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## **STANDARDS FOR PEDAGOGY: RESEARCH, THEORY AND PRACTICE**

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The dominant form of pedagogy in classrooms of America, Japan, and other industrialized countries continues to be whole-class instruction. The pervasive assumption is that knowledge is transmitted to students through direct instruction with occasional individual assistance. Students are seen as individuals, and the success or otherwise of learning as predominantly reflecting their individual attributes and talents. In contrast, the cultural historical activity theory (CHAT) of learning and development takes the view that knowledge emerges through social and cultural activity during community participation. To the focus on individual attributes, this perspective adds an emphasis on the ways students' attributes play out in interaction and activity with others (Boaler, 1999; Tharp & Gallimore, 1988, Wells, 2000). This view of knowledge development demands a quite different script, a different pattern of classroom activity settings, a different vision.

The CHAT approach emphasizes that the learner's interaction with materials and activity occurs primarily in a social context of relationships. In fact, that social context is the major constituent of the activity itself. As people (adults and children) act and talk together, minds are under constant construction, particularly for the novice and the young. The social processes by which minds are created must be understood as the very stuff of education. In teaching/learning interactions, development and learning proceed best when assistance is provided that permits a learner to perform at a level higher than would be possible alone. Vygotsky described this condition as a zone of proximal development, which is the "...distance between the actual developmental level as determined by individual problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers."

The zone of proximal development defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state. These functions could be termed the "buds" or "flowers" of development rather than the "fruits" of development (Vygotsky 1978:86, italics original)

The proximal zone, then, is different from the 'developmental level' at which individual, unassisted performance is possible. Focusing on this proximal zone allows us to see where teaching and learning actually occur.

We can therefore derive this general definition of teaching: Teaching consists of assisting performance through the [Zone of Proximal Development (ZPD)]. Teaching can be said to occur when assistance is offered at points in the [zone] at which performance requires assistance. (Tharp and Gallimore, 1988, italics original).

There is a large body of research that, in our view, offers support and amplification of the CHAT perspective. Though sometimes couched in different terms, study, in particular of students who are at risk of educational failure, suggests that the social organization of classrooms is

significantly implicated in their level of achievement. And the findings of this research turn out to be as relevant to the vast majority of students as they are to those on the educational margins. In our review of that literature, five main principles or 'standards' emerge, and these are key for quality teaching that activates dormant social contexts of classrooms for the benefit of all students' academic learning. The purpose of this chapter is to provide guidance for organizing classrooms along the lines that are suggested by these five standards for effective pedagogy. Developed both empirically and from a CHAT perspective, these standards express criteria and crucial elements for the transformation of classrooms from the 'receptacle-recitation' model to that of the socially productive, actively engaged, dialogically based CHAT model. These standards focus on the teachers and students, their activities, language, beliefs, values and the ways these are applied in the learning situation to encourage students' knowledge generation within the community of learners (Boaler, 1999; Tharp, Estrada, Dalton, & Yamauchi, 2000).

There is a remarkable consensus around these five statements, whether the original research that has produced them was guided by cognitive science, by critical theory, by atheoretical practical observations, or by exemplary professional practice. We express the consensus findings in the language of CHAT, partly because that theoretical orientation has guided the majority of the research and development itself, but also because it offers an integrated and powerful explanation of the findings. In education, it has often been assumed that knowledge stored in cultural artifacts can be grasped through reading and memory but, in a sociocultural view, the acquisition of cultural knowledge is more a matter of participation with others in activities that use knowledge and guidance from more expert others during learning (Wells, 1999). The constructs of CHAT are ideally suited for explaining and producing heuristics needed for the design and reform of pedagogy.

What does it mean to translate consensus findings into "standards"? Our intention is to emphasize the confidence with which these findings can be commended to practitioners, and to provide a basis for considering the degree to which research- (and theory-) based findings are enacted. Research and reports of effective practice confirm the critical relationship between what teachers know and do and what students successfully learn (Darling-Hammond, 1996; 1997). To this end, standards statements of the current reform movement in the USA guide competent, caring, and qualified teaching in curriculum content, induction, student performance, opportunity to learn, and assessment (McLaughlin and Shepard, 1995; Darling-Hammond, 1996, p3; 1997). However, standards that directly address effective teaching methods or pedagogy have remained relatively peripheral in teaching reform, barely penetrating education's core knowledge about processes of teaching and learning (Noddings, 1997; McLaughlin and Shepard, 1995, Resnick, 1998). With these five standards of pedagogy, we intend to move social context considerations to the center of standards-based teaching reform.

We might note, with Linder-Scholer (1996), that "standards" need not mean templates to copy or hurdles to jump, but can be taken in the original sense of standards, as banners guiding the way at the front of a procession. This notion of standards emphasizes their broad base and consensual nature, a consensus about ideals and principles that must be enacted in local contexts through local participation. These are not "quick-fix" recipes for teaching, but statements of ideals toward which teachers strive, and which they can approach through joint student and teacher classroom

community building, reflection, practice, interaction, constructive feedback, and continuous learning about local conditions and students' personal situations.

The five standards which we have identified are:

- I. Joint Productive Activity (JPA): Teachers and students producing together.
- II. Developing Language and Literacy Across the Curriculum (LLD)
- III. Making Meaning: Connecting School to Students' Lives (MM)
- IV. Teaching Complex Thinking: Cognitive Challenge (CC)
- V. Teaching Through Instructional Conversation (IC)

These five standards for effective pedagogy, their indicators, and illustrative examples of each are presented in the following sections of this chapter. The indicators guide preparation for implementing each standard, provide a classroom observation format and encourage reflection on practice, individually or with peers. The indicators are drawn from extensive observations in a variety of classrooms serving diverse and at-risk students in an effort to discern features that accompanied or supported the implementation of the standards. All of the indicators represent features that teachers have reported as challenging to install in their classrooms. While the indicators describe what we have observed teachers doing to enact the standards, their presence does not assure that any particular standard is fully in place.

### **Standard I: Joint Productive Activity (JPA): Teachers and students producing together**

Indicators for Standard I are that the teacher:

1. designs instructional activities requiring student collaboration to accomplish a joint product.
2. matches the demands of the joint productive activity to the time available for accomplishing them.
3. arranges classroom seating to accommodate students' individual and group needs to communicate and work jointly.
4. participates with students in joint productive activity.
5. organizes students in a variety of groupings such as by friendship, mixed academic ability, language, project, interests, etc. to promote interaction.
6. plans with students how to work in groups and move from one activity to another such as from large group introduction to small group activity, for clean-up, dismissal, and the like.
7. manages student and teacher access to materials and technology to facilitate joint productive activity.
8. monitors and supports student collaboration in positive ways.

When experts and novices work together for a common product or goal and have opportunities to converse about the activity, learning is a likely outcome (Rogoff, 1991; Moll, 1990; Tharp & Gallimore, 1988; Wertsch, 1985). Research on cooperative learning reports that students of color who participate cross-racially increase their academic achievement, motivation, self-esteem, and empathic development (August & Hakuta same patterns,, 1997). In natural (non-formal) settings even the youngest students, as well as mature ;adult learners, develop their competencies in the context of joint activity. Whether it is mother and child cooking together, or leader and team

producing together on the shop floor, shared ways of understanding the world are created through the development of language systems and word meanings that are used during shared activity. The common motivation provided by a joint goal inclines all participants to offer and receive assistance, since it is in everyone's best interest that the goal is reached. Because providing assistance is the basic act of teaching, joint productive activity creates the conditions in which development will occur. The use of joint productive activity increases exponentially the amount of communication and assisted performance available in the classroom. The teacher becomes only one source among thirty or so peer resources. Research evidence also clearly supports the role of the constructive, productive activity itself; while assistance is vital, the critical feature is applying that knowledge in productive action with others (Boaler 1999; Webb, Troper, and Fall 1995; Tharp and Gallimore 1988; Vygotsky 1978).

In conventional classrooms, joint products with a common goal are relatively rare, as most tasks have an individual focus. However, when joint products are called for, their impact on learners' motivation and understanding is often observable. For example, one Chicago elementary school featured a hands-on, cooperative approach in a classroom where students jointly researched the composition of an ocean coral reef. They worked together to discover and design reef features of which most, if not all, students had no direct experience. Then they constructed a model ocean coral reef in the hallway outside their classroom where they had room to work together to display their research findings about coral reefs creatively. Questions about shared habitats, territoriality, and food chain issues were engaged and resolved by the students in the process of constructing the most accurate display (Murphy 1997). This vignette gives evidence of indicators 1, 3 and 5.

Indicators 1, 2, 3, 4, 5, 6, 7, 8 all seem to be present in another example, that of a Zuni (New Mexico) Middle School 8th-grade literacy class, in which students collaborate throughout the year on the production of a monthly school newspaper. Virtually every activity setting in that classroom involves joint productive activity, because every column, advertising segment, editorial, or news story must be coordinated with other individuals or groups working on the same overarching product, the newspaper. The teacher participates as a member of the work team and does every task with the students, as needed, to insure the publication of the paper on time. Teacher and students interact in authentic ways, just as in a 'real' newsroom: The newspaper is extremely popular -- and so is the class (Tharp & Dalton, 1994).

Although whole-group instruction is the major or default format in today's classrooms in the USA, it is ill-suited to accommodate activities and social organization that produce the engagement and interaction of JPA. When joint productive activities are the basis for classroom organization, there is often a variety of concurrent activity settings: cooperative, individual and group work, teams working with peers and with the teacher. Teachers may arrange the classroom in more complex ways, for logistical, hygienic, and other purposes, and have concurrent activities set in separate areas of the classroom. For example, a triad might work on the computer, a small group listen to a story read by a peer, a third group finish a collaborative story draft, a fourth collect data on classroom science projects, and another group construct a bulletin board displaying some content area concept. Typically, the teacher circulates among the students, observing their progress and providing assistance as needed. From our point of view, students and teachers must share a significant portion of classroom activities. Only if the teacher is also present and engaged in the activities sufficiently to share the experiences will there be the

sustained, intensive discourse with the fully competent adult that maximizes development and creates intersubjectivity with her. This is especially important when the teacher and the students are not of the same cultures.

Joint activity between teacher and students creates a common context of experience in the classroom that nurtures the development of a harmonious set of values. When a shared cultural context is not present the conditions afforded by joint productive activity are vital. An important aspect of this classroom model is the redefinition of classroom management. In such a classroom community, adequate time for joint decision making about rules and problem solving is provided from the first moment of the school year. Teacher and students progress from simple, large group activities to complex classroom arrangements through joint planning, negotiation, and clear understandings about what will occur. Teachers themselves offer additional examples of how joint productive activities are developed and used on the web and in publications (Wells, 2001).

### **Standard II: Developing Language and Literacy Across the Curriculum (LD)**

Indicators for Standard II are that the teacher:

1. listens to student talk about familiar topics such as home and community.
2. responds to student talk and questions, making 'in-flight' changes during conversation that directly relate to student comments.
3. assists language development through modeling, eliciting, probing, restating, clarifying, questioning, praising, etc., as appropriate, in purposeful conversation.
4. interacts with students in ways that respect student preferences for speaking that may be different from the teacher's, such as wait-time, eye contact, turn-taking and spotlighting.
5. makes explicit connections between student language and literacy and academic content.
6. encourages students to use content vocabulary to express their understanding.
7. provides frequent opportunity for students to interact with each other and the teacher during instructional activities.
8. encourages student use of first and second languages in instructional activities.

Language proficiency in speaking, reading, and writing is key to academic achievement. The teacher's interaction with every student is critical in a view of learning that assumes that participation in social contexts influences knowledge generation and academic achievement. From the start, students' informal talk and the general activities of school opening produce information about students' language proficiency, families, prior experiences in school, and participation in activities within and outside of school. Implementing the language development standard means that teachers seize such informal opportunities to learn about their students while encouraging student participation in the emerging community of their classroom. Based on what is known about the interconnections of language, thinking, values, and culture, dialogue, particularly in joint productive activity, supports students' academic achievement and, also, their affective development (Tharp, 1997; Cazden, 1986; Au, 1980; Vygotsky, 1978; see also Holbrook & John-Steiner, this volume).

Students need opportunities to speak and write, to practice language use, and to receive the natural feedback of conversation from teacher and peers. Joint productive activity provides an ideal opportunity for development of the language of the activity's subject matter. Language development, both oral and written, can be fostered by such simple strategies as restating, modeling, offering alternative phrasing, and questioning. Everyday language and academic language need continuous and integrated development. This is because academic language builds on and modifies everyday language and the thinking that it reflects (Vygotsky, 1987). Academic discussion encourages students to move beyond everyday talk and to use subject lexicons to express their understanding of concepts. Teachers implementing this standard provide students with multiple opportunities to use varieties of language in appropriate forms with the teacher and with peers. The Joint Productive Activity Standard previously described complements classroom organization for Language and Literacy Development. In such contexts, students participating in joint activities from kindergarten through high school engage academic language and create text on academic topics.

The teacher's role is to involve students in activities that stimulate language use. For example, one kindergarten teacher described her integrated content activity on biodegradability thus:

I put gravel in the bottom of a 10 gallon aquarium. Then my kindergartners threw in leaves we collected on a nature walk and some food items, such as apples. I made sure the apples were near the glass so we could watch them rot. The kids also "planted" a plastic bag and an aluminum can. They put potting soil on top and watered it regularly. We put it in a south window and they were so interested that they checked it often, even during free play. They kept records of the degrading process by drawing pictures each time they observed the project. They labeled the items in the drawings which showed the process of change. We discussed the drawings and students shared the most important change that their drawing documented. This information was written down by the student or the teacher and pasted on the drawing. The students compiled their drawings in the order that they made them to create a book about the biodegrading process. After the project was completed, they placed the books in the classroom library to read with peers (Dalton, 1997).

This example involves indicators 1, 3, 5 and 7.

Prevalent classroom discourse patterns (ways of asking and answering questions, challenging claims, and using representations) are frequently unfamiliar to English Language Learners (ELLs) and other students placed at-risk of educational failure. When teachers draw on the real-life experiences of their students, the explicit connections between students' experience and language, literacy and academic knowledge are made clear. Topics that students have an interest in discussing often include those drawn from TV, the Internet, or other media. Conversely, given the increasing diversity of Western classrooms, students' ways of talking may be unfamiliar to their teachers. Inviting students to use their linguistic preferences within on-going classroom activities respects students' traditions, and provides opportunities to practice culturally-based ways of interacting. For Hawaiian-American students, for example, preferences for conversation include overlapping and simultaneous speech, reflecting their oral tradition of co-narration or "talk story." Teachers can adapt classroom participation to allow students' familiar forms of conversation, dropping unfamiliar forms such as hand-raising.

Of course, the purpose of schooling is not to further develop local community informal speech. But teacher awareness of community-based language patterns allows them to anticipate and respond in ways that further students' academic language development. When interactive occasions are frequent in a classroom, teachers can assist students by scaffolding their language performance for academic dialogue (Tharp & Gallimore, 1988). Enacting the Language Development Standard regularly provides students with the interactive experience needed to master academic discourse, and to understand that being a student means learning that language.

### **Standard III: Making Meaning: Connecting School to Student's Lives( MM)**

Indicators for Standard III are that the teacher:

1. begins activities based on what students already know from home, community, and school.
2. designs instructional activities that are meaningful to students in terms of local community norms and knowledge.
3. acquires knowledge of local norms and knowledge by talking to students, parents, community members, and by reading pertinent documents.
4. assists students to connect and apply their learning to home and community.
5. plans jointly with students to design community-based learning activities.
6. provides opportunities for parents to participate in classroom instructional activities.
7. varies activities according to students' preferences, from collective and cooperative to individual and competitive.
8. varies styles of conversation and participation to include students' cultural preferences, such as co-narration, call-and-response, choral, among others.

A wide range of social contexts and circumstances beyond classroom and school are reported to influence academic accomplishment for all students (August & Hakuta, 1997). For students placed at-risk by language and culture, ethnographic studies find students' learning is highly situated within the contexts of the social environments in which they participate (August & Hakuta, 1997; Phillips, 1983; Swisher & Deyhle, 1992). Certainly, multi-ethnic and multi-racial themes, activities, and materials have positive effects on the ethnic, racial and empathic attitudes of students, especially if included in on-going, daily events of the classroom. Nevertheless, the reality of students' lives is anchored in contexts outside school (August & Hakuta, 1997; Moll, Amanti, Neff & Gonzalez, 1992; Vogt, Jordan, & Tharp, 1992). The Making Meaning Standard therefore encourages teachers to use a variety of direct and indirect approaches to draw on students' familiar, local contexts of experience.

Three levels of contextualization are discussed in the culture and education literature. At the first, or pedagogical level, is the necessity to invoke students' existing schema as they relate to material being instructed (Au 1980). That is, the content of instruction should be drawn from, or carefully related to, students' own environments and experiences (Garcia 1991; Tharp and Gallimore 1988).

At the second, or curriculum level, there is uniform advocacy for instructional use of cultural artifacts as the media in which goals of literacy, numeracy, and science are contextualized. Drawing on personal, community-based experiences affords students opportunities to apply skills acquired in home and school contexts (Garcia 1991), and use them as the foundation for

developing school skills (e. g., Wyatt 1978/79). The work of Gonzalez and Moll in studying the 'funds of knowledge' in students' families and communities, and using those funds as curricular bases for mathematics instruction, is an excellent example of making instruction meaningful (Gonzalez et al.,1993; Moll et al. 1992).

At the third, or policy level, there are advocates for contextualization of the school itself. School learning is a social process that affects and is affected by the entire community. "More long-lasting progress has been achieved with children whose learning has been explored, modified and shaped in collaboration with their parents and communities" (John-Steiner & Smith 1978: 26). Readers can find excellent examples of this level of contextualization in McIntyre et al. (in press), in Andrade et al., (1999) and in Lipka (1994, 1986).

When the sixth grade in the Middle School in Zuni designed a unit on the delicious pinõn nut, teachers used a traditional activity as a context for their students to think about familiar activities in entirely new ways. At the grade level team meeting, the mathematics teacher came in and proposed a project with pinõns, a bumper crop for that year. He said, "I just figured that the pinõns are here, and we can't ignore them since all the students are eating them all the time. Why not study them?" The team responded enthusiastically, and came up with the following interdisciplinary unit on "Discovery of the Community," which integrated pinõn picking with academic lesson plans in the following ways:

- 1) In Mathematics class, students will figure out how many pinõns an "average" 6th grader picks per hour. They will weigh the pinõns, practice metric conversion, study percentages, and learn how these concepts are used in marketing to figure out costs and profit.
  - 2) In Social Studies, general principles of economics will assist students' marketing strategies for selling the nuts. Students will actually sell the pinõns. Any profit generated will go into the 6th grade fund.
  - 3) In Science, students will learn about the pinion tree, agriculture, and the environment.
  - 4) In Language Arts, students will discuss and write about this experience, and design labels for the pinõn packaging.
  - 5) Family Life will stress cooperation, social skills, community and family involvement.
- (Yamauchi, L., field notes, 1992).

The adventure of the pinõn unit provided opportunities for teachers to jointly plan, teach, learn about the community and its traditions, and debrief. In numerous ways, the unit involved the contexts, external to school, where student learning is situated, such as cultural tradition, staple crop harvesting and preparation, and marketing a cash crop. Parents were included on the field trips and in other activities as well. For the students, learning was collaborative, hands-on, and supported by the community. From the beginning, the tasks of the unit required considerable group cooperation, interdependence, and student choice for how to participate, challenging teachers to grant independence and students to accept responsibility. The meaningful activities promoted full inclusion and the focus on tasks increased students' interaction about the topic in their home language and in the language of instruction. Student understanding builds on what they bring to learning, but they will struggle with unfamiliar language and notions about abstract material in science, math, and other content areas when they are motivated by compelling activities they value (Tharp, 997; Dalton et al.1997; Cazden 1986; Au 1980; Vygotsky 1978).

The Meaning Making Standard does not assert that 'the known' is the goal and object of instruction, nor that learning should be confined to the languages, knowledge, and conventions of home, family, and culture. Far from it; the known is the bridge over which students cross to gain the new (Lee 1995). Scaffolding students from their prior knowledge into new understandings is not a simple association between the known and the new. It is an emergent process in which students and teachers relate to accomplish the tasks leading to the goals for learning.

#### **Standard IV: Teaching Complex Thinking: Cognitive Challenge (CC)**

Indicators for Standard IV are that the teacher:

1. insures that students, for each instructional topic, see the whole picture as the basis for understanding the parts.
2. presents challenging standards for student performance.
3. designs instructional tasks that advance student understanding to more complex levels.
4. assists students to accomplish more complex understanding by relating to their real-life experience.
5. gives clear, direct feedback about how student performance compares with the challenging standard.

Standard IV reflects research evidence that the teaching of complex thinking, by involving students in challenging tasks, is a universal principle for effective instruction. This emphasis shifts the goals of instruction from insuring that students have command of facts and basic skills to complex understandings that support practical problem solving in content domains. The Cognitive Challenge Standard emphasizes that students learn what they are taught, and that cognitive complexity will be learned if it is taught. Of course, neither a challenge too low nor one too high will assist development. Through the activity-and-language based interaction of the CHAT approach to pedagogy, 'challenge' can be appropriately leveled. And in CHAT terminology, it is in the zone of proximal development (the ZPD) that the appropriate level of cognitive challenge is to be found. Of course practice is useful; of course struggling with an impossible problem can be inspirational. But for development to occur, challenge must constantly be set at the point at which assistance is necessary. Most often, we think of the teacher as the principal assistant, but to the extent that peers provide appropriate assistance, learning and development will also occur. Increasing use of the social context to influence learning challenges teachers to produce activities and interaction in the community of learners that will nudge students through their zones of proximal development to more complex understandings of content concepts.

Here are a couple of examples of teaching that aims explicitly to draw out complex thinking. In the first, a Vermont teacher begins her cultural geography unit by asking students to describe their family culture and work in groups to describe their school culture. The students choose language and symbols that distinguish each. They then identify cultural expectations for boys and girls as reflected in newspaper cartoons and television shows from the 1950s and 1990s. Conversation about the contrasts of shows from the two decades helps students to see that current depictions of gender roles do not reflect the way boys and girls have to be. Finally,

students compare these depictions with real people to get feedback about how popular culture influences roles and action (Rutledge, 1997). In this scenario, indicators 1, 3, 4 and 5 are visible.

The second example, which shows indicators 1 and 4 particularly clearly, comes from a middle school math project emphasizing assessment methods, in which students were challenged to do survey research. The teacher read aloud a news story about a 10 year old who surveyed her classmates about the amount of their allowances. The survey showed that girls received less than boys, even when they did more chores. The students developed, administered, and reported on a survey of their own classmates to see whether such discrepancies existed. This project provided students with experience and data for applying their math skills and critical perspectives. Students are motivated to learn skills that help them see through and into their world. In fact, the students found that girls in their class were also given less allowance than boys (Rutledge, 1997, p72).

We know that all students need to be challenged to stretch, to learn language and content, and to think in complex ways beyond their current capacities [See chapters by Carr, Stetsenko & Arieviditch this volume]. Teachers who teach for understanding, guiding students through their zones of proximal development by including activities and interaction in the community, know that this approach takes and warrants more time than cursory coverage designed for memorization of facts. For example, Bruer (1993) describes the successful pedagogy of a high school physics teacher who spends over a week developing Newton's laws -- in contrast to the one or two days given to the topic by most traditional courses. Teachers who practice the Pedagogy Standards also stretch their own capacities to understand what their students' bring to learning and how they can assist them through their individual zones of proximal development by using social influences on learning. Guidance from the standards enables them to arrange interaction about activity in community that will develop the more complex thinking that students need in today's world.

### **Standard V: Teaching Through Instructional Conversation (IC)**

Indicators for Standard V are that the teacher:

1. arranges the classroom to accommodate conversation between the teacher and small groups of students on a regular and frequent schedule.
2. ensures that a clear academic goal guides conversation.
3. ensures that student talk occurs at higher rates than teacher talk.
4. guides conversation to include students' views, judgments and rationales, based on text evidence and other substantive support.
5. ensures that all students are included in the conversation.
6. listens carefully to assess levels of student understanding.
7. assists student learning throughout the conversation by questioning, restating, praising, encouraging, etc.
8. guides the students to prepare a product that indicates the instructional conversation's goal was achieved.

Instructional Conversation (IC) teaches students to engage in thoughtful and accountable conversation about cultural artifacts, ideally in small groups of three to seven. In IC, teachers

urge students to question and challenge, find alternative and deep problem solutions, rationalize and justify, and continually seek information in order to produce more complex and higher order thinking habits (Resnick, 1998). Unfortunately, typical classrooms provide infrequent occasions for sustained conversation, and rarely arrange for it to occur on a regular schedule. There are consequences for such a lack of cognitive engagement. Research reports describe how students' mastery of language, conversational conventions, and academic content are effectively postponed due to minimal classroom interaction and language production occasions (Au, 1980; Erickson & Mohatt, 1982; Rosebery, Warren & Conant, 1992). By middle school, such restricted opportunities result in language minority students' limited academic success and low self-confidence in their ability to learn (Padron 1992; Dalton & Youpa 1998).

The particular advantage of IC to the teacher of at-risk students is the opportunity to explore students' worlds of experience and knowledge and affirm their value and relevance to learning. Research reports that good teaching is characterized by the use of meaningful content presented in life-like situations (Allington, 1990; Chamot, 1992; Means & Knapp, 1991). IC builds on and incorporates students' funds of knowledge, their familial and community experiences, to increase connections between students' prior knowledge and the unknown, abstract, and academic content of instruction (Dalton & Sison 1994).

Ordinarily, IC takes place in small groups, though a teacher may have instructional conversations with larger groups or individuals. For example, teachers may work on a unit or thematic topic with the whole class, followed by small group ICs that focus on researching and analyzing selected aspects of the large group topic. Teachers combine ordinary conversation's responsive and inclusive features with assessment and assistance to help engage students and stimulate their learning. While any good conversation requires some latitude and drift in the topic, the teacher's leadership is used to focus on the instructional goal. While the teacher holds the goal firmly in mind, the route to the goal is responsive to student participation and developing understanding. In the following transcript from an eighth grade class with Native American (Zuni) English Language Learners, for example, notice how the teacher, Stacey, focuses the topic and persistently elicits students' rationalizations to guide them to a more complex understanding than they had at the beginning.

Teacher Stacey: Girls, what's one freedom that you'd want to have?

Student 1: No school.

Stacey: No school. The freedom not to go to school. OK, write that down. What could be... Jessica, what's one good thing about if you didn't have to go to school? What's good about it? Why do you want it?

Student 2: You can wake up whenever you want.

Stacey: OK, you can wake up whenever you want. So, you have your own schedule, right? It gives you more power. OK, what else does it give you?

Student 3: You can have fun all day.

Stacey: You have fun all day. So you can hang out and do whatever you want all day.

Student 1: Don't have to worry about tests.

Stacey: Don't have to worry about tests, OK, so, what's one bad thing about it?

Student 1: You don't learn anything.

Stacey: OK, so what if you don't learn anything? What's the big deal about that?

Student 4: You won't, you won't...uh...you won't know how to read.

Stacey: You won't know how to read. What does reading do? What does reading do for you?

Student 4: Helps you get a job.

Stacey: It helps you get a job. OK, why do you want a job?

All Students: Make money.

Stacey: OK, what else does reading do for you?

Student 1: Learn.

Stacey: You learn new stuff.

Student 1: You read about other cultures, new stuff.

Stacey: Why is it good to read about new stuff? I mean, doesn't Zuni have enough to offer? Why would you want to read about somewhere else?

Student 2: To learn about their country.

Student 1: So we know what's happening around the world.

Stacey: So you know what's happening around the world. Why would you want to know that?

Student 2: To see if they're different from us.

Stacey: To see if they're different. That's interesting. Do you think it's a basic human desire to know about other people and other cultures? It just sorta feels like you're drawn to it, doesn't it? That's cool. OK, go ahead and write that down, you guys.

## Summary

Taken together, the pedagogy standards guide teaching that reflects the social and cultural origins of learning, and focuses on the ways students' capacities and attributes develop in interaction with others. As we have seen, each standard impacts and interacts with the others. For example, the Joint Productive Activity (JPA) standard influences classroom organization and task design, which is foundational for the four other standards. An increase in the variety and richness of JPA provides more Meaning Making (MM) opportunities, because smaller groups increase opportunities for teachers to learn about their students' experiences in and out of school. JPA also makes Language and Literacy Development (LD) more likely, because students are willing to express themselves more fluently in the course of activities that have real-world value. JPA makes students' Complex Thinking (CT) more likely, because a teacher who knows students through interaction and joint activity can individualize instructional levels more sensitively and activate peer resources when there are alternatives to large group instructional settings. JPA makes Instructional Conversation (IC) more likely, because the teacher can dialogue on academic topics with a selected group of students while the others participate independently in various joint productive activities.

The standards are not invariant templates to be imposed on all situations. On the contrary, they represent ideals that strive to fit local circumstances and respect unique features of individuals, schools, and communities (Goldenberg & Gallimore, 1996). Students today enter schools with ethnicities, languages, cultures, and individual needs more disparate than ever before. Community localization, and individual responsiveness to these variations, is critical to insuring

all students' participation and academic engagement. The standards encourage classrooms to become communities of learners in which increased joint activity, innovative social organizational arrangements, meaningful problem solving, and dialogue on academic topics are emphasized. Standard III, Meaning Making, explicitly requires localization, and in general such contextualization is a fundamental quality of the standards themselves.

Basically, the pedagogy standards describe what teachers do to arrange and assist student learning in the same way that content standards describe what instruction must address; performance standards describe concrete examples and specific definitions of student proficiency; and opportunity-to-learn standards describe capacity to ensure equal access to education (McLaughlin and Shepard, 1995). Specifically, they articulate a CHAT view of learning, where knowledge emerges through social and cultural activity during community participation for the purpose of guiding teachers' enactments of the vision. Teachers' competence in pedagogy is key to quality practice that insures that multiple, differentiated, and simultaneous activity settings, organized to maximize social influences on knowledge development, occur regularly. When distinguished teaching means every student is often engaged in compelling activities that encourage interaction among teacher and peers, the focus of teaching and learning shifts from individuals' attributes to an emphasis on the ways in which students' attributes play out in interaction and activity with others. The pedagogy standards and their indicators present guidance for producing such teaching that is socially productive, actively engaged, dialogically based, and knowledge generative.