Why Pedagogy Matters: The Importance of Teaching In A Standards-Based Environment

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Abstract

The goal of the standards movement has been to improve student outcomes for all children regardless of their backgrounds or risk factors. The focus has primarily been on the instructional, program or performance standards. Paramount importance has been placed on what children will do to demonstrate that they have learned. While important, there is another ingredient in achieving positive student outcomes. What teachers do and how they do it is critically important and has a profound impact on the quality of the educational experience for children. This paper presents the seminal work of the Center For Research On Education, Diversity and Excellence (CREDE), one of the twelve federally funded research centers on education. Its findings, summarized in five critical elements of effective pedagogy, demonstrate that when consistently implemented the result is greater student outcomes across the curriculum regardless of age, and higher academic test scores regardless of the student population. Application in early childhood education settings is also discussed.

Pedagogy: The Science Of Teaching

 Word Origin--Greek: *Paidagogas*
paidos—a boy
a gogos-leader
agein-to lead

> *In Ancient Greece a* paidagogos *was a trusted slave who accompanied a child to his classes, ensured his good behavior in public, cared for his needs and tutored him with his homework.*

Introduction

Teaching and learning are complex processes. Throughout history, society has looked for better ways to educate children. Americans are still struggling with that fundamental issue, particularly in light of our diverse population and the rapid rate of technological change. The editors of Time magazine featured this challenge with a recent cover entitled *How To Build A Student For the 21st Century* (Wallis & Steptoe, 2006).

Educators and researchers at The Center For Research on Education, Diversity and Excellence (CREDE) have examined the processes of teaching. The research focus of this federally funded research and development program has been the improvement in the quality of education for all

students, particularly for those at risk for educational failure due to language or cultural barriers, race, geographic location, or poverty.   CREDE findings, the culmination of thirty years of research, are conclusive and compelling. They speak to the importance of pedagogy in general and in particular to the pivotal role of the teacher. These findings also underscore the importance of the instructional structure. Solid teaching practices are important for all children, but they are essential if vulnerable learners are to achieve positive learning outcomes. By focusing on pedagogical practices that work with the most challenging and vulnerable students, it is possible to identify the critical elements of teaching that results in successful for all children.

The CREDE research is useful in the context of school reform, which emphasizes improving student outcomes. Articulating desired outcomes, setting benchmarks and establishing various types of standards are important steps in designing a quality educational program, but they are not enough. To achieve the desired results, particularly with the most challenging students, the teaching process itself needs to be examined. Not to do so creates two problems. It leaves open the question of how educators are to reach the lofty goal of educating all children and it implies that all forms of pedagogy are equally viable. How a teacher approaches instruction is an important area of inquiry, particularly how she chooses to interact with learners, structure the classroom and deliver the content. Each teacher has a vast array of pedagogical approaches and teaching techniques from which to choose, but it is clear that they are not equally effective in producing positive student outcomes.   CREDE research provides the classroom teacher with a conceptual framework for making decisions on pedagogy. Since learning is an active process rather than something that is done to the learner, a brief discussion of early learning may provide a useful context for the CREDE research findings.

The Foundation: Relationships

Infants are born into social context. In fact, without the physical care provided by another human being, the newborn wouldn't survive. From the moment of birth, learning has a social dimension. Mother feeds the baby and teaches the skill of joint attention by interacting and responding to the infant. Even self-exploration, such as the discovery of the thumb or of gravity (in the form of a dropped rattle) is often accompanied by an askance look to see if the caregiver has noticed. "As people (adults and children) act and talk together, minds are under constant construction, particularly for the novice and the young." (Tharp et al, 2000, 44).

The role of a caring and more knowledgeable person in helping a child learn new skills and concepts does not diminish as the child matures. While caregivers, teachers and even older children eventually join parents in the responsibility for these critical interactions with the child, the central role these interactions play in the process of learning remains the same (Vygotsky, 1978; Shankoff, 2000; Berk & Winsler, 1995).   It was described by CREDE researchers in *Teaching Transformed* (Tharp, et al. 2000, 45) as follows:

> "So even the higher order functions—language, attention, memory, concepts, the will, values, perceptions, and problem-solving routines—all have their origins in social interactions. Each begins as a way of acting and talking among people. Each is 'internalized' or 'appropriated' and thus becomes a way of interpreting the world and of thinking that guides an individuals' future actions. The social interactions of early childhood become the mind of the child. Parent-child interactions are transformed into

the ways the developing child thinks, as are interactions with siblings, teachers, and friends…... This is true not only for early childhood; it is true for learning at every age and stage…..In schools, then, dedicated to the transformation of minds through teaching and learning, the social processes by which minds are created must be understood as the very stuff of education."

The nature and quality of the social and emotional interactions between teacher and students is therefore central to any discussion of quality education.

One obligation of citizens in society is to plan for the future. That planning takes root early when the topic is children. Loving parents and other caring adults in a child's life have plans aspirations for the newborn. Most hope to have a baby who is healthy and happy, and who will eventually become a caring and productive person with friends and who is *successful."* These are desired outcomes. The basics of this equation do not change greatly as the child grows from an infant, to a toddler, through the preschool years and then into the larger worlds of school and community. Those elements are also present in society's goals for its youngest citizens, and they are ultimately reflected in its directives to educators and the standards set for schools. As with the newborn, dependent on others for its very existence, it is through relationships that teachers help students to master the skills and knowledge necessary for positive long-term outcomes.

Standards and Outcomes

The field of education has become controversial, awash in discussions of school reform and of *standards*. Few topics have stirred more emotions (NSF, 1999). Education reform and the

standards movement have focused primarily on K-12 public schools. It grew out of concern from the public and from policy makers that America's education system was not adequately preparing all of its students for the challenges of our rapidly changing world (Seefeldt, 2005; U.S. Department Of Education, 1983). The underlying premise was that the application of higher expectations would provide a set of basic expectations for programs to help all students reach a higher level of achievement (NCR, 2001; Seefeldt, 2005). The form those expectations took became known as *standards* and were tied to evaluation to measure educational outcomes.

One force propelling current efforts at educational reform was the publication of *A Nation At Risk* (U.S. Department Of Education, 1983), which assessed the state of American public education. The National Education Goals Panel in 1991 continued that dialog, articulating the worthy goal-- which was later embodied in legislation--to "provide a national framework for education reform and promote systemic changes needed to ensure equitable educational opportunities and high levels of educational achievement for all students." (NEGP, 1991).

An articulated set of expectations for improved educational outcomes in the structure of uniform *standards* could serve an added function in our highly mobile society. A National Science Foundation study found that almost a third of students move two or more times during elementary school, which resulted in inappropriate placement for many of these children at their new school, and a lack of continuity in instructional content from one school to another. Children from low-income families, ethnic minorities, and children reared in single-parent or "other family situation homes" were more likely to have changed schools multiple times. That report suggested that instructional content aligned to larger educational outcomes would provide

some measure of consistence from school to school, helping to prevent mobile students from falling through the educational cracks (NSF, 1999).

Early Childhood Education And Educational Reform

The field of early childhood education was fortunate to have avoided much of the tumult that surrounded school reform, the adoption of standards and the implementation of standards-based instruction in public education through the turn of the century. By 2003, however, reform had come to early childhood educators and thirty states had developed learning standards for young children (Kagan, et al, 2003). By 2006, forty-three states had developed content standard for four-year-olds (Strickland & Ayers, 2006). It is clear that standards will be a part of early childhood education. The challenge for early childhood educators is to find ways to blend these standards with what they know about quality programming, the central role of relationships in learning, developmentally appropriate practice, and the most recent research on effective teaching and learning. The National Association For The Education Of Young Children published a position statement entitled *Early Learning Standards,* which states the following:

> "By defining the desired content and outcomes of young children's education, early learning standards can lead to greater opportunities for positive development and learning in these years." (NAEYC, 2002, 1).

> "In creating early learning standards, states and professional organizations must answer the "***so what?***" question: "What difference will this particular expectation make in children's lives?" This is the *issue of meaningfulness.* Those standards that

focus on the *big ideas* within domains or academic disciplines appear better able to

support strong curriculum, high-quality assessments, and positive results for children."

(NAEYC, 2002, 6).

Ultimately, finding a way to make educational opportunities truly available and appropriate for

all youngsters in programs that are accountable for outcomes will be beneficial. Just as it is

useful to know where one wants to go when a planning a trip, it is important for the teacher to

have a clear idea of what she wants individual students and the class as a whole to accomplish

over a given period of time. Having a destination in mind allows the traveler to chart an

effective route and the teacher to form reasoned plans.   Without a clear end point in mind, an

awareness of the lay of the land, and an understanding of the primary route, it is difficult for the

traveler to make mid-course corrections when detours become necessary. Similarly, when a

child's learning is off course, it is the responsibility of the teacher to know that the child is off

course and to make the needed adjustments in instruction to help the struggling student

understand and learn. This is one way in which standards in early childhood education can make

a meaningful difference in children's lives and learning.

A Closer Look At Standards

One challenge in dealing with the term *standard* is its multiple meanings.   A traditional

definition is as *a flag or military symbol on a pole, a rallying point that marks the way.*

Another definition is *a defined level of excellence or adequacy required, aimed at or possible*

(Agnes, 2004).   Evaluation is implicit in this later, more common usage; the need for

comparison against an established level is inherent in that interpretation. It is, in part, the aspect of evaluation that has made standards-based reforms challenging and contentious.

Another difficulty with *standards* is the differing but interrelated types of standards under consideration. Barbara Bowman described four kinds of standards in her 2006 keynote address at the NAEYC 15th National Institute For Early Childhood Professional Development: 1) Learning or Performance Standards refer to what children should know or be able to do. This form of standards represents desired learning outcomes that can be assessed. 2) Content Standards represent the specific knowledge, skills or concepts children need to master in order to reach the desired learning outcomes, and as such guide curriculum. 3) Program Standards define what is needed in the *learning environment* for children to reach their desired outcomes. These may include organization of time, space and materials, groupings, types of activities and credential requirements, which are used to set the structure of programs. 4) Professional Development Standards are generally tied to accreditation and are often used to chart the course for training institutions. They identify the required skills and knowledge teachers need in order to be effective. (Bowman, 2006, 42-43).

The critical question is whether, if taken together, these four types of standards make it possible to reach the desired goal of improved student outcomes for all children. Certainly it is important to identify the desired learning outcomes and specify knowledge and skills that are needed to reach them, to create the proper learning environment and to have teachers trained with specific skills and knowledge work in quality programs. But that may not be enough, particularly with diverse student populations and children most at risk for educational failure (Tharp & Gillimore,

1988; Tharp, 1997; Tharp, et al 2000). A major challenge for educators and the educational reform movement is finding ways to reach these students and to help them to achieve academically. A solution can be found in arena of pedagogy. To leave that area unexamined is to assume that all roles for the teacher, all approaches to teaching and all teaching techniques are equally effective. Recent research from a variety of disciplines, however, indicates that some approaches to teaching yield better outcomes and that the role of pedagogy is critically important to achieving educational goals (Levine 1998; Levine 2002; Jensen, 2000; Tharp et al 2000).

The Importance Of Pedagogy

The critical role of the teacher engaged in the active process of teaching in the classroom may be undervalued in the overall discussion of standards. David Souza made this point in his book, *How The Brain Learns*.

> "As we examine the clues that this [brain] research is yielding about learning, we recognize its importance to the teaching profession. Every day teachers enter their classrooms with lesson plans, experience, and the hope that what they are about to present will be understood, remembered, and useful to their students. The extent that this hope is realized depends largely on the knowledge base that these teachers use in designing those plans and, perhaps more important, on the instructional techniques they select during the lessons. Teachers try to change the human brain every day." (Souza, 2001, 3).

The teacher must have not only a mastery of the content and curriculum, an appreciation of the various forms of standards, an awareness of assessment, and the ability to organize the lessons, but also be able to engage students-- to know them well enough to make appropriate instructional decisions. It is through *pedagogy*, the science of teaching, that the skillful teacher ties these elements together. The ways in which a teacher interacts with students and organizes instruction are critically important aspects of helping each child learn (Tharp, 1999; Tharp et al, 2003).

CREDE Research

CREDE researchers took up the difficult challenge of identifying pedagogical practices that would result in all students reaching their educational potential. They conducted extensive and careful research into the process of teaching, particularly with children at greatest risk for educational failure. Their examination revealed a variety of solid teaching principles that, when implemented systematically in the classroom, resulted in improved educational outcomes regardless of the challenges that students faced (Tharp et al. 2000).

> "All school reform has one final common pathway: instructional activity…......nothing will have any effect on student learning except as it operates through the teaching-and-learning activities at the classroom level….The activities engaged in by teachers and students make up the common pathway that leads to educational success or failure." (Tharp, et al, 2000, 1-2)

The research findings were organized into a set of principles, which were then subjected to rigorous examination over a five-year period by other researchers, professional organizations,

administrators, policy makers, and teachers. Presentations were made to focus groups, conferences, workshops, professional meetings, community forums, professional organization and gatherings of all types (Tharp, 1999). A consensus on the critical role of these principles in the learning process was reached. These principles of effective teaching became known as *The Five Standards of Effective Pedagogy.* This use of the word *standards* evokes the more traditional definition of a flag or military symbol on a pole, serving as a rallying point that marks the way (Agnes, 2004; Tharp et al. 2000, 18.)

During the following five years, more than thirty CREDE funded research projects around the country tested the principles, gathered data and examined models using the Five Standards in a wide variety of settings and geographic locations, ages and grade levels, different subject mater focuses and ethnic populations. The results are clear and conclusive. What teachers do and how they do it matter greatly.

> "These consistent findings from instructional models and programs, and controlled and correlational studies demonstrate a systematic relationship between use of the Standards for Effective Pedagogy and improved student performance across a broad range of outcomes. Taken together, these findings provide strong support for the instructional effectiveness of the Standards for Effective Pedagogy. (Doherty et al, 2003, 1.)

These organizing principles represent a solid core of good teaching practices. No single element will be foreign to an experienced teacher, particularly in early childhood education where language acquisition and social interactions are stressed. When taken together and employed

consistently, however, these teaching practices represent a powerful means of achieving positive student outcomes (Tharp, 1999; Tharp et al, 2003; Doherty et al, 2003).

Standard 1. Joint Productive Activity: Teachers and Students Working Together

Young children have a lot to learn. Throughout history, the most effective way for this learning to occur has been for more experienced individuals to work with novices to produce a common goal. That principle formed the foundation of the apprentice system. It is the way parents teach their children to stick a foot into a pant leg while dressing or to make a bed. It is the way many adults learned computer skills. The more skilled person serves as the *expert,* providing needed assistance so the less experienced individual does not have to struggle alone.

Joint productive activity is another name for this form of "working together" toward a common goal. The key is for the teacher to work along side of students to solve real problems. In the process, the teacher underscores the connection between academic concepts and everyday life, which is basic to the process by which mature thinkers understand the world (Tharp, et all, 2000). This form of mentoring allows the teacher to embed concepts and language into a meaningful activity, which creates a common context in which all participants have a shared understanding upon which to build future learning.

Early childhood educators have an advantage over traditional K-12 teachers in creating joint productive activities. They have a history of organizing their classrooms into learning centers and utilizing small group instruction, such as art activities that require supervision, cooking projects or science experiments. These small groups allow the teacher to observe and listen

carefully to individuals in the group, watch for reactions and note responses that indicate either clarity or confusion and to chart progress. Most importantly, these joint productive activities create opportunities for teachers to have short but frequent and intense interpersonal contact with individual children.

Teachers can facilitate these important opportunities to work together by designing challenging activities with targeted outcomes that require student-teacher collaboration to produce a common end product. To do this, the room, staffing patterns and schedule need to be organized in a way that allows the teacher to devote the needed time to these targeted small group activities. The teacher needs to be aware of the composition of each small group, which may change from activity to activity or remain constant for a period of time. Ability levels, temperaments and learning styles, interests, language skills and even friendships are some of the factors that teachers need to consider when organizing these small group activities (CREDE 1).

When engaging in these activities with the small group, the teacher is an active participant. She might, for example, assume the role of a character reenacting a favorite story, a fellow inquirer in an experiment, or one of the cooks in the kitchen creating snack for the whole class. The teacher facilitates the activity by preparing or managing the needed materials, assisting the group with a difficult or potentially dangerous job, serving as a resource for locating additional information when needed and providing the advanced language and literacy requirements that other members of the group have not yet acquired. Throughout the activity, the teacher monitors the participation of the members of the group, reads their interest and attention levels, encourages

their collaboration and organizes the conclusion of the activity so that each member of the group feels a sense of accomplishment and has contributed to the project, including the clean up.

These intimate times with children offer an opportunity to collect data for portfolios and other assessment and reporting requirements. Because they are process oriented, the teacher is able to photograph or videotape a project as it unfolds to create a visual record for later instructional and documentation uses (Entz & Galarza, 2000; Tharp, et al, 2002).

Standard 2. Developing Language and Literacy Skills Across The Curriculum

Vygotsky (1978) described words as the *tools for thought*. The acquisition of language is so vital to social interaction and to thinking that it deserves a special place in any educational program. Early childhood studies have demonstrated that vocabulary growth and language exposure in early childhood correlate strongly with later academic success (Hart & Risley, 1995). Building on the studies on early language acquisition, CREDE researchers conceptualized Standard 2 as a metagoal, providing an overarching structure for all instruction and interactions throughout the day. Their researchers determined that all forms of language were essential for school success, including social language, subject matter vocabulary and specialized formal academic language. Additionally, children needed to be skillful in a variety of forms of discourse, including listening to and answering questions, asking questions and eventually challenging claims and using oral and written representations to further individual understanding and to function in the classroom community (CREDE, 2).

Students also need to be able to understand and to converse in a variety of academic languages, including the ability to "speak mathematics", "speak science" and "speak literature." (CREDE, 2). Each subject matter has a particular vocabulary and assumes an underlying understanding of concepts such as *big/little, experiment*, and *author.*

CREDE research revealed a variety of ways to facilitate language and literacy learning that are consistent with common early childhood education practices. Listening intently to students talk about familiar topics of home, family and activities in the community is such a common preschool experience that its value can be underestimated. The same holds true for engaging in conversation, responding to children's talk and questions. Other key teacher behaviors that facilitate language and literacy skills emerged from the research: the teacher's responsiveness to students, the ability to make "in-flight" changes to the direction of a conversation based on what the child has said and the teacher's respectfulness for students' speaking preferences (such as wait-time and making eye contact during conversation) (CREDE, 2).

CREDE model programs encourage teachers to make a conscious effort to have students understand and use content vocabulary to express their ideas and to connect oral and written language whenever possible (CREDE, 2). It is particularly important for young children to learn the connection between spoken and written language, and the conventions of reading and writing.

CREDE demonstration programs have also structured the classroom so there are frequent opportunities for students to interact with each other and with the teacher during instructional

activities. This CREDE Standard calls for all teachers to do what early childhood educators have long done to promote language: model, elicit, restate, probe, clarify, question, encourage, reinforce (CREDE, 2).

Standard 3. Contextualization/Making Meaning: Connecting Lessons to Students' Lives

Children, even young children, come to school or daycare with life experiences that form the basis of their skills and knowledge. The focus of this CREDE standard is on the importance of helping children relate the new information they are exposed to in formal educational settings to the conceptual frameworks that they have already constructed. By relating novel ideas to the familiar, teachers are able to help students expand their understanding to include new information.

This CREDE standard encourages the teacher to introduce instruction by referencing what the children already know from home, community, or previous school experiences. They design instructional activities that are meaningful in terms of community norms, knowledge and practices. They look for opportunities to capitalize on the children's families and the community as resources and by finding ways to apply new learning to the home and in the community. Teachers using this standard are sensitive to the communication styles, cultural norms and student preferences within the group. *Making meaning* is at the heart of this pedagogical standard (CREDE, 3).

Standard 4. Cognitive Challenge: Engaging Students with Challenging Lessons

Content standards identify what a teacher needs to cover and what skills students should master. This CREDE standard addresses ways to reach those lofty goals. It is often the case that when not much is expected, not much is produced or achieved. At-risk students, who frequently suffer from the prejudice of low expectations, benefit greatly from working with a teacher who expects them to learn and who positions tasks within their individual zones of proximal development (Vygotsky, 1978; Tharp, et al. 2000; Berk and Winsler, 1995).

Because young children are so inquisitive, the early childhood years are the ideal time to provide this type of support and to encourage youngsters to stretch intellectually. Even very young children benefit when a teacher designs activities that advance their understanding and challenge them to engage in more complex thinking.

The teacher begins the process of engaging students in cognitively challenging tasks by making a concerted effort to understand students' prior knowledge and then by constructing activities based on that knowledge base. Through carefully designed activities, questions and modeling, the teacher helps students learn to analyze, synthesize, apply and evaluate what they are doing. She shows children how to see the relationships between the whole and its parts. She gives clear directions and provides direct feedback about student performances. At all times, the teacher keeps performance standards and desired outcomes in mind when planning and guiding children through these cognitively challenging activities (CREDE, 4).

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Standard 5. Instructional Conversation: Teaching Through Dialog

CREDE research indicates that the most effective way to facilitate language development, help children engage in more complex thinking and achieve the other desired outcomes is through dialogue, questioning and sharing ideas. During these *instructional conversations,* the teacher

focuses her attention on what children are saying, makes guesses about their intended meanings and supports children's efforts at conversation. She adjusts her responses to assist her students' efforts to communicate. The teacher takes every opportunity to help children to see relationships and draw upon their funds of knowledge to relate school activities to community events or their family life.

The teacher who utilizes CREDE principles is acutely aware of the importance of ensuring that all students are included in conversations and have the opportunity to participate according to their individual communication preferences. A climate for conversation is created in which the opinions and contributions of all members of the group are encouraged and valued (CREDE, 5).

CREDE research indicates that a teacher can facilitate high levels of instructional conversations by arranging the classroom and schedule to encourage all types of conversation. For the early childhood educator, these include adult-child, child-child, child-children, parent-teacher and parent-child conversations. The teacher facilitates individual and small group dialogues by utilizing verbal and nonverbal cues, questioning, restating, encouraging and reinforcing efforts to communicate (CREDE, 5). As young children master more language, the teacher encourages higher rates of language production so that children speak more frequently than she does. She listens and responds more often than she speaks, which enables her to carefully assess the child's levels of understanding and respond to the message the child is trying to communicate.

Instructional conversations provide teachers the opportunity to further develop subject matter vocabulary and the language of instruction. Through intense teacher-student interactions and conversations, the teacher guides student participation through questioning and exchanging

ideas, utilizing both speech and writing. These dialogues often appear to be spontaneous, but they are always pointed toward articulated learning objectives (Tharp et all 2000, 32-33). When possible, the teacher helps children to prepare a "product" which demonstrates that instructional goals have been met (CREDE, 5). The product might be a dictated record of the children's thoughts, a presentation to a whole class or parents, a videotape of an activity to share with parents, a post to the classroom website, a photograph with printed description to display in the classroom, or a variety other indicators that learning has occurred (Entz and Galarza, 2000).

Curriculum

CREDE principles work with the vast array of approaches to curriculum available to teachers, with all subject matters and with all age and grade levels. They represent core teaching practices that engage children in the active process of skill acquisition and help them to learn material that they find relevant through a collaborative process that supports all members of the group.

Evaluation

Evaluation is a key component of the standards movement (Darling-Hammond 2004). In early childhood education, there are two main types: (1) evaluation for planning and (2) evaluation for accountability. Evaluation and assessments for planning help teachers identify children's prior knowledge, their preferred learning styles, how well they understand new material and other important information critical to the teaching-learning process. Evaluation for accountability focuses on what the children have learned (Bowman, 2006, 48).

The teacher who develops close relationships with individuals in her class through implementation of the Five Standards is well positioned to understand the learning strengths and challenges of the children with whom she works. She is able to contribute to the comprehensive assessment of each student since she can report on both the learning processes used and on the levels of achievement attained. While formal evaluations are necessary and sometimes useful, the exchanges between the children and their teacher during joint projects are rich in details that provide insight into a child's progress. They also reveal the learning strategies being employed. That information provides much needed balance to more formal evaluations. Dr. Mel Levine, founder of the *All Kinds Of Minds* institute, noted the pivotal role that teachers play in a balanced assessment:

"Teachers have nearly exclusive access to what I call the *observable phenomena*, the windows that offer an unobstructed view into a child's learning mind. Observable phenomena provide insights that are unavailable on the standardized achievement or diagnostic tests commonly used in schools and clinics…. That makes direct well-informed observation indispensable." (Levine, 2002, 310-11).

Using the Five Standards, the teacher is able to comment on a variety of factors critical to student success in the classroom. For example, a teacher who has close and meaningful contact with children over time can comment on each child's *wait time*, or the period of silent time a child needs after a question is posed before responding. Typically, elementary teachers waited an average of three seconds (Souza, 2001,128). Frequently, children at risk are able to answer the

question but are *slow retrievers* (Souza, 2001, 128; Levine, 2002). When a teacher is aware of the time a child needs to organize a response and then provides that time, the quality of the student's responses goes up. Additionally, the child participates more often and gives higher quality responses (Souza, 2001, 128). An increased awareness of the learning process is the essence of the on-going *assess-assist cycle* inherent in Five Standards teaching (Tharp, et al , 2000). This aspect of assessment is a necessary complement to more formal evaluation for young children.

CREDE Findings

Teachers have an astonishing variety of educational materials, practices and procedures from which to choose. Most are effective with some children some of the time. Some are more effective than others. A few work with all children. CREDE research has identified several key practices that have been organized into five elements which, when taken together and used consistently are effective with all students and result in higher student outcomes. These results are achieved even with students at greatest risk for educational failure (Tharp, 1999; Tharp, et all 2003). CREDE principles are certainly not the only good teaching practice and "are not intended to represent the full spectrum of complex tasks that comprise teaching". (Tharp, 2003, 1). They do, however, provide teachers with a conceptual framework around which to organize effective teaching. This research also underscores in dramatic fashion that what a teacher does in the classroom with children matters a great deal and is ultimately the vehicle for achieving success for all students.

The issue of meaningfulness of learning standards that was raised in the NAEYC position statement on standards is relevant to the standards of pedagogy as well. The question posed was a simple but important one: *What difference will it make in children's lives?* (NAEYC, 2002). The difference that standards of effective pedagogy can make in a child's life can be as great as the difference between success and failure in school and in life.

Stephanie Stoll Dalton, with the U.S Department of Education and a CREDE researcher, reported the following:

> "In classrooms where teachers practice these [CREDE] standards, even more than academic success can be present. The standards provide opportunities for every student to participate, to receive close teacher attention and interaction, and to live in a classroom where their experiences, ways of speaking, and cultures are respected and included. Students are expected to learn, they expect it of themselves, and most importantly, teachers can assist them to do it by using the standards for pedagogy". (Dalton, 1998, 37).

Barry Rutherford, Principal Investigator with CREDE's Research & Development Schools, noted at the conclusion of a five-year study into CREDE principles that it is " the classroom teacher, ultimately, who has the most significant impact on student achievement." The data collected "provides solid evidence that student achievement is higher in classrooms where teachers implement the Five Standards at high levels and attend to classroom management and organization." (Rutherford, 2003, 1).

Conclusion

Like a *Paidagogas,* the role of the modern early educator is to lead her young charges, care for them, help them exhibit good behavior, and to help them to learn. Pedagogy does matter.

Webster's Dictionary defines pedagogy as "the science of teaching". Given the complexities of the task, it could be argued that when done well by a skilled teacher it is as much an art form as a science. The application of standards, the implementation of assessment and evaluation, and the choice of curriculum is certainly on the science side of that equation. What the teacher does with that information, how she relates to the students, her ability to engage their imagination and ultimately to touch their souls in pursuit of the joint dream of quality education is in the province of art.

References

Agnes, Michael. E. (2004). *Webster's New World College Dictionary*, Indianapolis, IN: Wiley Publishing, Inc.

Linda E. Berk and Adam Winsler. 1995. *Scaffolding children's learning: Vygotsky and early childhood education.* Washington, DC: National Association For The Education of Young Children.

Bowman, Barbara. T., M. Suzanne Donovan, S., and M. Susan Burns. 2001. *Eager to learn: Educating our preschooler*s. Washington, DC: National Academy Press.

Bowman, Barbara T. 2006. Standards At The Heart of Educational Equity. *Young Children* Sept 2006. 42-48.

Bredekamp, Sue, and Teresa Rosengrant, T. 1995*. Reaching potentials; Transforming early childhood curriculum and assessment. Volume 2.* Washington, DC: National Association For The Education of Young Children.

Bredekamp, Sue, and Carol Copple. 199*). Developmentally appropriate practice in early childhood programs.* Washington, DC: National Association For The Education of Young Children.

Copple, Carol, and Sue Bredekamp, 2006*. Basics of Developmentally Appropriate Practice: An Introduction For Teachers of Children 3 to 6*. Washington, DC. National Association For The Education of Young Children.

Center For Research on Education, Research and Excellence. 2006.   Five Standards for Effective Pedagogy: (1) Joint productive activity: Teachers and students learning together. http://crede.berkeley.edu/.

Center For Research on Education, Research and Excellence. 2006.   Five Standards for Effective Pedagogy: (2) Developing language across the curriculum. http://crede.berkeley.edu/.

Center For Research on Education, Research and Excellence. 2006.   Five Standards for Effective Pedagogy: (3) Making meaning: Connecting school to students' lives. http://crede.berkeley.edu/.

Center For Research on Education, Research and Excellence. 2006.   Five Standards for Effective Pedagogy: (4) Teaching complex thinking: Challenging students toward cognitive complexity. http://crede.berkeley.edu/.

Center For Research on Education, Research and Excellence. 2006.   Five Standards for Effective Pedagogy: (5) Teaching through conversation: Engage students through dialogue, especially the instructional conversation.. http://crede.berkeley.edu/.

Dalton, Stephanie S. 1998. Pedagogy matters: *Standards for effective teaching practice.* University of California, Center for Research on Education, Diversity and Excellence.

Darling-Hammond, Linda. 1996. What matters most: A competent teacher for every child. *Phi Delta Kappa*, 78 (3), 193-220.

Darling-Hammond, Linda. 2001. T*he right to learn: A blueprint for creating schools that work.* San Francisco, CA: Jossey-Bass.

Darling-Hammond, Linda. 2004. Standards, Accountability, and School Reform. *TC Record Volume 106 Number 6*, 1047-1085.

Doherty, R. William, R. Soleste Hilberg, America Pinal, and Roland G. Tharp. 2002. Standards performance continuum: Development and validation of a measure of effective pedagogy. *Journal of Educational Research, 96 (2)*: 78-89.

Doherty, R. William, R. Soleste Hilberg, America Pinal, and Roland G.Tharp. 2003. Five standards and student achievement. *NABE Journal of Research and Practice 1 (1)*: 1-24.

Epstein, Ann. S. (2006*). The intentional teacher: Choosing the best strategies for young children's learning.* Washington, DC: NAEYC.

Entz, Susan and Sheri Lyn Galarza. 2000. *Picture This: Digital and instant photography activities for early childhood learning.* Thousand Oaks, CA: Corwin Press, Inc.

Hart, Betty, and Todd. R. Risley. (1995). *Meaningful differences in the everyday experiences of young American children.* Baltimore: P.H. Brookes.

Honig, Alice. 2002. *Secure relationships: Nurturing infant/toddler attachment in early care settings.* Washington, DC: National Association For The Education of Young Children.

Iacocca, Lee. 1989. http://www.findarticles.com/p/articles/mi_m3165/is_n1_v29/ai_13531197/pg_6

Jensen, Eric. 2000*. Brain-based learning: The new science of teaching and training.* San Diego, CA. The Brain Store.

Jacobs, Gera, and Kathy E. Crowley, K. 2006. *Play, projects, and preschool standards: Nurturing children's sense of wonder and joy in learning.* Thousand Oaks, CA: Corwin Press.

Koralek, Derry. 2004. *Spotlight on young children and assessment.* Washington, DC: National Association For The Education of Young Children.

Levine, Melvin D. 2002. *A mind at a time.* New York: Simon & Schuster.

Levine, Melvin D., and Martha Reed. 1998. *Developmental variations and learning disorders.* Cambridge, MA: Educators Publishing Service, Inc.

McClellan, Diane, andF Lilian G. Katz. 1997. *Fostering children's social competence: The teacher's role.* Washington, DC: National Association For The Education of Young Children.

National Association for the Education of Young Children & The National Association of Early Childhood Specialists In State Departments of Education. 2002. *Early learning standards: Creating the conditions for success.* Washington, DC: National Association for the Education of Young Children

National Association for the Education of Young Children & The National Association of Early Childhood Specialists In State Departments of Education, (1991). Guidelines for appropriate curriculum content and assessment in programs serving children ages 3 through 8. *Young children 46 (3):* 21-38.

National Association for the Education of Young Children &The National Association of Early Childhood Specialists In State Departments of Education. 2003*. Early childhood curriculum, assessment, and program evaluation— building an effective, accountable system in program for children birth through age 8.* Washington, DC. National Association For The Education Of Young Children.

National Education Goals Panel (NEGP). 1991.*The National education goals report: Building a nation of learners.* Washington, DC: U.S. Government Printing Office.

National Science Foundations. 1999. *Preparing our children: Content standards for all schools.* http://www.NSF.gov/pubs.

Rivera, Hector.H., Sheri Lyn Galarza, Susan Entz, and Roland G. Tharp. 2002. Technology and pedagogy in early childhood education: Guidance from cultural-historical-activity theory and developmentally appropriate instruction. *Information Technology in Childhood Education* 1: 173-96.

Rutherford, Barry. 2003. Leaving no child behind begins with leaving no teacher behind. *Talking Leaves Vol. 7, No 1.* Santa Cruz, CA: Center For Research On Education, Diversity and Excellence.

Schmoker, Mike, and Marzano, Robert J. 1999. Realizing the promise of standards-based education. *Educational Leadership, 56 (6):* 17-21.

Seefeldt, Carol. 2005. *How to work with standards in the early childhood classroom.* New York, NY: Teachers College Press

Shonkoff, J. P., and Phillips, D.A. (Eds.) (2000). From neurons to neighborhoods: The science of early childhood development. Washington, DC: National Academy Press.

Souza, David. 2001. *How the brain learns: A classroom teacher's guide.* Thousand Oaks, CA: Corwin Press, Inc.

Strickland, Dorothy S. and Shannon Riley-Ayers. 2006. Early literacy: Policy and practice in preschool. *Preschool Policy Brief, Issue 10.* New Brunswick, NJ: National Institute for Early Education Research. (NIEER). http://nieer.org/docs/?DocID=143

Tharp, Roland.G. and Ronald Gallimore. 1988. *Rousing minds to life: Teaching, learning and schooling in social context.* Cambridge: Cambridge University Press.

Tharp, Roland G. 1997. From at-risk to excellence: Research, theory, and principles for practice. *Technical Report No. 1.* Santa Cruz, CA: Center For Research On Education, Diversity And Excellence.

Tharp, Roland G., 1999. Proofs and evidence: Effectiveness of the five standards for effective pedagogy. *Technical Report No. 2.* Santa Cruz, CA: Center For Research On Education, Diversity And Excellence.

Tharp, Roland G., Peggy Estrada, Stephanie S. Dalton, and Lois A. Yamauchi. 2000. *Teaching Transformed: Achieving excellence, fairness, inclusion and harmony.* Boulder, CO: Westview.

Tharp, Roland.G., Susan Entz and Sheri Galarza, 2002. *The Sheri Galarza preschool case: A video ethnography of developmentally appropriate teaching of language and literacy.* CD-Rom. Provo UT: Brigham Yung University.

Tharp, Roland G., R. William Doherty, Jana Echevarria, Peggy Estrada, Claude Goldenberg, R. Soleste Hilberg and William M. Saunders. 2003. Research evidence: Five standards for effective pedagogy and student outcomes. *Technical Report No. GI, March* 2003. Santa Cruz, CA: Center For Research On Education, Diversity and Excellence.

Vygotsky, Lev. 1978. *Mind in Society: Development of Higher Psychological Processes.* Ed. by Michael Cole, Vera John-Steiner and Sylvia. Scribner. Cambridge MA: Harvard University Press.

Wallis, Claudia and Sonja Steptoe. 2006. How to Bring Our Schools Out of the 20th Century. *Time Magazine*, Dec 18, 2006.

"In a completely rational society, the best of us would be teachers and the rest of us would have to settle for something less, because passing civilization along from one generation to the next ought to be the highest honor and the highest responsibility anyone could have.   -

Lee Iacocca