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Motivational Processes in Learning: A Comparative Analysis of Cognitive and Sociocultural Frameworks

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INTRODUCTION

It is clear that educational psychology has moved from a behavioral framework as it has continued to explore basic questions about the nature of teaching and learning processes. A review of the current literature suggests that cognitive psychology and human information processing frameworks have replaced the hierarchical, discrete-skill, behaviorally-based views of the recent past. This shift has led to significant advances in efforts to promote learning by providing a more complex, sophisticated account of higher order learning in complex and ill-structured domains.

At the same time that progress has been made on this front, psychology has continued to grapple with questions and problems that have to do with the variability and complexity of behavior and psychological processes as they occur in the real world. The transfer of laboratory-based findings to everyday, real-world settings has been less than smooth. In addition, accounting for behavioral variability as a function of context and sociocultural factors has been difficult. Fortunately, there is a growing body of work which has begun to explore the role of social and cultural processes in learning and cognition, including the study of cognitive processes in everyday settings. This sociocultural perspective has begun to expand more traditional accounts of mental processes to include the historical, cultural, and contextual influences on behavior.

Although the cognitive and sociocultural traditions may be seen as competing frameworks by some theorists, we believe that they do not represent a simple dichotomy. In spite of the fact that there are critical differences between these two perspectives which can in part be traced to their very different historical roots and theoretical assumptions about mental activity, there are interesting and important

commonalities as well. In this chapter we will attempt to explore these similarities and differences within the context of motivation.

We believe that this focus on motivation is important as more than a theoretical platform to ground the comparison of these two theoretical frameworks of cognition and learning. There is increasing recognition that mental processes do not operate in isolation but are strongly and interactively influenced by affective processes such as motivation. In addition, we believe that there is a strong practical reason to examine this issue. A review of current reform efforts in schools indicate that there are large numbers of students whose school careers are less than satisfactory. This is especially true of low SES language and ethnic minority students. Often, the explanatory frameworks invoked to account for these outcomes embrace an explicit or implicit motivational component or otherwise hinge on some aspect of motivational processes. Given the importance attributed to motivational processes in successful (and unsuccessful) educational outcomes, it is imperative that this critical aspect of learning and cognition be explored as fully as possible.

We begin by providing a brief description of each of the two frameworks which are the focus of the chapter with special attention to the treatment of motivational processes in learning. Having done this, we will then explore the similarities and differences of these two approaches and speculate on how these two traditions might build upon each other in order to provide a fuller account of learning and higher-order mental processes.

A COGNITIVE PERSPECTIVE ON MOTIVATION1

1 This discussion is based in part on Dembo, M. (1994). Applying educational psychology (5th ed.). White Plains, NY: Longman.

Cognitive views of motivation are concerned with internal or cognitive-mediational processes influencing behavior. Although theorists often disagree over the importance of specific cognitive processes in motivation, they tend to focus on such factors as how students think about their goals, their values, the task, their perception of competence, and the reasons for their success and failure. As compared to earlier behavioral perspectives, this approach seeks to understand why students choose to engage in academic tasks rather than what they do or how long they spend doing so. The fundamental principle of intervention is: If you want to change students' motivation, you will need to change their beliefs or self-perceptions. Lastly, cognitive views of motivation generally assume that children's motivational beliefs mediate ethnic and cultural differences. This perspective differs from earlier personality approaches to motivation which focused on group differences (see Graham, 1994).

Since there is no one theory that represents the cognitive approach to motivation, we have selected one model that provides a comprehensive approach for understanding how students' beliefs about themselves and the task act as mediators of their behavior. This model is based on the work of Pintrich and his colleagues (Pintrich & DeGroot, 1990; Pintrich & Schrauben, 1992) who identified three motivational components related to self-regulated behavior: a value component, which includes students' goals and beliefs about the importance and interest of the task ("Why am I doing the task?"), an expectancy component, which includes students' beliefs about their ability to perform the task ("Can I do this task?"), and an affective component, which includes students' emotional reactions to the task ("How do I feel about this task?").

We shall discuss some important theory and research relating to each of the three components of motivation.

Value Component - "Why Am I Doing This Task?"

Goal theory is one of the most recent approaches to the understanding of achievement motivation in schools (Weiner, 1990). Goal setting controls behavior by influencing future behavior. Goals motivate individuals and provide them with information about their abilities as they attain or fail to attain their goals. More important, achievement goals determine patterns of motivation that determine how learners think about and engage in different academic activities (Ames, 1992).

One perspective on goals distinguishes between mastery versus performance goals (Ames & Archer, 1988; Maehr, 1992). These goal constructs also have been distinguished as learning versus performance goals (Dweck, 1986) and as task involvement versus ego involvement (Nicholls, 1984). A mastery goal is oriented toward learning as much as possible for the purpose of self-improvement, irrespective of the performance of others. A performance goal focuses on social comparison and competition, with the main purpose of outperforming others on the task. It is not uncommon for students to have multiple goals in school where they behave differently in different classes or pursue different goals in the same class (Wentzel, 1991). Table 1, based on Maehr (1992), summarizes the behaviors elicited by a mastery and performance goal orientations.

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Using the distinction between mastery and performance goals, we can understand how students define schooling and learning in different ways. The goal orientation that students adopt influences the effort they exhibit in learning tasks and the type of learning strategies they use. Thus, when students adopt a mastery goal orientation, they are more likely to have a positive attitude toward the task (even outside the classroom), to monitor their own comprehension, to use elaboration and organizational cognitive strategies, and to relate newly learned material with previously learned material. In contrast, students who adopt a performance orientation tend to focus on memorization and rehearsal strategies and often do not engage in problem solving and critical thinking. In general, they don't think about what they learn, but rather look for shortcuts and quick pay-offs (Maehr & Anderman, 1992).

Different research investigations on students' goal orientation and learning processes in the classroom have produced consistent results: A mastery orientation for learning leads to higher levels of cognitive engagement or involvement in subject matter (Ames & Archer, 1988; Nolen, 1988; Pintrich & Garcia, 1992). In other words, students who adopt a mastery goal orientation use learning strategies such as elaboration and organization, and more metacognitive strategies, than students who have a performance orientation.

Goal Setting and Motivation. Schunk (1991) points out some additional findings concerning goal setting and motivation: The effects of goals on behavior depend on

three properties: specificity, proximity, and difficulty level. Goals that set specific performance standards are more likely to increase motivation than general goals as, "Do your best." Specific goals help the learner determine the amount of effort required for success and lead to feelings of satisfaction when the goal is attained. As a result, learners come to believe they have a greater self-efficacy regarding the task**.**

Goals also can be identified by the extent to which they extend into the future. Proximal goals are close at hand and result in greater motivation directed toward attainment than more distant goals. Pursuing proximal goals also convey reliable information about one's capabilities. When students perceive they are making progress toward a proximal goal, they are apt to feel more efficacious and maintain their motivation. Since it is harder to evaluate progress toward distant goals, learners have more difficulty judging their capabilities even if they perform well.

Student perceptions of the difficulty of a task influences the amount of effort they believe is necessary to attain the task. If they believe they have the ability and knowledge, learners will work harder to attain difficult goals than when the standards are lower. As they work and attain difficult goals, they develop beliefs in their competence. However, if they don't believe they have the ability to attain a goal, they are likely to have low expectations for success and not become involved in the task.

The best example for this discussion is to think about how student motivation is influenced by the goals established by two different teachers. The first teacher simply tells students to write a term paper and hand it in on a certain date. The second teacher breaks the assignment down into different phases--prewriting (e.g., choose a topic, find, read and take notes on three sources, use correct bibliographic notation) drafting

(e.g., develop thesis statement, identify subtopics, draft subtopics), revising, editing, and submission (e.g., review and revise full document, prepare bibliography and table of contents). He provides his students with a checklist of all the activities under each phase identifying the date each activity is due. He explains the criteria for each activity and provides feedback when it is handed in. The advantage of breaking the assignment into different phases is that it makes the task more manageable. As students experience success at each phase, they are more likely to enhance their perceptions of competence. When a project is not separated into smaller tasks, the only possibility for success ins the completion of the final product (Spaulding, 1992).

A final point about goals: Allowing learners to set their own goals may encourage greater interest in attaining them. Thus, setting conferences with students to discuss individual classroom goals or establishing contracts for completing academic tasks can help students take more responsibility for their learning and develop greater self-efficacy (Schunk, 1991).

Task Value Beliefs The Pintrich motivation model distinguishes between goal orientation and task value beliefs. Goal orientation pertains to students' general goals for learning in a given course, wheras task value pertains to students' perceptions of the course material in terms of their beliefs about the iimportance and interest of the material. Pintrich and Schrauben (1992) state: "An individual's goal orientation may guide the general direction of behavior, wheras value may influence the strength or intensity of the behavior" (p. 157). In general, individuals tend to become involved in tasks that they positively value and avoid tasks that they negatively value (Wigfield & Eccles, 1992).

Eccles and her colleagues (Eccles et al 1983) have conducted several large-scale investigations exploring the relations of both expectancies and values to achievement performance and choice. These researchers have identified four aspects of achievement task values that can influence achievement behavior: attainment value (the subjective importance of doing well on a task influenced by how the task impacts an individual's needs), intrinsic value (the satisfaction an individual gets from doing the task), utility value, (the usefulness of a task as a means to achieve a goal that may not be directly related to a task), and cost (the negative aspects of engaging in a task).

Most of the research on attainment and utility value has addressed gender differences indicating that males tend to value achievement in school as they proceed through the grades, while females become more concerned about potential conflicts between academic and social goals (Sherman, 1979). More specifically, researchers have addressed the gender-typing of certain domains as "masculine" or "feminine" possibly influencing the attainment value of performance in different academic areas for males and females. For example, the sex-typing issue has been widely discussed in attempting to explain the lack of female participation in advanced mathematics classes (Stipek, 1993). Eccles and her colleagues (1983; 1984) have found that students' task values predict both intentions and actual decision to take advanced mathematics and English courses.

Another research focus of task value is age-related changes. In general, investigators report that students value academic tasks less as they get older (Eddles & Midgley, 1989; Eccles et al. 1984). On explanation for this finding is related to our discussion of perceived ability in the next section. As students move from the primary

grades through junior high school and have difficulty in school, they tend to view ability as a more important determinant of academic success than effort. As a result, they may devalue the importance of mathematics and other academic subjects in order to deflect the impact of poor grades on their self-estee. Another explanation focuses on the school environment. Eccles and Midgley (1989) have argued that the changes associated with the transition to junior high school can have a negative impact on students' motivation for and valuing of school.

Expectancy Component - "Can I Do This Task?"

Self-efficacy Beliefs. Self-efficacy is an individual's evaluation that he or she has specific performance capabilities on a particular type of task (Bandura, 1982). Perceived efficacy can influence motivation. Students with a high sense of efficacy are more likely to choose difficult tasks, expend greater effort, persist longer, apply appropriate problem-solving strategies on tasks, and have less fear and anxiety regarding tasks than students with a low sense of efficacy for a task (Schunk, 1989).

Observing a similar peer successfully performing a task well can promote a sense of efficacy in the observers. For example, if a low-achieving student observes another low-achieving students successfully completing a math problem at the blackboard, the observer is likely to believe that he or she also could learn to solve the problem. The effectiveness of the model can be enhanced if he or she describes to the class how he or she studied, persisted at the task, or overcome any difficulty learning the task (Schunk, 1991). Using culturally-different students as peer models can also be an effective way to increase their classroom status and perceived competence by other students in the classroom.

Control Beliefs. The notion that individuals' perception of control influences their behavior has been discussed by many psychologists (deCharms, 1981; Deci, 1975; Rotter, 1966.) Some students blame someone or something else for their poor performance: a poor test, a confusing book, or an incoherent teacher. These students believe external aspects of their environment wield control over their downfall (or over their success). They see themselves as powerless to counteract this trend. DeCharms used the terms "origins" and "pawns" to describe students who believe they can control their behavior and students who believe that others control their behavior.

Much of the conceptualization and research in this area stems from the social-learning theory of Rotter (1966), who used the term locus of control with two dimensions--external locus of control and internal locus of control. An "external" person perceives having little control over fate and fails to perceive a cause-and-effect relationship between actions and their consequences. An "internal" person holds the reins of fate securely and understands that effort and reward are correlated.

Learned helplessness is one of the worst conditions that can develop when students learn over time that they have no control over the outcome of events (Abramson, Seligman, & Teasdale, 1978). That is, they see no relation between effort and the attainment of goals. As a result, they quickly abandon the use of learning strategies rather than attempt to modify their approach to learning.

Efficacy perceptions are different from locus of control, or outcome expectations. It is possible for a person to believe that a successful performance will lead to a desired outcome, e.g. a good term paper will lead to a high grade (locus of control). Yet, the person might not believe that he or she has the necessary knowledge or skill to perform

well (self-efficacy). Thus, self-efficacy is a judgment about and one's confidence in his or her ability to achieve a particular task.

Attribution Beliefs. Attributional theorists believe that individuals search for understanding about the causes of events. In academic settings, attributions are explanations that individuals give for the causes of their successes and failures. Common achievement attributions are ability ("I'm good/bad in math."), effort ("I studied hard for the test/ I didn't study enough),"task difficulty ("The test was easy/ hard))," and luck ("I guessed right/wrong) (Weiner, 1979).

Weiner (1986) argues that the specific causal attributions are less important than the underlying dimensions of the attributions in determining achievement behavior. For example, students who attribute prior success to stable factors (e.g., high ability or easy task) are likely to hold higher expectancies for success than students who attribute success to less stable factors (e.g., high effort or good luck).

Covington (1992) discusses the attributions among success-oriented and failure-avoiding students. Success-oriented students tend to believe that they can handle most academic challenges. As a result, their ability is not viewed as an important issue in learning. Therefore, these students view success and failure as related to the quality of their efforts. The research clearly points out that success-oriented students tend to attribute success to ability and effort and failure to lack of proper effort. These explanations are helpful to the individual because success inspires further confidence as a sign of one's ability to do well, whereas failure signals the need to try harder. The success-oriented individual is not threatened by failure when it does occur, because it doesn't reflect on the individual's ability. This explanation also helps to understand why

failure can be used to motivate already successful students.

Failure-avoiding students generally have a different set of attributions. They tend to attribute their failures to a lack of ability and attribute their successes to external factors such as luck or an easy task (Weiner & Kukla, 1970). It is difficult to imagine a more distressing situation--the students blame themselves for failure but take little or no credit for success. They feel that they have little control over their academic destiny so they minimize pain by trying to avoid failure.

There are some other considerations about the emphasis on effort teachers need to consider (Ames, 1990). First, some students may already believe that they are working as hard as they can. If teachers convince these students that poor effort is the primary cause of their academic problems, they may decrease their sense of efficacy regarding the task. The reasoning may be as follows: If I try hard and still can't solve the problems, then I must lack ability. Second, if teachers continually emphasize the importance of sustaining a maximal effort on tasks, some students may conclude that they don't want to work so hard to succeed..

The implication is that teachers need to know how their students attribute the causes for their successes and failures, and encourage both reasonable effort attributions along with the use of appropriate learning strategies so that students can learn more effectively and efficiently.

All three of the self-perceptions discussed in this section-- self-efficacy, control, and attributions--have been shown to influence the use of learning strategies. Research (see Schunk & Meece, 1992) shows that students who are high rather than low in internal control report they are better managers of their study time, their study

environment, and their actual effort in the face of boring or difficult tasks. Students who feel more efficacious about their ability to do well in a course or on a task, and who believe that their behavior and effort influence their performance are more likely to use different learning strategies than students who feel less efficacious about their ability and don't believe increased effort will make a difference in their achievement results.

Affective Component-"How Do I Feel About The Task?"

Covington's Self-Worth Theory. The self-worth theory of achievement motivation (Covington, 1992) incorporates a motivational component with the causal perceptions of success and failure. According to self-worth theory, an individual learns that in our society one is valued because of one's accomplishments. The key factor to achievement motivation can be explained by how a person attempts to maintain positive ability perceptions that are the basis of self-worth.

If a person fails at a task, the feedback evokes the possibility of a lack of ability. In addition, failure creates feelings of unworthiness and self-rejection. As a result, when individuals are faced with the possibility of failure, they will avoid the situation or develop strategies to protect any inferences as to the lack of ability.

A problem that teachers must deal with is that children's perceptions of their academic abilities decline as they proceed through school (Nicholls, 1984). When children first enter school, they believe that effort is the most important student attribute. In fact, young children generally believe that students who work hard are brighter than those who do not try (i.e., ability and effort are perceived as synonymous). They also believe that working harder can actually cause an increase in ability. By working hard they can please their teacher and develop the positive image of a "good" student

(Covington, 1984). The results of such perceptions are that young children do not feel bad when they fail.

By ages 11 and 12, students have considerably lower self-perceptions of competence. This change is due to the fact that, as students get older and perceive the social comparison in the classroom (e.g., grades, ability grouping), their sense of worth begins to depend on doing better than someone else. The consequence of social comparison information for most students leads to the realization that effort does not compensate entirely for ability. Thus, the belief that "I may not be as smart as I thought" begins to emerge as students progress through the elementary grades. Ames and Felker (1979) have shown that competition tends to magnify the positive affect associated with success (pride) and the negative affect associated with failure (shame or guilt).

Another factor related to changes in self-perceptions is that while young children believe that trying hard leads to improvement in ability, trying hard takes on negative characteristics for older children (by age 12). As these children make greater distinctions between effort and ability, they come to realize that success with a good deal of effort indicates lower ability. As a result, high effort becomes an indicator of low ability (Paris & Byrnes, 1989).

Holt (1982) provides a good example to illustrate how evaluation by others influences our behavior. The next time you are around an infant, observe her motivation in trying to succeed at a new task. The infant is like a scientist, always observing and experimenting. Even when the infant fails, she continues to try to make sense out of its environment. An infant does not react to failure as does a child or

adolescent. "She has not yet been made to feel that failure is shame, disgrace, a crime. Unlike her elders, she is not concerned with protecting herself against everything that is not easy and familiar; she reaches out to experience, she embraces life" (Holt, 1982, p. 112).

If we examine the role of effort from both teachers' and students' perspectives, we will find that in some cases teachers and students operate at cross purposes. Although teachers highly value achievement, they often reward (or punish) some students more than others for exactly the same level of performance. Students who are perceived as having expended effort (regardless of their ability) tend to be rewarded more and punished less than students who do not try (Weiner & Kukla, 1970).

However, Covington and Omelich (1979) found that students experienced greatest shame with a combination of high effort and failure and least shame with low effort and failure. This research helps to explain why failure-avoiding students often do not try! Expending effort and still failing poses a serious threat to one's self-esteem. The student who does not try but fails can always rationalize that success could have been achieved through proper effort, thus maintaining a reasonable level of self-esteem. Teachers, however, tend to reinforce students who demonstrate effort and punish those who do not. Understanding the perspectives of both the teacher and the student helps to see how effort can become a "double-edged sword" for many students. They must walk the tightrope between the threatening extremes of high effort and no effort at all. They must demonstrate some effort to avoid negative sanctions from their teachers--but not enough to risk shame should they try hard and fail. Some students use excuses to maintain a balance between these extremes. A popular tactic is to try hard but to

use excuses (external factors) to explain why trying did not help. Such behavior avoids any inference as to low ability (Covington & Omelich, 1979). Covington (1983) summarizes the safe strategy of many students: "Try, or at least appear to try, but not too energetically and with excuses always at hand" (p. 149).

A SOCIOCULTURAL APPROACH TO MOTIVATION IN LEARNING

In this section we present a conceptualization of motivation consistent with current sociocultural, interactionist perspectives on cognitive ability as distributed and socially constructed, (Forman, Minick, & Stone, in press; Marshall, 1992; Salomon, in press; Wertsch, 1991). Following this, some of the key principles of this alternative perspective are illustrated with examples from a case study.

There is an emerging perspective in the psychological literature that departs from a more traditional individualistic orientation. In the mainstream cognitive literature, for example, this interest is reflected in recent work on situated cognition and anchored instruction (Brown, Collins, & Duguid, 1989; Greeno, 1989; The Cognition and Technology Group at Vanderbilt, 1990) and more attention to sociocultural factors in learning (Belmont, 1989). These relatively recent developments can trace their roots to what is loosely termed here a sociocultural, interactionist perspective. Briefly, this framework emphasizes the sociocultural roots of learning and related psychological processes and in addition stresses the importance of joint collaborative activity, the social context of learning and thinking, and social mediation. This theoretical framework draws from the writings of psychologists within the sociohistorical school of psychology as described by Vygotsky (1978), among others, and further developed by his followers in the United States and elsewhere (Lave, 1988; Moll, 1990; Rogoff, 1990; Rogoff & Lave, 1984;

Valsiner, 1989; Wertsch, 1985a, 1985b, 1991). The basic outline of this perspective, specifically as it relates to motivation, is presented in the following section.

A Sociocultural Approach to Motivation

Sociocultural theory argues for a reconceptualization of cognitive activity (and by extension, motivation) as a within-child, context-independent phenomenon towards a perspective that highlights the interdependence of cognitive and sociocultural factors (e.g., Laboratory of Comparative Human Cognition, 1982; Wertsch, 1991). Accordingly, from this view, cognition is not situated solely within the individual without reference to the social and cultural contexts within which individual actions take place. Sivan (1986) has proposed an extension of this formulation with reference to motivation in the classroom:

> ...motivation is inseparable from the instructional process and the classroom environment. The culturally determined joint activity between student and social context results in an internal state of interest and cognitive and affective engagement, and motivated behaviors, both of which can be considered cultural norms. (p 209)

A review of the sociocultural approach suggests that contextual and cultural/historical influences on motivation are paramount. In this respect, the cognitive trend to view motivation as domain or context specific appears to be very similar. However, sociocultural theory goes beyond the view of motivation as contingent on contextual influences. Specifically, the sociocultural view focuses on how culture shapes not only what people think, feel, and act but in addition provides a context for how it is displayed. That is, the conceptualization of motivation and its display in a given sociocultural context is a cultural norm. Mehan (1979) and Collins and Green (1992), for example, have discussed the classroom as a unique culture with its own set

of norms, rules, and ways of organizing the world along important dimensions such as time, discourse features, etc.

In support of the view of motivation and its display as a cultural norm, Sivan (1986) describes elementary, middle, and high school teachers' categories of motivation: (a) motivation to be social, where the energy and interest of the student lie in forming and maintaining social relations, (b) motivation to learn, referring to an interest, an eagerness, and active engagement in learning context for its own sake; and (c) motivation to perform, where the student's efforts are directed to performing well on a task and getting good grades. The commonalities across the various levels of teachers suggests a consistent and relatively well-developed norm for the notion of "motivated student". As Sivan (1986) points out, these cultural norms are important since they form the basis from which judgements and expectations about others are formed.

A key point in the sociocultural analysis of cognition is the interconnectedness of social and cognitive activity, where psychological characteristics, such as motivation, are not viewed as characteristics of the individual, but of the individual-in-action within specific contexts. Minick (1985), for one, has made this point forcefully: "The individual has no psychological characteristics; the individual as an object of research does not exist in isolation from actions and action systems" (p. 282). In sociocultural theory, these specific contexts or "action systems" within which individuals interact are referred to as activity settings.

The construct of activity setting, which is a more detailed development of what is ofter referred to a "context" the psychological literature, includes the following: (1) objective features of the setting and environment, (2) the objective features of the

motoric and verbal actions of the participants, in conjunction with (3) the subjective features of the participants' experience, intention, and meaning. More simply stated, activity settings may be described as the who, what, when, where and whys of everyday life in school, home, community, and workplace. As Gallimore, Tharp, and John-Steiner (1990) state, "These features of personnel, occasion, motivations and meanings, goals, places, and times are intertwined conditions that together comprise the reality of life and learning. The catalog of activity settings comprises the everyday routine." (p. 10).

In sociocultural theory, it is within these activity settings that cognitive activity and the construction of meaning takes place. In short, meaning is socially constructed with others in specific activity settings. This perspective, we should mention, is not necessarily new. The shift from the individual as meaning-maker to a view of collectively constructed meaning has antecedents in both sociology and psychology. As Mehan (1983) has pointed out, in sociology, *symbolic interactionists* were an early influence with respect to the idea that consciousness (meaning) is not intrinsic to objects, people, events, and situations in the real world. Rather, it is viewed as something which is constructed. Humans are seen as symbolic beings who interpret and define their world, and their behavior must be understood with reference to this defining process.

In the school of psychology, Piaget (1954)described the individual constructivist processes (the child's interactions with the environment) which serve as the impetus for cognitive development. In particular, he emphasized the child's exploration and manipulation of the objects in the environment, facilitating the construction of reality and stable representations of the world, which he convincingly demonstrated were much different from those of adults. Most importantly, his theory assumed that development

is a constructive process. Later, the school of thought known as *constitutive phenomenology* (Cicourel, 1973; Garfinkel, 1967; Goffman, 1963) emphasized more prominently the role of social interaction in the interpretive process. Meaning was no longer seen as being "in the privacy of one's head," but rather as a process carried out among and between people in social activities, not individual mentalistic acts.

More recently, the Vygotskian tradition has provided an additional contrast to the individual constructive processes described by Piaget. Without discarding the notion of the child as an active agent in his or her own development, Vygotsky (1978) and his followers have come to emphasize culturally organized, socially mediated practices and how the child's development emerges from these practices. A basic notion of this orientation is that higher order cognitive functions develop out of social actions, most prominently social interactions with more competent others in meaningful activities. Importantly, the unit of analysis is no longer the individual, but the child and more capable others engaged in meaningful activity in specific activity settings.

Furthermore, Vygotsky also emphasized that social interactions are themselves mediated. Humans use cultural signs and tools (e.g., speech, literacy, mathematics) to mediate their interactions with each other and with their surroundings. A fundamental property of these artifacts, Vygotsky observed, is that they are social in origin; they are used first to communicate with others, to mediate contact with our social worlds; later, with practice, much of it occurring in schools, these artifacts come to mediate our interactions with self, to help us think, and we internalize their use (see, for example, Vygotsky, 1978, Chaps. 1-4; Wertsch, 1985b, Chaps. 2-4). Therefore, from a Vygotskian perspective, a major role of schooling is to create social contexts for

mastery of and conscious awareness of the use of these cultural tools. It is by mastering these cultural technologies of representation and communication, as Olson (1986) has put it, that individuals acquire the capacity, the means, for "higher order" intellectual activity. Thus, Vygotskian theory posits a strong, dialectical connection between external (social), practical activity mediated by the use of cultural tools, such as speech and writing, and individuals' intellectual activity. As Wertsch (1985b) explains it, Vygotsky "defined external activity in terms of semiotically mediated social processes and argued that the properties of these processes provide the key to understanding the emergence of internal functioning" (p. 62).

In describing the rudiments of a sociocultural approach, then, several key elements appear to stand out: the role of social interactions, the influence of culturally based knowledge and practices, including the use of cultural technologies; the mediating role of signs and symbols, our cultural tools, as well as that of peers or more competent others: and finally, a focus on thinking as inseparable from social and cultural activities. Although this approach has focused mostly on cognition, it lends itself well to reconceptualizing motivation, especially in classroom learning situations. Not only does it take into account the effects of context (activity setting), but suggests that we examine motivation indirectly, as a mediated phenomenon, through the analysis of the activities within which kids are observed learning or not learning, motivated or otherwise, so that motivation is always a characteristic of the child in activity of a certain sort.

Sivan (1986) has suggested that this approach helps to reconceptualize motivation, especially in school settings, along the following three dimensions: (a) it

allows for a discussion of context and cultural issues that influence motivation and how motivation is shown, (b) it allows for a discussion of intrapsychological functioning of the individual, and (c) it allows for a discussion of interpersonal relations that influence, shape, and maintain motivation. The fashion in which these dimensions might be played out in everyday classroom contexts is addressed in the next section.

In order to explicate the differences between these frameworks and their implications for educational theory and practice, we next present a specific case study and explore the different aproaches suggested by each of the frameworks.

A Classroom Incident

The following classroom incident will be used to explore the differences between the sociocultural and cognitive perspectives regarding motivation.

Mr. Patterson is a sixth-grade teacher in a large urban school district. The students in his class come from culturally-diverse backgrounds and speak three different languages in addition to English. His primary method of instruction involves teacher-directed lessons followed by independent seatwork. Upon entering his classroom, an observer notices a well-organized classroom with rules posted near his desk and numerous classroom charts and graphs identifying student progress in different subject areas. Mr. Patterson frequently uses these charts to identify students who are achieving at high levels. He believes that the identification of the ranking of the students in the class will serve to motivate the low-achieving students.

Mr. Patterson recently has been concerned with the motivation of Alex, the son of parents who immigrated to the United States when he was four-years old. Although Alex scored above the mean on a recent battery of national achievement tests, he

appears to do only what is necessary to maintain a C average. One problem is that he seems to be negatively influenced by a peer group who is less interested in school achievement. For example, one day when he completed his math assignment, he was derided by two other students in class for being a teacher's pet. When told by Mr. Patterson that he could do well in class if he tried harder, Alex stated: "I don't want to be smart!"

Mr. Patterson observed that Alex tends to avoid situations when he may be evaluated. For example, he didn't come to school the day a math quiz was given and often leaves his math book at school when he is required to turn in homework the next day.

Mr. Patterson had an opportunity to talk with Alex during recess one morning to discuss his math achievement. Alex stated the following: "I just can't learn math. I don't understand much of what you put on the board, and even when I tru to study, I still don't do well on the tests. What's the use of trying to do the work? As far as I'm concerned, studying math is just a waste of time."

CASE DISCUSSION

A Cognitive Analysis of Motivational Problems

As mentioned earlier in this paper, cognitive psychologists believe that students' perceptions concerning their abilities, the task,and classroom environment act as mediators of their behavior. The classroom context has important implications for students' motivation since different contexts can elicit different goal orientations (Meece, 1991). Mr. Patterson's classroom can be classified as performance-oriented since he

emphasizes competition, grades, and social comparison of students.

It is apparent that Alex doesn't have a mastery orientation toward his academic work, and is not moticated by Mr. Patterson's competitive reward system. As a result, he places little value on improvement and effort. In fact, he indicates to Mr. Patterson that he is satisfied with his academic achievement by his statement: " I don't want to be smart!" Although Alex appears to be performance-oreinted, he uses social comparison not as a basis for outperforming others, but as a means to regulate his academic achievement so that he doesn't perform better than his peers.

Wentzel (1991) has pointed that classrooms provide an opportunity to pursue multiple goals, both social and academic. Apparently, the social objective to comply with implicit social rules and norms has influenced his classroom behavior. His "game plan" appears to be: try to do what is necessary to succeed, but don't outperform your peers! Also, since he doesn't value math, he doesn't believe that there is any need to learn it.

Another important concern is Alex's perceptions concerning his competencies: Alex is achieving below average in mathematics and doesn't expect to succeed in this subject area. He appears to have an external locus of control ("I can't learn it"), and low efficacy concerning his achievement in mathematics (" I don't understand much of what you put on the board"). In other words, he doesn't believe that anything he could do would lead to success and doesn't believe he has the necessary knowledge or skills to attain success. Finally, he has little task value for studying math ("As far as I'm concerned, studying math is just a waste of time.") These perceptions negatively impact his cognitive engagement in mathematics.

Mr. Patterson needs to evaluate how his comments might influence Alex's perceptions concerning his abilities and expectations for future success. His statement that Alex could do better if he tried harder might be interpreted by Alex that he lacks ability and that if he was smart, he wouldn't have to try harder. In addition, it might be helpful to discuss with Alex his notion of what it means to be smart. Dweck (1986) has found that children can have two different perspectives or theories about intelligence. Incremental theorists believe that intelligence is modifiable by the degree of one's effort. When students with both beliefs are givendifficult tasks to complete, entity theorists are more likely to give up sooner and state they don't have the ability, while incremental theorists persist on the task and demonstrate greater effort when tasks become more difficult.

Finally, Alex's avoidance behaviors (i.e., not coming to class the day of the a quiz and leaving his book at home) are attempts to protect his self-worth. He may be thinking: "If I don't try, I can't be labeled dumb, just lazy or defiant!" This belief system provides him with excuses for potantial failure by reducing the impact of causal attributions of ability as the cause of his low achievement.

Intervention Strategies: A Cognitive Perspective In the previous section we identified students' beliefs and perceptions that influence their motivation to learn. We also indicated that a mastery orientation toward learning is beneficial to academic success. The characteristics of mastery-oriented students identified in Table 1 include interest in improving their knowledge, willingness to take risks, enjoyment of academic challenges, belief that errors are part of the learning process, and belief that ability can be improved through exhibiting greater effort. One of the most important research

findings is that mastery oriented students are more likely to use more complex learning strategies in their approach to learning (Ames & Archer, 1988).

Evidence indicates that certain teacher behaviors and classroom instructional organizational factors are more likely to elicit a mastery goal orientation, thus changing students' motivational perceptions (Ames, 1992; Maehr & Anderman, 1933). Six specific steps can be taken in the classroom to attain a mastery orientation. These steps--actually dimensions--were first identified and described by Epstein (1988) and are now being implemented by Ames (1992), Maehr (1992), and Midgley (1991). The acronym TARGET represents the six interrelated dimensions: authority, recognition, grouping , evaluation, and time.

The cognitive perspective on motivation would emphasize classroom practices that positively influenced perceived interest and value of the task (value component), perceived competence (expectancy component), and confidence in one's ability to complete the task successfully (affective component). The TARGET dimensions for classroom intervention is one model that attempts to impact students perceptions and beliefs.

Task Dimension The task dimension focuses on the intrinsic value of learning by encouraging teachers to select tasks that provide challenge and interest in learning. Mr. Patterson should assign practical math problems so Alex can learn how math is used in his daily life (e.g., Figuring out how much discount he can get from a supermarket coupon to buy a product he wants). These assignments would be an important first step in changing Alex's beliefs about the value of math.

Secondly, Mr. Patterson could assign challenging, but noncompetitive games

involving math computation and problem-solving skills. Finally, he also need to think about how he presents assignments. Brophy et al. (1983) found that students were less likely to become involved in a task when the teacher introduced it in a negative fashion (i.e., suggesting the task was boring or pointless, or that they would find it difficult or frustrating). Finally, Mr. Patterson could allow Alex to establish his own short-term goals for obtaining competency in mathematics and provide him with learning strategy instruction. If Alex achieves some measure of success by taking charge of his own learning, he may develop greater math efficacy and hhigher expectancy for future success. Most important, he may come to believe that effort pays off.

Authority Dimension The authority dimension focuses on allowing students to make more decisions in what and how they learn. Research indicates that students respond positively to classroom environments in which they can exercise some control (Ryan, Connell, & Deci,, 1985). Also, there is evidence that self-efficacy is higher in classroom situations where autonomy is valued (Grolnick & Ryan, 1987). Therefore, giving Alex the opportunity to make decisions about setting individual progress goals for improving his math achievement and selecting homework assignments may enhance his perceptions of internal control over his environment and his sense of efficacy regarding mathematics. Also, by teaching Alex the learning strategies necessary to solve math problems on his own, he would be more likely to take responsibility for his own learning.

Recognition Dimension The recognition dimension concerns the formal and informal use of rewards, incentives, and praise in the classroom. Ames (1992) points out that "the types of rewards, reasons for rewards, and the distribution of rewards have

important consequences for whether children develop an interest in learning, feelings of self-worth, and a sense of satisfactions with their learning" (p. 336). Mr. Patterson's chart and graphs involves a system which guarantees that many students receive negative recognition. As a result, it does little for students like Alex who perform low and have low self-efficacy for their math achievement. A system needs to be initiated in which there is more emphasis on other characteristics than ability (e.g., effort and self-improvement). If Mr. Patterson insists on using charts, he might include charts entitled: " Most Improved Students" or "Highest Effort." He might also speak to Alex privately to provide personal feedback about his effort, accomplishments, and improvement.

Grouping Dimension The grouping dimension focuses on students' ability to work cooperatively with others rather than competitively on school tasks. Students respond positively to classroom situations in which they can collaborate with their peers (Ames, 1987; Nicholls, 1983). Cooperative learning also has the potential to elicit more student involvement because it presents less risk for any given student (Johnson & Johnson, 1985). Alex already has a peer group in place. If Mr. Patterson used cooperative learning, Alex's interest and engagement in math activities might improve.

Evaluation Dimension The evaluation dimension involves classroom procedures used to assess and monitor student learning. Since evaluation plays an important role in the classroom, students' motivation to learn can be undermined by the type of evaluation system used (Covington, 1992). Ames (1984) believes that students are more likely to develop a mastery orientation when evaluation is based on individual improvement, progress toward individual goals, participation, and effort. Mr. Patterson's

competitive system of evaluation is doing little to motivate Alex. He should consider evaluation systems that emphasis individual progress such as portfolio assessment or base his evaluation on a written contract with Alex. Both of these procedures can encourage Alex to take more personal responsibility for his behavior and highlight that effort can increase achievement.

Time Dimension The time dimension concerns the appropriateness of the tasks, the pace of instruction, and the time allotted for completing learning activities and assignments. As Alex gets further behind in his class work, he may feel overwhelmed each day when confronted with new assignments. If Alex was given more freedom in determining his learning pace, his effort might increase and, as a result, he might experience less performance anxiety and be more willing to complete tasks.

A Sociocultural Analysis of Motivational Problems

Social constructivist theory suggests motivation is: 1) socially negotiated (what is motivating, what is interesting, and how it is displayed), 2) socially distributed (not just a characteristic of the child), and 3) context-specific (related to features of specific activity settings). The general idea in addressing "motivational problems" is that motivation, like other mental activity, is mediated and therefore can be re-mediated (Cole & Griffin, 1983; Laboratory of Comparative Human Cognition, 1982). That is, specific elements of the activity setting can be systematically modified to assist performance. In contrast, the cognitive orientation suggests that students alone process environmental, cognitive, and affective information and generate feelings/thoughts/beliefs that influence actions indicative of motivation such as on-task behavior, task engagement, interest, etc).

One immediate implication of the view is that the range and type of activity

settings to which a given child has access to need to be examined. As Rohrkember (1989) states:

> ...a Vygotskian perspective of self-regulated learning is one that stresses socialization processes and that the internalization of the social/instructional environments of home and school must be considered if we are to fully understand adaptive learning in students' classroom performance. A specific learning event is not isolated from prior experience: present intrapersonal consequences can be related to former and ongoing interpersonal influences." (Rohrkemper, 1989, p. 143).

In Alex's case, an issue of primary importance is the exploration of the culturally and socially mediated experiences and understandings he brings to school and school-like literacy and numeracy activities. The fact that Alex's parents are immigrants may indicate that the understanding of school and all its cultural norms and practices is different from that found in many traditional schools (Au, 1993). Is Alex unfamiliar with the school-based norms about how competence is displayed (Mehan, 1978)? Does school success lead to greater economic and social outcomes in the eyes of Alex and his family? Or is schooling relegated to a secondary status? (Ogbu, 1987). How are literacy and numeracy practiced and valued in the family? What are the activity settings types of mediation which are found most frequently at home and in the community? Are cooperative activity or learning settings more common than competitively structured settings? Does the fact that Mr. Patterson chooses to emphasize a competitive orientation in the classroom result in an unfamiliar and uncomfortable context?

When motivation is understood in terms of a culturally mediated norm, it is possible to distinguish between motivation and motivated behaviors. Sivan (1986) points out that:

> The case may arise when students might 'act motivated' in order to be accepted by the teacher or by peers in the class. Consequently, 'acting motivated' becomes a goal in itself. Or, in the case

> of a child who seems constantly off task, the teacher may see that she or he is very interested in and engaged in his or her own learning task, is 'motivated', and in not really just fooling around. By realizing that student motivated behaviors are a cultural norm, teachers can more closely examine and understand the deviations from that norm. (Sivan, 1986, p. 219).

In Alex's case, a central focus would be to find out exactly what tasks Alex is expending his resources on (Chandler, 1992; Collins & Green, 1992).

The fact that Alex comes from an immigrant family might also indicate that he is dealing with acculturation problems in the socio-political context of the school where diversity appears to play a large role. Trueba (1983), for example, has documented how acculturation-related problems can have a strong impact on school achievement and behavior. Associating with a peer group who is uninterested in school achievement may be a strategy for establishing an identity or otherwise negotiating status in the school context.

A related consideration in conceptualizing school-related motivation (or lack thereof) is that it is necessary to take into account divergence in understandings of a given task and the significance of these understandings with reference to classroom performance. It is assumed that the common goal of instruction and motivation is to develop an internalized capacity for activity, ie, self-regulation. The independence required for self-regulated learning requires that students see themselves as invested in the outcomes or goals. Moreover, students must see themselves as being able to achieve those outcomes or goals. In order for instruction and motivation to be integrated, a certain level of "intersubjectivity" and "situation redefinition" is needed between the student and teacher. Without this, there is no common understanding in regard to the motive and the goals and the reason for perform a given activity. Under

optimal conditions, the student and teacher are in negotiation and constantly working collaboratively to obtain a goal that is understood by both to be important (Blumenfeld, Puro, & Mergendoller, 1992; Chandler, 1992; Rommetveit, (1985), Wertsch (1984), and Wertsch, Minick, and Arns (1984) have described the process of achieving intersubjectivity and situation redefinition as a process of negotiation in which the students' and teacher's understanding of objects and events in the task setting shifts from separate points of view to intermediate and final convergence.

It is sometimes the case that in the case of school learning that this achievement of intersubjectivity is a long and complex process. Imagine, for example, the discrepancy between the child's and adult's notion of "reading" during bedtime storybook reading. It is only through participation in long term mediated literacy experiences that the two understandings will converge and that of the child will approximate that of the adult's.. Importantly, however, the child is able to meaningfully participate in the entire authentic activity from the earliest beginning stages with appropriate adult mediation. Gradually, the role of the adult will diminish and the role of the child will escalate, and the child will become a self-regulated reader. The fact that Alex can't see why he needs to learn math suggests that there has been a failure to meaningfully connect learning in this domain to authentic life purposes. In other words, the learning tasks are the teacher's, not the students, and intersubjectivity appears not to have occured.

A final area which would be important to explore is the nature of the learning tasks which are commonly presented in the classroom. Of note is the fact that instruction is primarily teacher-directed, supplemented by independent seatwork. It

should be recalled that the sociocultural view conceptualizes motivation not within the head of the individual but in the interaction of the student with others in meaningful activity. That is, the task itself becomes part of the analysis. There is some suggestion that the decontextualized or "recitation" teaching script (Tharp & Gallimore, 1989) described in this classroom may foster learning for short-term recall but not complex understanding. Moreover, the fact that teaching seems to be conceptualized as unidirectional (from teacher to student) reduces the opportunity for collaborative complex problem solving on authentic activities.

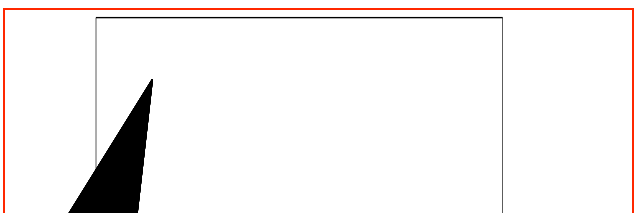
It is clear that a sociocultural orientation leads to more questions than answers in the analysis of this case. It also leads one to ask questions which go beyond the specific manifestation of school based motivation problems. Perhaps the most critical question is, How does Alex's behavior "makes sense"? That is, How is it a logical and sensible response to his understanding of the classroom and his role within it?

Intervention Strategies: A Sociocultural Perspective

From a sociocultural perspective, teaching can be defined as providing assisted performance at a level just above what the learner can independently accomplish (Tharp & Gallimore, 1989). That is, teaching is the process of providing mediation for a learner, but only when and where necessary. Mediation or assisted performance provided at this level is known as "responsive" assistance. The independent level of functioning by Alex represents the bottom or lower level of the well-known zone of proximal development. Thus, a quick analysis of the case suggests that the task of the teacher would be to provide mediation consistent with the zone of proximal development exhibited by Alex in situationally specific learning activities.

In an important sense, the questions posed about Alex in the previous section would be critical in designing a specific intervention strategy or stragegies. It is clear, however, that dealing with "motivational problems" would require individualization, taking into account each task or activity in light of Alex's zone of proximal development and adapting instruction accordingly. Scaffolding of learning tasks with a view to cognitive as well as affective components is essential. Moreover, instruction becomes bidirectional in a way that reflects the achievement of intersubjectivity and situation redefinition.

Although providing assisted performance or mediation to Alex would be one way of intervening in this situation, from a sociocultural perspective such an analysis would be incomplete. Given the sociocultural view of motivation as located in the individual's interaction with others in specific activity settings, it should come as no surprise that the target for intervention must include some unit larger than Alex as an individual. In this case the target would encompass not only Alex but Mr. Patterson and the range and nature of the learning activities in the school setting. In essence, one would ideally establish a "reciprocal chain of assistance" in which the "intervener" provides assistance to Mr. Patterson who in turn provides assistance to Alex (Tharp & Gallimore, 1989). This triad in the chain of assistance represents a segment of a presumably longer chain which extends at both ends (See Fig. 1). The reciprocal nature of this chain reflects the fact that the "learner" has been shown to contribute to task performance, problem-solving, and the continued development of the "teacher" (Baumrind, 1971; Bell, 1979; Rogoff, 1986, 1990).



A specific target of intervention with Mr. Patterson would be increased self-reflection with respect to teaching practices. The recitation-like, teacher-controlled instruction which he favors has been shown to be especially problematic in diverse classrooms such as that described in the example (Dembo, 1994). A specific focus of change would be to foster responsive teaching practices that promote collaborative, complex learning around meangingful and authentic activities (Tharp & Gallimore, 1989). In addition, Mr. Patterson would ideally be provided the tools to begin to examine students' backgrounds and individual lives as a resource for instruction (Moll, 1992) and as a basis for interpreting student behavior. These "funds of knowledge" and the range of activity settings in which they are developed and used have been shown to be especially powerful when used as the basis for designing instruction. In the case of Alex, additional issues surrouding issues of acculturation, home literacy practices, and related areas would be appropriate areas of exploration from a sociocultural framework.

With Alex, a central focus would be on establishing the relevance of both school as an institution as well as specific subject areas to more meaningful activities out of school. It is likely that changing the nature of classroom instruction to more collaborative, challenging, and authentic project-oriented activities would have a profound effect on task engagement.

Even with the preceding instructional areas addressed, it is possible that specific cognitive and learning strategies, self-regulatory practices, attributional beliefs, or content knowledge may be inadequate for optimal school learning. That is, once factors at the interpersonal level have been addressed, it would be appropriate to begin to explore intrapersonal (individual cognitive) level factors. Only at this stage, however, would specific intrapsychological activity be a direct target of intervention. Again, the model of assisted performance would be the guiding framework in a fashion similar to that described to Sivan (1986).especially as described below:

> ...by means of assisted learning.. a more experienced peer or a teacher assists a child at a nonindependent functioning level, pulls him or her along, and offers assistance while the child gradually develops the ability to perform independently. Assisted learning is the method by which instructional and motivational goals are integrated, the student's cognitive and affective needs are able to be met, and the child can be helped to achieve motivational competence. (Sivan, 1986, p. 222).

Gallimore, Tharp, & John-Steiner (1990) have reviewed seven specific means of assistance which have well-documented empirical foundations in the psychological literature. These include the following:

1. Modeling: offering behavior for imitation. Modeling assists by giving the learner information, and a remembered image that can serve as a

performance standard.

2. Feedback: the process of providing information on a performance as it compares to a standard. Geedback is essential in assisting performance because it allows the performance to be compared to the standard, and thus allows self-correction.
3. Contingency Management: the application of the principles of reinforcement and punishment to behavior
4. Instructing: requesting specific action. It assists by specifying the correct response, by providing clarity, information, and decision-making. It is most useful when the learner can perform some segments of the task, but cannot yet analyze the entire performance, or make judgements about the elements to choose.
5. Questioning: a request for a verbal response that assists by producing a mental operation that the learner cannot or would not produce alone. This interaction assists further by giving the assistor information about the learner's understanding.
6. Cognitive structuring: "explanations". Cognitive structuring assists by providing explanatory and belief structures which organize and justify new learning and perceptions, and allow the creation of new or modified schemata.
7. Task structuring: chunking, segregating, sequencing, or otherwise structuring a task into or from components. This assists the learner by modification of the task itself, so that the units presented to the learner fit

into the zone of proximal development, when the entire task is beyond that zone.

What the sociocultural analysis adds to the above list of long-establlshed means of assisting performance is the notion of responsivity. That is, these means of assisting performance should not be used in prescriptive, inflexible, or nonresponsive ways. In the case of Alex, the more systematic and comprehensive exploration of his learning activities would be the guide for initial intervention and ongoing monitoring of his responses would be the guide for subsequent revision.

COMPARING FRAMEWORKS

The earlier discussion of the cognitive perspective suggests clearly that there are strong connections between individual differences in student's motivational goals and their cognitive engagement in schooling tasks. When students are cognitively engaged, they are said to be motivated; That is, they use metacognitive and other self-regulatory strategies to approach learning tasks in a thoughtful fashion. Moreover, the cognitive literature suggests that the classroom context and specific teacher practices impact the type of learning goals students adopt. In short, students who perceive the classroom as a place which stresses learning (mastery) versus performance goals report more positive attitudes toward the academic subject, more intrinsic motivation, and are more cognitively engaged.

The sociocultural perspective likewise stresses the need for students to engage thoughtfully in higher-order cognitive tasks and the role of self-regulatory processes in the successful negotiation of classroom tasks. The mediation which forms the basis fof appropriate instruction in fact is directly traceable to the behavior change mechanisms

which have been thoroughly investigated in the psychological research.

It is clear that these are not diametrically opposed theoretical viewpoints. In fact, one can argue that both perspectives are very similar in the way they argue against extrinsic rewards, public evaluation, grouping by abililty level, and performance-oriented goals. Moreover, both emphasize a focus on higher-order cognitive processes, self-regulation, a constructivist perspective on learning and thinking, and the important role of context in impacting behavior. What are the crucial differences between these perspectives, then? Are differences a matter of emphasis or fundamentally different ways of understanding the nature of psychological phenomena such as classroom motivation? In order to begin to explore this issue, we have elected to compare the two frameworks along selected key dimensions. These dimensions and their characteristic manifestations within each framework are represented in Table 2.

Insert Table 2 about here

Perhaps one of the most difficult to understand, yet key differences of the cognitive and sociocultural frameworks, is reflected in the answer to the question, "Where are psychological constructs such as motivation located?" The well-ingrained practice of viewing psychological constructs as located "within the head" of the individual makes it difficult to conceptualize an analytic unit other than the individual. Nevertheless, the sociocultural perspective argues for a larger unit of analysis, a unit in which the individual is only a part and not the entirety. To claim that common psychological constructs such as motivation are situated "...in the interaction of the

individual engaged with more competent others in meaningful activity" (i.e., in specific activity settings) may sound somewhat mystical and baffling. However, it broadens in a theoretically useful and novel way the psychological analysis of successful and unsuccessful school outcomes and experiences.

A related dimension has to do with the notion of context and the role it plays in each of the frameworks. While the role of context is much more evident in contemporary cognitive accounts of motivation and other psychological constructs, generally context is treated as an independent variable. That is, context is seen to have an important impact on behavior such that variability can be reasonably accounted for. However, in the sociocultural framework, context (or activity setting) is the central focus of study. Behavior cannot be meaningfully separated from the specific activity settings in which it is constructed and displayed. In fact, the norms and cultural practices which characterize specific activity settings are themselves socially constructed and situated with reference to specific cultural and historical anchors. The very fact that we are concerned with the dimension of human psychological functioning which we term achievement motivation in the classroom is a historically and culturally determined practice which would not have equally important meaning at other times and/or in other places. That is, even our concern and that of our readers with this specific topic can be said to be socially constructed, that is, situated within a given community of social practice.

In addition, an important distinction can be found in the theoretical importance placed upon social interaction in each of the frameworks. In general, cognitive theory views social interaction as a process most often seen as the proper domain of other

specialities such as social psychology. Although others are seen to be important influences on individual behavior, the overriding concern is with the individual. Thus, while a teacher's orientation can be shown to have a clear influence on motivational beliefs, the focus is on those beliefs and the individual who manifests them. In contrast, the sociocultural approach views social interaction as the root of higher order cognitive processes. At another level, thinking can be viewed as internalized social interaction (Wertsch, 1979).

There are two other areas of contrast which merit attention. The first has to do with the role of socio-cultural knowledge. In general, the cognitive framework places importance on the role of background knowledge as a factor which can facilitate comprehension and which serves as the foundation for the integration of new knowledge. As such, it is not ignored. However, in the sociocultural framework, it is the individual socio-cultural knowledge which serves as the basis for authenticity in learning and other cognitive actitivies. That is, one view of the "authenticity" which is so valued in this framework is the degree to which learning activities connect to this knowledge base which is socially, culturally, and historically situated. Thus, one of the more successful interventions with low achieving English-learning students has centered on training teachers to tap into students' and their families' "funds of knowledge" as the basis of instruction (Moll & Greenberg, 1990).

A final and non-trivial distinction between the cognitive and sociocultural frameworks has to do with the characteristic methodological and empirical foundations upon which they rest. In general, American psychologists are more at home with quantifiable constructs and variables which can be unambigrously operationalized and

combined in larger models which can be tested for predictive power and universal application. The experimental roots and laboratory roots of the discipline tend to be clearly reflected in the questions pursued and how they are investigated.

In contrast, the sociocultural concern with socially and culturally-mediated processes has resulted in the view that these can only be examined and understood with reference to the specific activity settings in which they are constructed. The attempt to study context and dynamic sociocultural processes has led to much more reliance on qualitative approaches to the investigation of behavior and psychological constructs such as motivation. Researchers in this tradition have been quick to adopt and extend the tools of allied fields such as linguistics, anthropology, and other related sciences. Often, this adoption of non-traditional methodology has led to a general mistrust of traditional psychological, laboratory-derived data collection procedures (Csikszentmihalyi, 1990).

Conclusion

Returning to the question regarding whether there are clear differences between cognitive and sociocultural theories, the above discussion suggests that there are a number of areas where they overlap in interesting ways. The clearest links and those which distinguish both theories from earlier perspectives on learning and cognition have to do with constructivism, the active role of the learner in meaningful learning, and the role of affective factors in higher-order cognition (Marshall, 1992). These elements have led to fundamental changes in how school based learning is seen and the nature of the questions which are deemed important to investigate.

On the other hand, the preceding analysis suggests that there are crucial areas

of difference as well. While constructivism serves as the common thread linking these two powerful frameworks, the distinction between cognitive and social constructivism should not be minimized. Moreover, the universal cognitive processes such as metacognition, strategy usage, and self-regulatory behaviors which are the focus of the cognitive framework leave insufficient room for social and cultural differences which increasingly permeate the classrooms in which those cognitive activities are examined.

In tandem, however, the powerful analysis of learning processes from the cognitive perspective combined with the focus on the social and cultural roots of higher order cognitive processes and affective dimensions of learning such as motivation from the sociocultural perspective promise continued and significant advances in improving learning in school aged children.

Table 1.

Two Definitions of Schooling

Success defined as ...	improvement, progress mastery, innovation, creativity	high grades, high performance compared with others, relative achievement on standardized measures
Value placed on ...	effort, academic venturesomeness	demonstrating high performance relative to others
Basis for satisfaction...	progress, challenge, mastery	doing better than others, success relative to effort
School/classroom oriented toward...	how all students are learning, progressing	students' relative performance levels
Focus...	the student as a continual learner	periodic demonstration of achievements relative to others
Reasons for effort...	learn something new	high grades, demonstrated ability
Evaluation criteria...	absolute criteria; evidence of progress	norms; social comparisons
Type of involvement...	all participate; high degree of choice	differential participation by ability; low choice
Errors viewed as...	part of the learning process, informational	failure, evidence of lack of ability
Ability viewed as...	developing through effort	fixed

Source: Maehr, 1992

Table 2.
A Comparison of Cognitive and Sociocultural Theoretical Frameworks on Selected Dimensions

Element	Cognitive Framework	Sociocultural Framework
nature and/or locus of motivation or comepetence	individual psychological construct	socially constructed and situated in specific activity settings
unit of analysis	individual-cognitive	individual engaged in activity settings with more competent others
role of context	a variable impacting behavior	the unit of analysis
nature of constructivism	cognitive	social
role of social interaction	peripheral	the basis of learning and development; the root of higher-order cognitive processes
role of sociocultural knowledge	peripheral	central
preferred methodological tools	quantitative, experimental	qualitative, observational

REFERENCES

Abramson, L., Seligman, M., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Ames, C. (1987). The enhancement of student motivation. In M. L. Maehr & D. A. Kleiber (Eds.), Advances in motivation and achievement: Enhancing motivation (Vol. 5) (pp. 123-148). Greenwich, CT: JAI

Ames, C. (1990). Motivation: What teachers need to know. Teachers College Record, 91, 409-421.

Ames, C. (1992). Achievement goals and the classroom motivational climate. In D. H. Schunk & J. L. Meece (Eds.), Student perceptions in the classroom (327 -348). Hillsdale, NJ: Erlbaum.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. Journal of Educational Psychology, 80, 260-267.

Ames, C., & Felker, D. W. (1979). Effects of self-concept on children's causal attributions and self-reinforcement. Journal of Educational Psychology, 71, 613-619.

Au, K.H. (1993). Literacy instruction in multicultural settings. Orlando, Fl: Harcourt, Brace, Jovanovich.

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.

(1971). Current patterns of parental authority. Developmental Psychology Monographs, 4, 99-103.

Bell, R.Q. (1979). Parent, child, and reciprocal influences. American Psychologist, 34, 821-826.

Blumenfeld, P.C., Puro, P., & Mergendoller, J.R. (1992). Translating motivation into thoughtfulness. In H.H. Marshall (Ed.), Redefining student learning: Roots of educational change. (pp. 207-240). Norwood, NJ: Ablex Publishing Crop.

Brophy, J. E., Rohrkemper, M., Rashid, H., & Goldberger, M. (1983). Relationships between teachers' presentations of classroom tasks and students' engagement in those tasks. Journal of Educational Psychology, 75, 544-552.

Chandler, S. (1992). Learning for what purpose? Questions when viewing classroom learning from a sociocultural curriculum perspective. In H.H. Marshall (Ed.), Redefining student learning: Roots of educational change. (pp. 33-58). Norwood, NJ: Ablex Publishing Crop.

Cole, M., & Griffin, P. (1983). A Socio-historical approach to re-mediation. The Quarterly Newsletter of the Laboratory of Comparative Human Cognition, 5(4), 9-74).

Collins, E., & Green, J.L. (1992). Learning in classroom settings: Making or breaking a culture. In H.H. Marshall (Ed.), Redefining student learning: Roots of educational change. (pp. 59-86). Norwood, NJ: Ablex Publishing Crop.

Covington, M. V. (1983). Motivated cognitions. In S. G. Paris, G. M. Olson, & H. W. Stevenson (Eds.), Learning and motivation in the classroom (pp. 139-164). Hillsdale, NJ: Erlbaum.

Covington, M. V. (1984). The self-worth theory of achievement motivation: Findings and implications. Elementary School Journal, 85, 5-20.

Covington, M. V. (1992). Making the grade: A self-worth perspective on motivation and school reform. Cambridge, NY: Cambridge University Press.

Covington, M. V., & Omelich, C. (1979). Effort: The double-edged sword in school achievement. Journal of Educational Psychology, 71, 169, 182.

Csikszemtmihalyi, M. (1990). Literacy and intrinsic motivation. Daedalus, 19(2), 115-140.

DeCharms, R. (1981). Personal causation and locus of control: Two different traditions and two uncorrelated measures. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol. 1. Assessment methods. New York: Academic Press.

Deci, E. L. (1975). Intrinsic motivation. New York: Plenum.

Dweck, C. S. (1986). Motivational processes affecting learning. American Psychologist, 41, 1040-1048.

Eccles, J.S., Adler, T.F., Futterman, R., Goff, S.B., Kaczala, C.M., Meece, J.L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), Achievement and achievement motivation (pp. 75-146). San Francisco: Freeman.

Eccles, J.S., Midgley, C., & Adler, T. (1984). Grade-related changes in the school environment

Epstein, J. L. (1988). Effective schools or effective students: Dealing with diversity. In R. Haskins & D. MacRae (Eds.), Policies for America's public schools: Teacher equity indicators. Norwood, NJ: Ablex.

Gallimore, R., Tharp, R., & John-Steiner, V. (1990). The developmental and sociocultural foundations of mentoring. New York, New York: Columbia

University, Institute for Urban Education. (ERIC Document Reproduction Service No. ED 354 292)

Grolnick, W. S., & Ryan, R. M. (1987). Autonomy in children's learning: An experimental and individual differences investigation. Journal of Personality and Social Psychology, 52, 890-898.

Holt, J. (1982). How children fail (rev. ed.). New York: Delta.

Johnson, D. W., & Johnson, R. T. (1985). Motivational processes in cooperative, competitive, and individualistic learning situations. In C. Ames & R. Ames (Eds.), Reseaerch on motivation in education (Vol. 2) (pp. 249-286). New York Academic Press.

Laboratory of Comparative Human Cognition. (1982). A model system for the study of learning difficulties. The Quarterly Newsletter of the Laboratory of Comparative Human Cognition 4(23), 39-66.

Marshall, H.H. (1992). Redefining student learning: Roots of educational change. Norwood, NJ: Ablex.

Maehr, M. L. (1992, April). Transforming school culture to enhance motivation. Paper presented at annual meeting of the American Educational Research Association, San Francisco.

Maehr, M. L., & Anderman, E. M. (1993). Reinventing schools for early adolescents. Elementary School Journal, 93, 593-610.

Marshall, H.H. (Ed.). (1992). Redefining student learning: Roots of educational change. Norwood, NJ: Ablex Publishing Crop.

Meece, J. L. (1991). The classroom context and student motivational goals. In M.

Maehr & P. Pintrich (Eds.). Advances in motivation and achievement (Vol. 7) (pp. 261-285). Greenwich, CT: JAI Press.

Moll, L.C., & Greenberg, J.B. (1990). Creating zones of possibilities: Combining social contexts for instruction. In L.C. Moll (Ed.), Vygotsky and education: Instructional implications and applications of sociohistorical psychology. New York: Cambridge Univ. Press.

Nicholls, J. G. (1983). Conceptions of ability and achievement motivation: A theory and its implications for education. In S. G. Paris, G. M. Olson, & H. W. Stevenson (Eds.), Learning and motivation in the classroom (pp. 211-237). Hillsdale, NJ: Erlbaum.

Nicholls, J. G. (1984). Conceptions of ability and achievement motivation. In R. E. Ames & C. R. Ames (Eds.), Research on motivation in education: Vol. 1. Student motivation (pp. 39-73). Orlando, FL: Academic Press.

Nolan, S. B. (1988). Reasons for studying: Motivational orientations and study strategies. Cognition and Instruction, 5, 269-287.

Ogbu, J.U. (1987). Variability in minority school performance: A problem in search of an explanation. Anthropology and Education Quarterly, 18(4), 312-334.

Paris, S. G., & Byrnes, J. P. (1989). The constructivist approach to self-regulation and learning in the classroom. In B. J. Zimmerman & D. H. Schunk (Eds.), Self-regulated learning and academic achievement: Theory, research and practice (169-200). New York: Springer-Verlag.

Pintrich, P. R., & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. Journal of Educational

Psychology, 82, 33-40.

Pintrich, P. R., & Garcia, T. (1992, April). An integrated model of motivation and self-regulated learning. Paper presented at the annual meeting of the American Educational Research Association.

Pintrich, P. R., & Schrauben, B. (1992). Students' motivational beliefs and their cognitive engagement in classroom academic tasks. In D. Schunk & J. L. Meece (Eds.), Student perceptions in the classroom (pp. 149-183). Hillsdale, NJ: Erlbaum.

Rogoff, B. (1986). Adult assistance of children's learning. In T.E. Raphael (Ed.), The contexts of school based literacy (pp. 27-42). New York: Random House.

Rogoff, B. (1990). Apprenticeship in thinking. New York: Oxford University press.

Rommetveit, R. (1985). Language acquisition as increasing linguistic structuring of experience and symbolic behavior control. In J.V. Wertsch (Ed.), Culture, communication, and cognition: Vygotskian perspectives. (pp. 183-204). New York: Cambridge University Press.

Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80 (1, Whole No. 609).

Ryan, R. M., Connell, J. P., & Deci, E. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. Ames (Eds.), Research on motivation in education: Vol. 2. The classroom milieu (pp. 13 -51). Orlando, FL: Academic Press.

Schunk, D. H. (1989). Self-efficacy and cognitive skill learning. In C. Ames & R. Ames (Eds.), Research on motivation in education: Vol. 3. Goals and cognitions (13-

44). San Diego: Academic Press.

Schunk, D. H. (1991). Goal setting and self-evaluation: A social cognitive perspective on self-regulation. In M. L. Maehr & P. R. Pintrich (Eds,), Advances in motivation and achievement (Vol. 7) (pp. 85-113). Greenwich, CT: JAI

Schunk, D. H., & Meece, J L. (Eds.). (1992). Student perceptions in the classroom. Hillsdale, NJ: Erlbaum.

Spaulding, C. L. (1992). Motivation in the classroom. New York: McGraw-Hill.

Trueba, H.T. (1983). Adjustment problems of Mexican and Mexican-American students: An anthropological study. Learning Disability Quarterly, Vol. 6, 395-415.

Weiner, B. (1979). A theory of motivation for some classroom experiences. Journal of Educational Psychology, 71, 3-25.

Weiner, B. (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.

Weiner, B. (1990). History of motivational research in education. Journal of Educational Psychology, 82, 616-622.

Weiner, B., & Kukla, A. (1970). An attributional analysis of achievement motivation. Journal of Personality and Social Psychology, 15, 1-20.

Wentzel, K. R. (1991). Social and academic goals at school: Motivation and achievement in context. In M. L. Maehr & P. R. Pintrich (Eds.), Advances in motivation and achievement (Vol. 7) (pp. 185 -212). Greenwich, CT: JAI.

Wertsch, J.V. (1979). From social interaction to higher psychological processes: A clarification and application of Vygotsky's theory. Human Development, 22, 1-22.

Wertsch, J.V. (1984). The zone of proximal development: Some conceptual issues. In

J.V. Wertsch & B. Rogoff (Eds.), Children's learning in the zone of proximal development (pp 7-18). San Francisco: Jossey-Bass.

Wertsch, J.V., Minick, N., & Arns, F.J. (1984). The creation of context in joint problem solving. In B. Rogoff & J. Lave (Eds.), Everyday cognition (pp 151-171). Cambridge, MA: Harvard University Press.