective teaching and education practices that provide for equity, successful student learning, and valued school outcomes.

<sup>1</sup> From Curran, n.d.

Three related areas comprise this last area of teacher effectiveness analyzed in the literature: collaboration, leadership, and advocacy. Many advantages and connections to student achievement, teacher capacity and efficacy, and school improvement are reported to result from these practices (e.g., Danielson, 2006; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Goddard, Goddard & Tschannen-Moran, 2007; Hord, 1997; Inger, 1993; Parsad, Lewis & Farris, 2001; York-Barr & Duke, 2004).

## ***Collaboration***

There are many definitions and terms surrounding collaboration and teaching: collegiality, congeniality, cooperation, consultation, communication, and collaboration. Each of these terms may have a varied function or purpose related to an educator's roles and responsibilities within schools. (Slater, 2004). As a result a multiplicity of collaborative education practices have occurred over the past few decades which are suggested to improve equitable and challenging student learning, student achievement, and educator retention, morale, efficacy, capacity, and teaching and school effectiveness. These include: family involvement programs, parent conferences; parents-as-partners programs, interdisciplinary teaching, team teaching, co-teaching, push-in models, collaborative consultation, problem-solving teams, professional learning communities, lesson study, coaching, mentoring, professional development schools, job-embedded professional development, and teacher-researcher partnerships (Annenberg Institute for School Reform, 2004; Berry, Daughtery & Weider, 2009; Brownell, Adams, Sindelar, Waldron, & Vanhover, 2006; Carroll, Fulton & Doerr, 2010; Darling-Hammond, 1994; Darling-Hammond & Richardson, 2009; Dove & Honingsfeld, 2010; Flowers, Mertens & Mulhall, 2003; Friend & Cook, 2009; Hord, 1997; Henderson & Mapp, 2002; Jordan, Orzoco, & Averett, 2002; Leko & Brownell, 2009; Lemkie & Lesley, 2009; Neufield & Roper, 2003; Sturtevant, 2003; York-Barr & Duke, 2004; Wei, Andree & Darling-Hammond, 2009). Collaboration has also been described as both a process and product (Inger, 1993).

***Collaboration with Families.*** Family involvement and collaboration practices have been found to strengthen the engagement of parents in student learning and result in improved student achievement and school outcomes (Henderson & Mapp, 2002; Eccles & Harold, 1993). Rationale and benefits supporting family involvement were noted earlier in the chapter. Supporting dispositions and a knowledge-base of family structures (e.g., goals/benefits/barriers to family involvement, differing cultural and family values/beliefs/needs/patterns); techniques and strategies to support communication between home, teachers and schools; and information on how to sensitively involve families in students' learning and school activities serve as a base for teachers to foster collaboration with families (Harvard Family Research Project, 2006/2007).

**Professional collaboration.** Effective educators also collaborate with other professionals to support student learning. Professional-professional collaboration involves differing (a) structures (formal or informal; online or face-to-face, etc.); (b) purposes (school improvement; shared governance and decision-making; curriculum alignment and enrichment; equitable and improved instructional practices; inclusive and enhanced services and instruction; and teacher support and leadership); and (c) collaborative structures (professional learning communities, interdisciplinary teaming, team teaching, co-teaching, coaching dyads, mentoring, etc.) (e.g., Annenberg Institute for School Reform, 2004; Berry, et al., 2009; York-Barr & Duke, 2004).

Marilyn Friend (2007) explained that collaboration requires “*shared responsibility for decisions, shared accountability for outcomes, and shared resources*” (p. 1). Components necessary for collaboration identified by Friend include: (a) a sense of commitment to shared work; (b) effective communication skills; (c) an understanding of interaction processes, programs and services that foster collaboration; and (d) supportive context and informed leadership. Professionals have reported that effective collaboration requires supportive structures such as scheduled and structured time for collaboration, effective leadership support, a supportive culture, trust, training, and flexible scheduling (Boss, 2009; Inger, 1993; Center for Comprehensive School Reform, 2007; Leonard & Leonard, 2003; Walther-Thomas, Bryant & Land, 1996). Collaboration may also extend outside the school environment in a number of other configurations and relationships to support student learning, teaching effectiveness, and education practices (Lawson, 2003).

While there is a substantial body of work supporting collaboration for improved teaching and student learning, “*Rigorous research on the impact of collaboration on teachers and teaching practices is just beginning to emerge*” (Lemke & Lesley, 2009, p. 4). One recent study (Goddard, et al, 2007) found that teacher collaboration “*may improve schools’ ability to foster student achievement... the relationship between teacher collaboration for instructional improvement and student achievement is likely indirect. That is, the most important outcome of teacher collaboration may be that teachers learn how to improve their instructional practice*” (p. 892).

**Collaboration for improved teaching effectiveness and learning.** Establishment of a strong, school-based professional community is “*a key ingredient in improving schools*”

(Annenberg, Institute for School Reform, 2004, p. 4). Professional learning communities (PLCs) have been frequently recommended as a structure and process to create and sustain a school-based culture supporting ongoing professional inquiry, collaboration, and decision-making focused on student learning and effective teaching (Carroll, Fulton & Doerr, 2010; Center for Comprehensive School Reform, 2009; duFour, 2004; Hord, 1997). *“At its core, the concept of a professional learning community rests on the premise of improving student learning by improving teaching practice”* (Vescio, Ross & Adams, 2006, p. 6). Waters & O’Meara 2008 clarified that *“ It is through this collaboration that teachers are able to develop a high level of professional practice and instructional problem-solving tailored to the needs of their students”* (p. 3).

Teacher participation, commitment, communication and collaboration skills are elemental to this organizational structure and process (Graham, 2007; Jolly, 2008; Newmann & Wehlage, 1995). Additionally, school and district leadership, structures, and supports have been recognized as factors influencing the effectiveness and capacity of PLCs (Feger & Arruda, 2008; Hord, 1997; Graham, 2007; Jolly, 2008; Newmann & Wehlage, 1995). This type of collaborative work is increasingly utilized in schools and expected of educators to support student learning and teaching effectiveness. It is worthwhile to note as Feger and Arruda (2008) concluded: *“Examination of the education research literature on PLCs revealed a broad range, type, and history of published articles and studies. However, the research on PLCs is limited and largely descriptive...”*(p. 17). PLCs are an emerging structure to support collaboration centered on professional learning that may result in improved student achievement and school success.

A related structure to support teaching effectiveness in the current literature is *job-embedded professional development* (JEPD). (Croft, Coggshall, Dolan, Powers & Killion, 2010). Croft and colleagues defined JEPD as follows:

*“Job-embedded professional development (JEPD) refers to teacher learning that is grounded in day-to-day teaching practice and is designed to enhance teachers’ content-specific instructional practices with the intent of improving student learning”* (p. 3).

Because there is a continuum or progression of teaching knowledge and skill levels that relate to teaching effectiveness (novice to expert professional), JEPD supports teaching effectiveness throughout the teacher career continuum (Hill, Jeffrey, McWalters, Paliokas, Seagren, & Stumbo, 2010; Reconceptualizing Teacher Professional Development, 1995; Smylie & Conyers, 1991). Effective teaching skills are honed through continued experience in the field, and enhanced through teacher inquiry, ongoing learning, professional collaboration, professional support, and feedback on teaching (Darling-Hammond, 2010a; 2010b). JEPD contributes to teaching effectiveness and effective teachers seek out, participate in, and utilize JEPD to improve their teaching skills and positively impact student learning.

## **Leadership**

Teacher leadership is not a new notion (ECS, 2010), however there is increasing policy, professional, and practitioner press calling for increased use of teacher leadership practices to support teaching effectiveness, satisfaction, accomplishment, and school reform. A number of benefits to teacher leadership practices have been described in the literature (e.g. improved teacher quality, better student learning, increased likelihood for success in education reform, enhanced recruitment and retention of teachers, creation of a reward mechanism for accomplished teaching, enhanced principal capacity, and establishment of more democratic school environments (Berry, Daughtery & Wieder, 2010; Center for Comprehensive School Reform, 2005; ECS, 2010; Lambert, Wallach & Ramsey, 2007; NCCTQ, 2010; York-Barr & Duke, 2004). York-Barr and Duke (2004) defined teacher leadership in the following manner:

*“Teacher leadership is the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of the school communities to improve teaching and learning practices with the aim of increased student learning and achievement. Such team leadership work involves three intentional development foci: individual development, collaboration or team development, and organizational development.”* (pp. 287–288).

Teacher leadership may occur in both informal and formal structures and collaborative activity (ECS, 2010; Danielson, 2006). For many, the present context of teacher leadership discussions is situated in a broader process of developing and utilizing the leadership qualities of all teachers (Lambert, 2003). Lambert elucidated, "*all teachers have the right, capability and responsibility to be leaders, therefore, the major challenge before us is not to identify who is and who is not a teacher leader but to create a context that evokes leadership from all teachers*" (p. 422). The Institute for Educational Leadership (IEL) maintained that teacher leadership is about "*mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school*" (2001, p. 4).

For others, however, the conversations surrounding teacher leadership primarily center on recognizing and utilizing teacher leaders, or expert teachers "*who aspire to stretch beyond their classrooms to engage in leadership roles*" (ECS, 2010, p. 1). Both of these stances (leadership development and teacher leader) are present in the literature with proposed benefits, cautions and recommended practices (e.g., ECS, 2010; Lambert, 2003; Institute for Educational Leadership, 2001; NCCTQ, 2010). Recently, The Teacher Leadership Exploratory Consortium (2010) - a group of varied education organizations, state education agencies, teacher and principal leaders and institutions of higher education - released a draft of for public comment on *Model Teacher Leader Standards*. This document suggests domains and skills involved in teacher leadership.

## **Advocacy**

Advocacy has long been included directly or indirectly in standards of professional practice or professional ethics statements (Fennimore, 2007). There is increasing and integrated reference to advocacy in recent and current revisions of professional standards and practices (e.g., National Association for the Education of Young Children, 2005; CCSSO, 2010; Council for Exceptional Children, 2009; National Association of Teacher Education for Family and Consumer Sciences, 2004; National Middle School Association, 2005; Teacher Leadership Exploratory Consortium, 2010, etc.). While an acknowledged professional responsibility, advocacy as a practice and process has received less attention



until recently. Currently, professional advocacy for school and education change and for improved teaching effectiveness and student learning is gaining agency on many fronts.

Advocacy is defined as “*public support for or recommendation of a particular cause of policy*” (Oxford Online Dictionary, 2011). The Teacher Leadership Exploratory Consortium referenced the work of advocates, which is

*” to formulate a position and communicate it through a process that includes defining objectives, gather facts to build a case, assessing and taking into account others’ interests and resource, presenting a clear case and revising it in response to feedback. An advocate is one who speaks on behalf of the issue in question”* (2010, p. 6).

Kaplan stated that advocacy can be “*practiced from different roles and perspectives*” (2003, p. 4). While, Lalas (2007) noted that, in addition to content and pedagogical skills development, preservice and in-service teachers must also be assisted and guided in cultivating “*advocacy for social justice to improve the overall education of their students in urban schools*” (p. 19). Petty, O’Connor & Dagenhart, (2009) described a need for professional advocacy in high needs rural schools. One frequently recognized purpose of advocacy is to address instructional and educational inequities that impact individuals or groups of students which are frequently maintained by status quo practices which discount or do not address the educational rights and needs of these students (Fennimore, 2007; Holmes & Herrera, 2011; Lovitt, 2010; Peters & Reid, 2009). The need for educator advocacy for culturally linguistically diverse students and students with disabilities is recognized as an important professional responsibility (Ford, Blanchett & Brown, 2006; Gartin, Murcick, Thompson & Dyches, 2002)

Advocacy is recognized as a complex and developmental process. Peters and Reid (2009) describe the foundational knowledge and skills supporting advocacy: self-awareness, and purposeful critical reflection – often cultivated collaboratively through dialogues/texts. Fennimore (2007) described a process of analysis and decision-making framing advocacy decisions and further described critical points in practice where teachers either retain or release a “*resilient and determined sense of advocacy for children*” (p. 294). Purposes and perspectives for educator advocacy may include: (1) policy (law/regulation); (2) families; (3) the individual child; and (4) the profession itself (Fennimore).

While knowledge and skill for teacher advocacy is acquiring clout in professional standards and discussions, this limited review found little research investigating educator advocacy skill development, supports and outcomes related to student learning and teaching effectiveness to guide further discussion. Soul (2005) completed a qualitative study of practicing teachers and advocacy finding differing impacts of power and other contexts impacting teachers' decisions and orientations toward advocacy and exercising power. Additionally, rationale, frameworks and preservice programs which seek to develop the initial advocacy skills of pre-service professionals for diverse students (e.g., Homes & Herrera, 2009; Peters & Reid, 2009), school-based practices utilizing culturally relevant pedagogy to promote social justice (e.g. Esposito & Swain, 2009; Lalas, 2007); and advocacy needs and actions for teacher-librarians (e.g. Kramer & Diekman, 2010) characterize the type of literature garnered in this review.

Effective educators as advocates, *“are both instruments of change and effect change through advocacy”* (Peters & Reid, 2009, p. 556). Current literature and standards promote a progressive role for teachers in advocating for students, learning, teaching and schools. Grymes (2007) endorsed additional support within the field to address this area of teaching effectiveness for the future:

*“For education to continue to be regarded as a profession and for teachers to continue to garner respect from the public, we must help this next generation of teachers develop the skills to advocate for the children they serve, the best practices and approaches known, and for the profession itself”* (para 9).

## **SUMMARY**

Recently a more responsive teaching paradigm has become prominent. In response to changing policies, practices, societal and student needs, a responsive model of teaching effectiveness has developed. This chapter summarized themes of effective teaching surfacing through the professional literature from 1980 to present. This review reveals a period of significant change in conceptions of teaching effectiveness and student learning. Effective teaching is presently characterized by knowledgeable, self-aware and reflective educators who design, differentiate, and implement quality, challenging, and relevant curriculum and instruction for all children. Their instruction and practices are

student-centered, founded on knowledge of learner-centered instructional principles and practices, deep knowledge within the content domains, as well as sound child and adolescent development and contextual knowledge. Responsive teachers collaborate with many stakeholders. They lead and advocate for individual students, diverse groups of students, and quality education and teaching. Effective teachers are engaged in ongoing learning.

Five inter-twined spheres of teaching effectiveness framed this review on effective teaching resulting from the author’s ongoing and current research. These were confirmed by the ITQP research team. Related characteristics or attributes were presented within each sphere. Table 3 summarizes the teaching effectiveness spheres and their associated characteristics. There are notably characteristics which overlap across spheres, supporting the complex yet connected nature of teaching and learning and its cyclical nature of decision-making, interaction, and action. The author developed five anchoring qualities supporting teaching effectiveness that ground larger qualities and concepts across the six spheres of teaching effectiveness. These are described elsewhere (Curran, n.d.).

Responsive teaching has necessitated new roles and responsibilities for teachers. Yet, continued issues and challenges have remained in fully realizing the potential of this model. The next chapter will present a model for consideration in transforming a future for teaching effectiveness and enhanced student learning.

Table 3: Anchoring Qualities and Spheres of Teaching Effectiveness<sup>1</sup>

<b>Anchoring Quality</b>	<b>Spheres of Teaching Effectiveness</b>
<ul style="list-style-type: none"> <li>• Personal</li> </ul>	<ul style="list-style-type: none"> <li>• Dispositions, Self-Awareness, and Self-Efficacy</li> </ul>
<ul style="list-style-type: none"> <li>• Professional</li> </ul>	<ul style="list-style-type: none"> <li>• Developmental and Contextual Knowledge of Learners</li> <li>• Content Knowledge Domains (Content Knowledge, Pedagogical Content Knowledge, Multiple Literacies)</li> </ul>
<ul style="list-style-type: none"> <li>• Passionate</li> </ul>	<ul style="list-style-type: none"> <li>• Responsive Pedagogy and Effective Instruction</li> </ul> <p>1. Crafting Learner Centered Classrooms and</p>

	<p>Instruction</p> <ol style="list-style-type: none"> <li>2. Teaching for Understanding</li> <li>3. Implementing a Rigorous and Meaningful Curriculum</li> <li>4. Elevating Assessment for Learning (Formative Assessment) and Using Balanced Assessment Information</li> <li>5. Synchronizing Differentiated, Responsive Instruction for Learner Differences</li> <li>6. Creating Organized and Well-Designed Learning</li> </ol>
<ul style="list-style-type: none"> <li>• Partnered and Progressive</li> </ul>	<ul style="list-style-type: none"> <li>• Collaboration, Leadership &amp; Advocacy</li> </ul>

(Curran, n.d.)

## Appendix A: Summary of Literature Review Procedures

In order to synthesize information and research on teaching effectiveness for this chapter, a literature review was conducted in three phases. In the first phase, a database search was conducted in Education Resources Information Clearinghouse (ERIC), as well as in electronic education databases available at the author's institution. Primary search terms included *teaching effectiveness*, *effective teaching*, *teacher quality*, and *teachers qualifications*. The initial search pulled documents for preliminary analysis from the mid 1980's to present.

In a second phase, a search of national policy and research documents from national centers including the Center for American Progress; Center on Instruction; National Comprehensive Center for Teacher Quality; Educational Testing Service, as well as organizations supporting the Regional Education Laboratory program also occurred. The search terms listed above were used. However at this stage, the search terms also included terms related to the spheres of teaching effectiveness, primarily those listed in each sphere in the chapter with combinations of other relevant terms. These terms were also subsequently applied in a second search in the databases listed in the first phase of the literature review. At times, the references utilized from key documents suggested additional literature to review and were added to the analysis.

A third phrase utilized a broader search employing an internet Google search to confirm any potential missing or unrepresented areas of key information. Search terms were similar to those utilized in phase one and phase two. References from articles accessed when deemed essential were also reviewed. Finally, the review included use and integration of the Iowa Department of Education's Characteristics of Effective Instruction (2009) within the Responsive Pedagogy and Effective Instruction sphere of teaching effectiveness.

Overall, articles selected were primarily those that were research-supported, frequently referenced literature, influential works, as well as those proposing policy and teacher standards and practices. Given varying conceptions of teaching effectiveness, the review was intended to be broad in scope. This review does not propose to be exhaustive and was based upon this author's selection of literature. The overall intent was to select

key research or literature characterizing major general bodies of research/information on teaching effectiveness. Naturally, specific research in distinctive areas of teaching (e.g. special education, bilingual education, mathematical education, etc.) is not substantively included. However, the author did strive to access articles within various disciplines and specialties throughout the review to support comprehensive application of information more broadly for teaching effectiveness. The author acknowledges this review as one that was more open-ended, thematic, and holistic seeking to integrate areas of information across teaching effectiveness.

## Appendix B: Selected Pedagogical Frameworks for Promoting Effective Learning and Teaching

Framework	Description	Key Elements	Reference
<p><i>How People Learn: Brain, Mind Experience and School</i></p> <p>Design of Learning Environments</p>	<ul style="list-style-type: none"> <li>• New research on learning supports rethinking “<i>what is taught</i>”; “<i>how it is taught</i>”; and “<i>how it is assessed</i>.”</li> <li>• Environments are important “in the processes of learning, transfer and competent performance. Those processes...are affected by the degree to which learning environments are student-centered, knowledge centered, assessment centered and community centered.” (p. xvi)</li> </ul>	<p><u><i>Learner-Centered Environments</i></u></p> <ul style="list-style-type: none"> <li>• Address the knowledge skill, attitudes, interests, &amp; beliefs learners bring to the classroom</li> <li>• Support students’ unique cultures</li> <li>• Address student prior misconceptions about concepts</li> <li>• Respect, assess &amp; utilize prior learning experiences in learning</li> <li>• Use discourse to support learning. Includes use of social language with academic language</li> <li>• Use learners’ experiences &amp; understandings as bridges to new understanding</li> </ul> <p><u><i>Knowledge Centered Environments</i></u></p> <ul style="list-style-type: none"> <li>• Support learning that leads to understanding &amp; transfer of knowledge</li> <li>• Focus on information that develops an integrated, connected understanding of the discipline</li> <li>• Address big ideas to organize curriculum &amp; build deeper understanding</li> <li>• Support &amp; assists students in personalizing meaning through metacognitive learning</li> <li>• Provide for coherent and long-term structures for building understanding &amp; generalization of knowledge</li> <li>• Strike a balance between activities promoting understanding &amp; automaticity of skills</li> </ul> <p><u><i>Assessment Centered Environments</i></u></p> <ul style="list-style-type: none"> <li>• Provide continuous opportunities for feedback &amp; revision congruent with learning goals</li> <li>• Use formative assessment to improve teaching &amp; learning &amp; increase transfer</li> <li>• Create assessments that make thinking visible</li> <li>• Focus on understanding, past rote memorization of procedures or facts</li> <li>• Build skill in self-assessment &amp; utilize collaborative</li> </ul>	<p>National Research Council (Bransford, Brown &amp; Cocking, 1999)</p>

		<p>peer-assessment to support learning &amp; understanding</p> <ul style="list-style-type: none"> <li>• Support metacognitive learning</li> <li>• Align formative assessments (along with summative) with state and national assessments in support of student understanding &amp; learning.</li> </ul> <p><u>Community Centered Environments</u></p> <ul style="list-style-type: none"> <li>• Create community within the classroom &amp; connect learning to a larger community within the school, home &amp; communities (local, regional, national, world)</li> <li>• Promote social norms that honor learning, and willingness to take learning risks, ask questions and provide freedom to make mistakes</li> </ul>	
<p><i>How Children Learn</i></p> <p>A Framework for the Design of Curriculum and Instruction</p>	<ul style="list-style-type: none"> <li>• Brief research synthesis of information integrated from several areas of psychology (educational, cognitive, developmental, social &amp; clinical) about how children learn to provide “a comprehensive framework for the design of curriculum and instruction...found behind a number of innovative programmes across the world today.” (p. 6).</li> </ul>	<ul style="list-style-type: none"> <li>• Use active involvement structures/activities</li> <li>• Utilize social participation in learning</li> <li>• Create meaningful activities</li> <li>• Relate information to prior knowledge</li> <li>• Promote strategic knowledge and learning</li> <li>• Engage and promote self-regulation and reflection</li> <li>• Assist students in Restructuring prior knowledge</li> <li>• Aim toward understanding rather than memorization</li> <li>• Help students learn to transfer</li> <li>• Allow time to practice new understanding and skills</li> <li>• Provide for developmental &amp; individual differences</li> <li>• Create motivated learners</li> </ul>	<p>International Bureau of Education (IBE) &amp; The International Academy of Education (IAE) (Vosnaidou, 2001)</p> <p>(See <a href="http://www.ibe.unesco.org/en/services/online-materials/publications/educational-practices.html">http://www.ibe.unesco.org/en/services/online-materials/publications/educational-practices.html</a> for additional syntheses of research-based effective teaching and educational practices)</p>
<p><i>Understanding by Design (UbD)</i></p> <p>A Framework for Curricular Design</p>	<ul style="list-style-type: none"> <li>• UbD is a conceptual framework of curriculum design (backward planning), teaching and assessment that promotes improved and deeper student understanding through selection of “big ideas” or essential questions and utilization of six facets</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize 3 Stages to design meaningful curriculum in a backward design process (desired results, acceptable evidence; planned learning experiences and instruction)</li> <li>• Identify essential questions or big ideas that serve as focal points for organizing curriculum &amp; assist student in building purpose and meaning</li> </ul>	<p>(McTighe &amp; Seif, 2003)</p> <p>(Wiggins &amp; McTighe, 2005)</p> <p>(See McTighe &amp; Seif, 2003 for a summary of</p>



	<p>of understanding demonstrated through student performances.</p> <ul style="list-style-type: none"> <li>UbD is “a framework for improving student achievement through standards-driven curriculum development, instructional design, assessment and professional development” (McTighe &amp; Seif, 2003, p. 1)</li> </ul>	<ul style="list-style-type: none"> <li>Center on student inquiry and transfer of learning</li> <li>Build connections among facts, skills and concepts</li> <li>Design assessments that determine the extent of the students’ understanding, knowledge and skills</li> <li>Address any student misunderstandings that may interfere with learning</li> <li>Use student, prior experiences and culture within instruction</li> <li>Employ the 6 facets of understanding for demonstration of understanding: explanation, interpretation, application, perspective, empathy and self-knowledge.</li> <li>Use culminating performance-based projects.</li> </ul>	<p>research supporting the UbD framework)</p>
<p><i>Teaching for Understanding (TFU)</i></p> <p>A framework to guide effective teaching that supports deep understanding and improved student learning</p>	<ul style="list-style-type: none"> <li>TFU is a framework developed to guide educational practices in developing deeper student understanding of concepts for improved achievement and learning outcomes. It is described as a tool to design, revise, and review curriculum and instruction that helps students develop deep understanding</li> <li>TFU originated through initial collaborative research conducted with researchers from the Harvard Graduate School of Education and practicing educators (1989-1996) and has been further refined and utilized in varied contents, schools and countries.</li> <li>A body of research has been published describing, and supporting positive outcomes from the original as well as ongoing studies.</li> </ul>	<p>The framework centers around four key concepts in the design of a topic or course to support teaching for understanding:</p> <ul style="list-style-type: none"> <li><i>Generative Topics</i>: Identification of essential topics from the discipline that are central to the discipline, accessible and engaging to students, richly connected to real-life experience, and support integration or connections of diverse topics within and outside the discipline. Learning is generative when it is focused on central concepts, has topics that are personally meaningful, uses active student engagement and inculcates an atmosphere of inquiry. Addresses: “What shall we teach?”</li> <li><i>Understanding Goals</i>. Identification of goals pinpointing essential understandings to provide focus for instruction. The goals are clearly articulated to students and teachers, publicly posted, and referred to throughout instruction. The goals aim for understanding of complexity. Addresses “What should students learn about these topics?”</li> <li><i>Understanding Performances</i>. Specification of “performances of understanding” where students build and demonstrate understanding of matter through thought-provoking and demanding performances involving, explaining, finding</li> </ul>	<p>ALPS: Teaching for Understanding- Putting Understanding Up Front, n.d.)</p> <p>Blythe, 1998</p> <p>Brandt, 1993</p> <p>Higley &amp; Murphy, 2010</p> <p>Perkins &amp; Blythe, 1994</p>

		<p>evidence and examples, applying, analogizing, and representing the topic in a new way. These performances engage students actively in learning while they develop real and deep understanding. Addresses, “<i>What will students do to learn?</i>”</p> <ul style="list-style-type: none"> <li>• <u>Ongoing Assessment</u>. Creation and co-creation of ongoing formative assessment opportunities with establish criteria and continual opportunities for reflection throughout instruction (beginning to end). This encompasses varied feedback mechanisms including teacher and peer feedback, as well as self-evaluation. Criteria are public, feedback is regular, and frequent reflection is evident throughout learning.</li> <li>• The four TFU elements interact and engage students through an interactive learning community between student(s) and the teacher where deep understanding of topics is constructed and students are able to use knowledge in new ways.</li> </ul>	
<p><i>Authentic Intellectual Work (AIW)</i></p> <p>Original Research From:</p> <p>Chicago Consortium for Chicago School Research</p>	<ul style="list-style-type: none"> <li>• The AIW framework establishes standards that: (1) maximize expectations of intellectual rigor for all students; (2) increase student interest in their academic work; (3) promote teacher’s taking time for in-depth vs. superficial understanding of content; (4) provide for a common conception of students’ intellectual work; and (5) provide students with skills to navigate complex intellectual challenges presented in work, civic participation and personal affairs (Newmann, et al., 2007, p. vii)</li> <li>• AIW “<i>involves original application of knowledge and skills, rather than just routine use of facts and procedures. It</i></li> </ul>	<p>Criteria and Standards for AIW:</p> <ul style="list-style-type: none"> <li>• <u>Construction of Knowledge</u>: <ul style="list-style-type: none"> <li>○ <u>Instruction</u>: Promote Higher Order Thinking</li> <li>○ <u>Assignments</u>: Involve Construction of Knowledge</li> <li>○ <u>Student Work</u>: Center on Analysis</li> </ul> </li> <li>• <u>Disciplined Inquiry</u>: <ul style="list-style-type: none"> <li>○ <u>Instruction</u>: Focus on Depth of Knowledge &amp; Student Understanding; Use Substantive Conversation</li> <li>○ <u>Assignments</u>: Incorporate Elaborated Written Communication</li> <li>○ <u>Student Work</u>: Extends Disciplinary Concepts</li> </ul> </li> <li>• <u>Value Beyond School</u>: <ul style="list-style-type: none"> <li>○ <u>Instruction</u>: Provides Connection to the Real World</li> </ul> </li> </ul>	<p>Bryk, Nagaoka, &amp; Newmann, 2000</p> <p>King, Newmann, Carmichael, 2009</p> <p>Newmann, Bryk &amp; Nagaoka, 2001</p> <p>Newmann, King &amp; Carmichael, 2007</p> <p>Newmann, Lopez &amp; Byrk, 1998</p>

	<p><i>also entails careful study of the details of a particular topic or problems and results in a product or presentation that has meaning beyond school/” (</i></p> <ul style="list-style-type: none"> <li>• Research on AIW is well-established (e.g., see Newmann, et al., 2007; Newmann, Bryk &amp; Nagaoka, 2001) with results demonstrating higher achievement by those students who experienced authentic instruction and assessment</li> </ul>	<ul style="list-style-type: none"> <li>○ <u>Assignments</u>: Connect to Students’ Lives</li> </ul>	
<p><i>High Schools That Work (HSTW)</i></p> <p>Southern Regional Education Board (SREB)</p>	<ul style="list-style-type: none"> <li>• <i>HSTW is a school improvement initiative of SREB including more than 1200 high schools. HSTW supports high expectations and continuous school improvement.</i></li> <li>• <i>Improved school achievement and outcomes in these schools has been reported</i></li> <li>• <i>The HSTW framework supports integrated academic &amp; vocational education, along with research-proven instructional strategies.</i></li> <li>• <i>The goal is for students to master complex academic and technical skills in supportive environments.</i></li> <li>• <i>HSTW supports rigorous curriculum content, with increased responsibilities for learning and enhanced relevance for students. (Bottoms, 2006, p. 2).</i></li> </ul>	<ul style="list-style-type: none"> <li>• <u>High Expectations</u>: Use high expectations by integrating high expectations into classrooms practices and providing frequent feedback.</li> <li>• <u>Challenging Program of Study</u>: Require each student to complete an upgraded academic core and an academic or career concentration.</li> <li>• <u>Meaningful Academic Studies</u>: Teach more students concepts of the college preparation curriculum by encouraging them to apply academic content to real-world problems and projects.</li> <li>• <u>Career and Technical Studies</u>: Promote more students access to intellectually challenging career/technical studies that emphasize higher order thinking and academic problem solving skills, including technology integration and application</li> <li>• <u>Work-based Learning</u>. Enable students and parents to design programs that integrate challenging high school studies and work-based learning for future success</li> <li>• <u>Teachers Working Together</u>: Provide cross disciplinary teams and provide for teacher time and support to work together</li> <li>• <u>Students Actively Engaged</u>. Engage student in rigorous and challenging proficient level assignments using research –based instructional strategies and technology.</li> <li>• <u>Guidance</u>: Engage students and their parents in a</li> </ul>	<p>SREB, 2011</p> <p>Bottoms, 2011</p> <p>Bottoms, Han &amp; Young, 2011</p> <p>Bottoms, Young &amp; Han, 2009</p> <p>SREB, 2009; 2011</p>

		<p>guidance and advisement system that develops positive relationship and helps them plan for their future.</p> <ul style="list-style-type: none"><li>• <i>Extra Help</i>: Provide a structure system of extra assistance to assist students....</li><li>• <i>Culture of Continuous Improvement</i>: Use data continually to improve school culture, organization, management curriculum, instruction, and student learning.</li></ul>	
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**Future Qualities: Transformational**  
**The Context for Next Generation Schools**  
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At no time in the history of education has major change in PK-12 schools been more needed and possible than it is today. There is significant debate in educational circles about what 21<sup>st</sup> century schools should look like. Some question if educators understand the imperative for educational reform as many of today's educators have lived in a world where failed educational fads have come and gone while leaving the system basically unchanged and functioning as it has for decades. Schools are preparing students to work jobs that are fast disappearing from the American economy (Wagner, 2008). It is clear through the writings of current futurists and scholars that there must be a sense of urgency for changing learning environments to reflect the rapidly changing global context. There is a disconnect between the skills students acquire in the current educational system and the skills students will need for success in tomorrow's communities (National Center on Education and the Economy (NCEE), 2007)

The environment for the next generation of learners will host an increasingly diverse student population, prepare students for jobs that are yet to be created in a technologically rich global environment, and engage students in an individualized learning experience. (Friedman, 2005; SIIA, 2010). Miller described the expectations for this future generation of learners, "The members of the next generation of Americans will need to graduate from high school ready to compete in a world of rapid globalization, burgeoning technological innovations, and changing labor markets. They will need to be informed citizens in a complex world" (Miller, 2009, p.1).

Pockets of schools have arisen around the country embracing bold new approaches to teaching and learning. Herein, these schools will be referred to as "next generation" or "transformed" schools. In order to prepare teachers for next generation schools, teacher education and professional development for in-service

educators must evolve to keep pace with the change. Not only is the goal to prepare future teachers to be successful but also that each teacher should be empowered to be a change agent in these transformed schools.

In striving to prepare teachers equipped to thrive and lead the evolution of next generation schools, it is important to provide a glimpse into the context of new learning environments. National and international organizations have emerged, many relatively recently, devoted to catalyzing the transformation of schools. These include The Partnership for 21<sup>st</sup> Century Skills, Knowledge Works-New Tech Schools, The National Education Policy Center, Edutopia, The Alliance for Excellent Education, The Center for Digital Education, The Center for Teaching Quality, The Council of Chief State School Officers, The Association for Supervision and Curriculum Development, The School Redesign Network, High Tech Schools and the Bill and Melinda Gates Foundation. These organizations are steadfast in their commitment to change. Their publications offer a view into a future arrived at through a combination of knowledge, research and intuition. The one belief these organizations share is their commitment to a focus on student-centered, personalized, learning (SIIA, 2010). As schools redefine their missions to ensure the success of the individual student, educators will be developing reconfigured learning environments. Ones which bear little resemblance to the segmented progressions of many of today's schools where "learning" is restricted within the walls of individual classrooms and advancement is reserved for the end of each academic year.

A transformation of schools will necessitate extrapolation of the characteristics of a future population of students. This, in turn, will require the development of a new type of teacher. One key challenge in preparing teachers for next generation schools is highlighted by Berry (2009), he states that one cannot create what one cannot imagine. The teaching imagined is student-centered, driven by new tools, new organizations and new ideals. From the curriculum to the assessment, individual students with individual abilities and individual needs must be at the center of learning (CCSSO, 2010; Edutopia, Partnership for 21<sup>st</sup> Century Skills (P21), 2004; Darling-Hammond, 2010). This requires not only a re-

examination of the characteristics of present K-12 student population, but some speculation about the next generation student as well. The transformed schools will have the student at the center of teaching and learning.

### **Transformed Schools are Student-centered Schools**

Its resistance to change defines the history of education. Schools continue to be defined by discrete classrooms in which discrete disciplines are taught in discrete packages of time. At the end of the school year, students are promoted in mass to the next grade level. This long-standing tradition must cease to exist in next generation schools. Christensen, Horn, and Johnson (2008) described the current educational system's need for change as, "the way it trains teachers, the way it groups students, the way the curriculum is designed, and the way the school buildings are laid out – is designed for standardization – schools need a new system". These schools must be transformative in that educators will begin with the student needs in mind. This new orientation will require the creation of structures and opportunities in which individual student needs serve as the driving force for education.

While students will be addressed as individuals, the next generation of learners will share a collection of common traits and attributes. Students will arrive at school with a new profile of academic, cognitive and social skills requiring teachers to teach much differently (Dede, 2007). They will be media-savvy, multi-taskers with short attention spans who demand authentic and engaging learning opportunities. They will possess educational traits that cause them to gravitate toward collaborative authentic activities, to be comfortable with racial and ethnic diversity, and to experiment and invent. They will prefer to use sound and images to convey content whenever possible (Rodgers, 2006). While students will continue to be very social, at the same time they may be lacking in key social skills (Stuart, 2011). New pedagogies need to be designed that help a new type of learner to attain sophisticated learning outcomes that drive all students to construct new meaning or learning about important issues, problems and topics. These students must gain the habits of mind, the learning skills, and the facility with digital tools necessary to process relevant information and determine what is useful and valid (Costa, 2000).

In the emerging workplace, most students will be required to be able to find, synthesize, and evaluate information from a wide variety of subjects and sources (P21, 2004).

### **Student-centered Schools Focus on Global Citizen Development**

A key factor in transformed, student-centered schools is providing for a new and broad range of needs for next generation students. As educators aim to prepare each student for success, they must broaden their understanding of the principles of human growth and development to include an understanding of the development of students as global citizens. This includes expanding understanding of teaching and learning to include employability, health literacy, civic literacy, financial literacy, individual social and emotional development, reflective thinking, cultural and technological proficiency, and advocacy for sustainable stewardship of the cultures, land, and people (Iowa Core Curriculum (ICC), 2010; ICC, 2011; P21, 2004). This broad range of factors impacting students' development as global citizens redefines how we nurture PK-12 students as well as how educators define their own priorities. The Association for Curriculum Development and Supervision (2007) advocates for a "whole child approach to learning, teaching and community engagement" that redefines a successful learner in a manner consistent with next generation schools. This initiative consistently places students at the center of learning, aligning resources to students' learning differences and advocating for a more balanced approach to teaching and learning that goes well beyond the present state of education's focus on content knowledge. The social and emotional development of each student will become even more paramount. Student-centered learning environments will broaden their focus to ensure students are healthy, safe, engaged, supported and challenged (ASCD, 2007, and Noddings, 2005). Thus the age-old parameters of the principles of human growth and development must expand considerably to include advocacy for a broader range of principles required for global citizen development.

This new understanding of not only students, but of educators as global citizens, is complex and is changing everything about the way people work, communicate, and ultimately live (Friedman, 2007). Global citizen development has



implications for the development of school culture, the types of learning opportunities created for students and the very nature of teaching and learning. Deliberate and concerted energy must be devoted to increasing the understanding of both students and teachers within this connected world. The concept of each individual student's social identity as a significant member of larger community must be intentionally addressed in next generation schools. Schools should nurture an ethic of caring for individuals, cultures and the environment among our future high school graduates. The process begins with knowing students as individuals and this, in turn, is dependent of structuring an environment in which personal relations are valued and nurtured as a foundation on which schools are based (ASCD, 2007).

### **Rapidly Changing Content in Concert with Global Literacies**

Knowledge is expanding at an exponential rate that makes it impractical to continue to focus education on the transmission of discrete pieces of knowledge (Darling-Hammond, 2010). If teaching and learning continue to be shaped by state and national content standards, those standards must quickly evolve to become increasingly focused on multiple literacies that combine knowledge and skills. These universal literacies include problem solving, curiosity, creativity, innovation, complex communication, interpersonal skills, and the ability to synthesize across disciplines, ethics, and technological expertise (CCSSO, 2009; ICC, 2010). Access to information will be essentially unlimited, making the use of static textbooks obsolete. In addition, a more robust type of learning emerges as a result of this rapidly changing content; one that relies heavily upon technology (Hill, 2010). Darling-Hammond (2010) insists that "schools must begin to teach disciplinary knowledge in ways that focus on central concepts and help students learn to think critically and learn for themselves, so they can use knowledge in new situations and manage the demands of changing information, technologies, jobs and social conditions" (p. 4). Next generation schools must combine the learning of knowledge with 21<sup>st</sup> century skills, and in Iowa Universal Constructs, to produce a reconfiguration of both what and how students learn. This, in turn, will necessitate

a complete overhaul of our assessment systems to one less focused on measuring discrete pieces of content knowledge.

### **Teaching and Learning Redefined**

The new student profile will require a different kind of teacher. Teachers in next generation schools must be able to design personalized experiences and environments for each student's diverse learning strengths and needs. Furthermore, the successful next generation teacher must be skilled at using a variety of approaches to tailor instruction to the individual learner. This individualized tailoring encompasses designing project-based learning experiences, creating technology-supported curriculums, and relevant activity-based learning. Students will desire learning experiences that are engaging, teachers will respond by constructing authentic student-centered learning experiences so that they can teach to each and every learner's difference. These authentic learning experiences must be rich in terms of providing students with rigorous intellectual challenges and accompanying high expectations. Authentic intellectual teaching and learning will be evident through extensive teacher discourse that results in high level learning activities and assessments that mirror real-life experiences (Newmann, et. al, 2009; Iowa Core Curriculum, 2010). Next generation teachers must be skilled at melding the teaching of knowledge and skills to help students achieve deep understanding (Darling Hammond, 2010; ICC, 2010). They must be motivated to and skilled in creating opportunities that allow students to take charge of their own learning and to do this in creative ways (Hill, et. al, 2010). This will necessitate teachers who are comfortable and confident using technology-rich systems for creating learning experiences, and for tracking and supporting student progress. Additionally, next generation teachers need the dispositions and the skills to go well beyond meeting students' academic needs. They should model lifelong learning, creativity, and flexibility, showing students how to embrace change by immersing themselves in a quest for change. They must be deeply committed to the whole child and in turn preparing well-rounded students able to meet the demands of a rapidly changing world (ASCD, 2007).

The next generation teachers will not only create their own curriculum, they will utilize authentic assessment of performance that reflects the way knowledge is used in the real world (Darling-Hammond, 2010; Newmann, 2009). They will move assessment from regurgitation of memorized facts with a focus on a single standardized test and other disconnected processes to demonstration of understanding through application in a variety of contexts. This will result in complex and balanced systems of assessment for learning, incorporating multiple measures including ongoing formative assessments and performance-based summative assessments. Assessments will be focused on growth, immediate feedback and individual needs (Hill, et. al, 2010, ICC, 2010). The roles of real-world audiences and self-assessment will play an important part in the assessment process (21<sup>st</sup> Century Schools, 2010). Assessment of 21<sup>st</sup> century skills such as critical thinking, collaboration and work ethic will become increasingly important. Such authentic assessments will, in turn, encourage the teaching and learning of higher order thinking skills (Newmann, et. al, 2009) resulting in new curriculum that is both rigorous and relevant (ICC, 2010).

### **Context of Schools Reformulated**

Not only must teachers have a new set of skills, but also schools must be configured differently as well. Personalized learning models are essentially the reverse of the traditional model that views learning time and place as the constant and achievement as the variable. In next generation schools, personalized learning will ensure all students gain proficiency independent of time, place, and pace of learning (CCSSO, 2010). Technology assisted systems will allow students to access learning everywhere at anytime, not all of which will occur within the four walls of a school building (CCSSO, 2010; Berry & Wieder, 2010). This flexible anytime, anywhere access will maximize learning for each student. As student-centered learning environments are created, the focus will change from standardized delivery to large groups of students to one of individualization to ensure success for each student. In such a personalized system, each student will have teachers who have the opportunity to observe their unique gifts and interests and can connect their learning to these individual attributes (Dede, 2007; ASCD, 2007). This system will

necessitate a restructuring of the learning environment to enable teachers the opportunity to know and reach each student, to teach to worthwhile learning goals that go beyond content knowledge, and use technologically-rich, productive tools and materials to continually improve their practice. The redesigned learning environment will support more intensive learning for both students and teachers (Darling-Hammond, 2010). It must not only look different from the place currently called school, it must be fundamentally different. Educators must focus their efforts to develop a reconfigured learning environment. Traditional classroom walls should be expanded with virtual connections, just in time and differentiated learning can replace ringing bells that tell groups of students when and where to move. This redefinition will fully capitalize on multiple ways of learning in multiple contexts. It will result in the creation of customized opportunities for personalized student learning that can occur anytime and anywhere, in a transformation supported heavily by technology, and a redefinition of how we measure success.

### **Leadership Transformed**

Next generation teachers will redefine leadership, constantly modeling their initiative and collaboration skills to their students. Their influence will extend well beyond their classrooms to their school, their community and beyond (Danielson, 2006). They will advocate for their students and for their profession (Teacher Leadership Exploratory Consortium, 2010). These teachers will have a keen ability to see the “big picture” and focus their efforts on how they can help improve the school as a whole (Thompson, 2010). This will necessitate that they emerge from isolated classrooms to create and embrace a new learning environment. Teachers will take a more active role in their own continuous professional development, embracing the concept of anytime, anywhere learning. Just as the next generation teacher will work to help students become discriminating consumers of information, as teacher-leaders they will use these skills to continue to learn and develop the best ways to help each student to reach their potential. Doing so through significant and constant interaction with colleagues in a fashion that melds collaboration with self-reflection to create effective teams of educators who are creative problem-solvers, each member bring their expertise to the challenges at hand.

If the aim of education is to prepare students to become well-rounded individuals who make positive contributions to the global society, the next generation teachers must be well-rounded, active contributors as well. They should have the skills and dispositions to constantly advocate for student learning and for advancement of the profession (Teacher Leader Exploratory Consortium, 2010). Examining characteristics of next generation schools results in a vision for a transformed educational system dominated by a student-centered learning environment in which the role of the teacher leadership is redefined. In this future view, many of the skills and dispositions of student and teacher become blended as the role of the teacher evolves to become mentor, facilitator, collaborator, innovator and advocate. Teacher knowledge of the principles of human growth and development will expand to encompass views of students as global citizens with complex needs and perspectives. This global citizen development will be concerned with not only the social and emotional development of students, but healthy lifestyles, sustainability, social justice, cultural proficiency and social identity (Oxfam, 2006)

Teachers will expand their sphere of influence as they become both leader and advocate for change designed to enhance the development of well-rounded individuals equipped with the knowledge, dispositions and skills to impact change as citizens. Basic content standards will be redefined to reflect the rapidly changing nature of content and the importance of teaching and assessing complex thinking skills. This change will impact both teaching and learning, highlighting the necessity of employing multiple ways of learning in multiple contexts. From these new perspectives will emerge the Next Generation Teacher Development Systems, consisting of a transformed teacher education and professional development programs equipped to prepare teachers who will be leaders for the new brand of students in a new brand of school.

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