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ABSTRACT

This guide provides a general overview of research on student motivation in classroom and school settings and a guide to help teachers and school teams to analyze the sources of students motivational problems and consider changes that will improve motivation. Chapter 1 defines motivation, considers the extent of the motivation problem, and summarizes some conclusions from the research. Chapter 2 combines a review of the research on the use of incentives with the practical experience of educators in an urban district (Birmingham, Alabama). It stresses that rewards can be overused and reduce interest in learning and that punishment can lead to alienation and frustration. Chapter 3 discusses classroom factors (related to instruction, assessment, and classroom climate) that have been shown to relate to student interest and effort and suggests an overall framework for a classroom environment that results in student engagement and interest. Chapter 4 focuses on school wide policies and practices that affect student motivation. Chapter 5 suggests ways to assess motivation including analyzing achievement and behavioral indicators, using existing motivation instruments, and using focus groups. Chapter 6 offers concluding remarks about how schools can organize to improve student motivation. Schools are urged to collect data from students and to support ongoing planning concerning the improvement of student motivation. (Contains 85 references.) (JLS)

Improving Student Motivation

A Guide for Teachers and School Improvement Teams

R&D

SERVE

SouthEastern Regional Vision for Education

Improving Student Motivation

A Guide for Teachers and School Improvement Teams

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About the SERVE Organization

SERVE, the SouthEastern Regional Vision for Education, is a consortium of educational organizations whose mission is to promote and support the continuous improvement of educational opportunities for all learners in the Southeast. Formed by a coalition of business leaders, governors, policymakers, and educators seeking systemic, lasting improvement in education, the organization is governed and guided by a Board of Directors that includes the chief state school officers, governors, and legislative representatives from Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina. Committed to creating a shared vision of the future of education in the Southeast, the consortium impacts educational change by addressing critical educational issues in the region, acting as a catalyst for positive change, and serving as a resource to individuals and groups striving for comprehensive school improvement.

SERVE's core component is a regional educational laboratory funded since 1990 by the Office of Educational Research and Improvement (OERI), U.S. Department of Education. Building from this core, SERVE has developed a system of programs and initiatives that provides a spectrum of resources, services, and products for responding effectively to national, regional, state, and local needs. SERVE is a dynamic force, transforming national education reform strategies into progressive policies and viable initiatives at all levels. SERVE Laboratory programs and key activities are centered around

- Applying research and development related to improving teaching, learning, and organizational management
- Serving the educational needs of young children and their families more effectively
- Providing field and information services to promote and assist local implementation of research-based practices and programs
- Offering policy services, information, and assistance to decision makers concerned with developing progressive educational policy
- Connecting educators to a regional computerized communication system so that they may search for and share information, and network
- Developing and disseminating publications and products designed to give

educators practical information and the latest research on common issues and problems

The Eisenhower Consortium for Mathematics and Science Education at SERVE is part of the national infrastructure for the improvement of mathematics and science education sponsored by OERI. The consortium coordinates resources, disseminates exemplary instructional materials, and provides technical assistance for implementing teaching methods and assessment tools.

The SouthEast and Islands Regional Technology in Education Consortium (SEIR◆TEC) serves 14 states and territories. A seven-member partnership led by SERVE, the consortium offers a variety of services to foster the infusion of technology into K-12 classrooms. The Region IV Comprehensive Assistance Center provides a coordinated, comprehensive approach to technical assistance through its partnership with SERVE.

A set of special purpose institutes completes the system of SERVE resources. These institutes provide education stakeholders extended site-based access to high quality professional development programs, evaluation and assessment services, training and policy development to improve school safety, and subject area or project-specific planning and implementation assistance to support clients' school improvement goals.

Following the distributive approach to responding and providing services to its customers, SERVE has ten offices in the region. The North Carolina office at the University of North Carolina at Greensboro is headquarters for the Laboratory's executive services and operations. Policy offices are located in the departments of education in Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina.

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Introduction and Overview

More and more teachers are reporting that motivating their students to learn is one of their most difficult challenges. While some students seem self-motivated to learn, others show very little interest in learning, gaining new skills, or improving their abilities. Far too many students do not develop their academic abilities or talents because they lack the desire to do so. By the time a student has reached adolescence, poor motivation has become one of the chief contributors to underachievement.

Improving students' motivation is generally viewed as important because it is related to high achievement. However, it is also an important educational outcome itself. We want our students to achieve, but we want them to also value the process of learning and to develop a long-term commitment to learning. John Dewey (1963) said in the 1930's that "the most important attitude that can be formed is that of the desire to go on learning" (p. 48). Teacher education programs, however, still give only minimal attention to the subject of student motivation. Many teachers, therefore, begin their teaching careers with little working knowledge of how to motivate students (Ames, 1990). Concerns about the quality of student motivation have received very little attention in recent debates about school reform. The focus of policy at the state level is often on district-level incentives for increased test scores and sanctions for low test scores, with little consideration of the kinds of impact such policies might have on teachers and, ultimately, student motivation.

This document presents a general overview of current research and thinking on student motivation in classroom and school settings. It is designed as a resource to help teachers and school teams analyze the sources of students' motivational problems and consider changes that will improve motivation. Specifically, this publication is intended to help the reader

- understand the importance of considering student motivation as an educational outcome,
- consider causes of lack of student motivation,
- reflect on how teaching practices affect student motivation,
- explore effective ways of using incentive systems based on research,
- consider schoolwide policies that enhance intrinsic forms of motivation, and
- consider ways to assess student motivation.

Because it is intended as a resource, it does not have to be read in the order presented. The summary below outlines the intent of each chapter. We invite you to select those of most interest to you.

Chapter One defines motivation, considers the extent to which we have a motivation problem in the American educational system, and introduces the reader to some conclusions from research on motivation. Evidence is cited to suggest that

- Lack of motivation is a major problem in education. Students often exert the minimum rather than maximum effort.
- There are individual differences in motivation which arise from a number of factors (child-rearing practices, cultural influences, etc.), but motivation cannot be considered as primarily the student's problem because researchers have documented that student motivation declines over the school years.
- Motivation can be increased. One researcher (Ames, 1990b) assembled a large notebook of strategies for teachers and parents to consider in increasing students' motivation to learn. She reported a number of positive student outcomes from the work of these teachers.

Chapter Two combines a review of the research on the use of incentives with the practical experience of educators experimenting with incentive systems in an urban district (Birmingham, Alabama, the site of a SERVE Research and

Development project) with a high percentage of disadvantaged youth. Although incentives and consequences are frequently used by schools to improve motivation, research suggests that such strategies have limitations that need to be understood and considered in planning.

> *The relation of extrinsic rewards to individual differences is of critical importance. In the classroom, extrinsic incentives are often intended to motivate the least attentive students or those who typically perform poorly; however, the rewards are typically applied to the entire classroom or even the entire school population, as in many reading incentive programs. The hidden costs become most apparent when they are applied to these larger groups where individual differences in interest, performance, and ability are ignored (Ames, 1992, pg. 417).*

Chapter Two stresses that rewards can be overused and reduce interest in learning and punishments can lead to increased alienation and frustration among students. The context for the use of rewards and consequences are critical to their impact. The more controlling the environment in which they are administered, the more compliance and obedience may be served but the less we will help students become responsible and caring people.

In Chapter Three, you will find a discussion of a variety of classroom factors that have been shown to relate to student interest and effort and an overall framework for a classroom environment that results in a high level of student engagement and interest.

Factors related to instruction, assessment, and classroom climate are described. This chapter is critical for promoting dialogue among teachers about what constitutes good practice in light of the goal of improving student motivation. A checklist is provided to help teachers assess their current practices.

Consideration of schoolwide policies and practices that affect student motivation is the focus of Chapter Four. It is not enough to provide teachers with opportunities to reflect on how to improve motivation in their classroom settings. Schoolwide practices in grouping, curriculum, grading, etc., must also be considered in light of their impact on student motivation.

This chapter is important for school administrators and leadership teams to read to better understand their role in supporting teachers' efforts to improve student motivation.

In Chapter Five, we suggest ways to assess motivation as a starting point for identifying an action plan for improvement. Methods include analyzing achievement and behavioral indicators, using existing motivation instruments, adapting items, and using focus groups or other means to get student and parent input.

Students can articulate what they like and don't like about courses and what conditions are best for motivating them. McCombs et al (1995) note that when we listen to students talk about conditions that motivate them, they talk about teachers who know and care about them, who provide challenges in a non-threatening environment, who give them choices and responsibility and solicit their input, who make learning fun, and who make instruction relevant. Beginning to explore student attitudes and perceptions is critical for improving motivation.

Chapter Six offers some concluding remarks about how a school might organize itself to consider the information in Chapters Two through Five.

Webb, F.R., Covington, M. V., & Guthrie, J.W. (1993). "Carrots and sticks: Can school policy influence student motivation?" In T. Tomlinson (Ed.), *Motivating students to learn*. Berkeley, CA: McCutchan Publishing Corporation.

Chapter One

How Engaged are Students in Learning?

Chapter Preview

The goal of this chapter is to bring the reader to a better understanding of the meaning of motivation in a school setting. The information will assist educators and school improvement teams in deciding if student motivation should be considered as an important school improvement goal.

After describing what is meant by "a highly motivated student," evidence is provided to suggest that schools often stop short of the level of motivation and student engagement described and are satisfied if students follow directions, complete their work, and behave. Many students exert the minimum, rather than the maximum, effort. Underachievement is particularly problematic among the non-college-bound and non-white populations. Although it may be unrealistic for teachers or schools to think that they can motivate 100 percent of their students to learn, educators generally agree that there is room for improvement.

Factors both inside and outside of school that affect motivation are described. Intrinsic and extrinsic motivation are contrasted. We conclude that although there are individual differences in motivation, factors outside the school's control (e.g., parental and cultural influences) cannot alone explain low levels of student motivation in our middle and high schools. Research reflects significant declines in intrinsic motivation over the school years. Thus, the school environment clearly has a role in the kinds of motivation students exhibit.

Testing and accountability have been a common refrain throughout the 1980s and 1990s. The educational enterprise has been judged based on its ability to produce higher and higher test scores. At the same time this top-down pressure has been exerted, some more innovative schools with site-

based management, new curriculum frameworks, and other influences have begun a process of self-examination that typically begins or centers around discussions of what kinds of students they are trying to develop. Most of these schools, in addition to the development of basic skills, have dedicated themselves to the business of producing students who will be active learners; be motivated to learn; take responsibility for their improvement; use information; plan, think, and develop products; and care about learning.

These schools have taken the idea of site-based management seriously and are holding themselves accountable for student outcomes that go beyond state-mandated test scores. They are looking at a host of interrelated factors (curriculum, instruction, grading, scheduling, size, student involvement, grouping practices, etc.) and improving them in light of the desire to create life-long, active learners. It is not to say they don't care about improving test scores, but if they create a culture that fosters student responsibility for learning and a commitment to continuous improvement, they believe test scores will improve. **The success of many of these schools in helping students to perform at high levels is in part due to their commitment to engaging student motivation (Darling-Hammond, 1996). They care about getting the conditions right that foster students' commitment to the learning process.** These schools demonstrate that fostering motivation to learn is a worthy goal that pays rich dividends.

Darling-Hammond (1996) calls the schools which have successfully restructured, "high-involvement, high performance" schools: "high involvement" because they have relied to a greater extent on the knowledge, judgment, and skill of front-line workers (teachers) and developed more collaborative forms of planning and problem-solving that are more responsive to students' needs; "high performance" because they are approaching teaching and learning in distinctive ways. These successful schools

> *are learner-centered, in that they are deliberately organized to attend to the individual needs of learners, and learning-centered in that their work is clearly focused on developing powerful learning and proficient performances. They organize their work around learners' needs for active, inquiry-based learning opportunities that build on prior experience. Learning is organized around complex and integrative tasks that lead to major products and performances; students and teachers are grouped in ways that are sufficiently personalized for teachers to come to know their students well (Darling-Hammond, 1996, pg. 149).*

Many schools around the country are on the road to becoming such "high involvement, high performance" schools, but they need resources and information. This publication is for those interested in learning more about the rich research on student motivation, those schools or teachers who feel that their

students are not as motivated to learn as they could be, and those who want to explore ways to improve that outcome. It may be that this lack of motivation is evidenced by missing class, avoiding homework, cheating, negative attitudes in class, lack of interest in reading, choosing easy classes, or avoiding challenging work. The perception may be that many students are just "getting by" or "marking time" until graduation.

Sometimes schools recognize that they have a motivation "problem," but they opt for simplistic solutions (e.g., implement an incentive program). In addition, teachers, especially of middle and high school students, may feel that motivation is something that students either have or don't have and feel helpless to impact student motivation. These reactions to the motivation problem may be based on a lack of awareness of the research base that exists. Research on, and practical experience with, student motivation can provide a framework for beginning to think about the kind of educational environment that creates a commitment to learning. Involving teachers in assessing and trying to improve student motivation through getting the conditions right may be a missing, but vital, link to improving schools. **A key point of this document is that schools and teachers can encourage or discourage student responsibility for, and interest in, learning through the ways in which they structure the learning environment.**

In this first chapter, we explore the problem of student motivation. Consider how you would answer the following questions:

- What is a highly motivated student?
- Is the lack of student motivation—desire to work and learn—a problem in schools?
- Is the lack of motivation a student problem (they just aren't motivated), a school problem, a cultural problem, or all of these?
- What kind of motivation are we ultimately hoping to cultivate: intrinsic or extrinsic?
- If intrinsic motivation—desire to master tasks for personal satisfaction—has positive life-long benefits, why are some students intrinsically motivated and others not?
- Can schools and teachers increase student motivation to learn?

What is a Highly Motivated Student?

According to Brophy (1987a)

> *Student motivation to learn is an acquired competence developed through general experience, but stimulated most directly through modeling, communication of expectations, and direct instruction or socialization by significant others (especially parents and teachers) (pg. 40).*

When making inferences about student motivation, teachers rely on observations of behavior and performance. Motivation to learn in school is clearly linked to grades, test scores, and other measures of academic performance. However, because prior learning and instruction can affect academic performance, achievement should not be the sole indicator of student motivation.

Behavioral Indicators of Highly Motivated Students:

1. Attendance and discipline. At the most basic level, students who are motivated attend class, pay attention, and are not disruptive.

2. Participation and completion of work. Students who are motivated begin assignments with little prompting, follow directions, participate in classroom discussions, and complete tasks on time.

3. Task persistence and acceptance of errors. How long a student stays with a task, especially a difficult one, is an important indicator of motivation. Highly motivated students persist and try different solutions before seeking help when they have difficulty with a task.

4. Quality of task involvement. Students can either invest effort in learning or find shortcuts to get the task done without expending a great deal of effort. The amount and quality of effort students expend on learning tasks is an important indicator of motivation. Highly motivated students are willing to invest effort and to use the skills they have acquired.

5. Independent learning. Students who are willing to learn more than is required are reluctant to stop working on a task, even when it is time to move on to something new. They also may bring in materials from home, complete work that is not required, or ask questions to learn more about a topic.

6. Interest and liking. Highly motivated students enjoy learning, show enthusiasm, and take pride in their work.

Think about a classroom or school you are familiar with, and estimate the percent of students who

- Persist on difficult tasks or material
- Enjoy coming to school
- Sometimes engage in learning activities that go beyond course requirements
- Select challenging tasks, even though they may not initially succeed

These attitudes and behaviors are commonplace in schools where students are highly motivated.

Is the Lack of Student Motivation—Desire to Work and Learn—a Problem in Schools?

Consider the following conclusions about the lack of motivation in the United States from *Motivating Students to Learn* (Tomlinson, 1993).

- In a chapter on the anomalies between what adolescents are capable of and their lack of "academic effort" (J. Thomas: *Course Demands, Students' Study Practices, and Academic Achievement)*

  > *Recent commissioned reports and essays about the state of learning and instruction in the United States have presented a picture of the typical adolescent learner as relatively disengaged from learning, unmotivated, less than proficient at carrying out learning tasks on his or her own, and disposed to invest only a minimum of effort on academic tasks (e.g., Carnegie Forum on education and the Economy, 1986; College Board, 1985; National Commission on Excellence in Education, 1983). Surveys taken at institutions of higher education confirm this latter characterization; high school graduates are described as having desultory study practices, low-level, repetitive study strategies, and poor time and effort management habits (e.g., Bossone, 1970). Further, virtually every college and university has instituted some type of program for entering students designed to provide remedial assistance in the area of learning and study skills (Tomlinson, 1993, pg. 140).*

- From a chapter of international comparisons of motivation (L. Peak: *Academic Effort in International Perspective*)

  Among the many values and beliefs that exist in every society, some reinforce and others undermine student academic effort. Some of the most important of these beliefs and values concern the relationship of effort to success. Most cultures acknowledge that academic success is influenced by a combination of effort and innate ability, but the relative emphasis placed on effort and ability differs. . . . In Japanese schools, effort is so consistently portrayed to children as the key to success ability is rarely mentioned. Mottos and slogans adorn the walls of Japanese classrooms: "Become a child who can persevere," "If you try, you can do it," and the like. Many times a day, children are encouraged "gambatte" (hang in there) and "gaman shite" (persevere). . . . In Japan, all students are believed to be able to master the curriculum if they try hard enough, and those who are ahead of their peers should exert their effort toward helping their friends. This is in marked contrast to the United States, where ability is believed to be so crucial to academic performance and potential that it is standard practice to separate children during the first weeks of first grade into ability groups for reading. . . (Tomlinson, 1993, pg. 47).

- From a chapter on the impact of peer pressures on academic effort (B. Brown: *School Culture, Social Politics, and the Academic Motivation of U.S. Students*)

  Several observers of American high schools have reported that high school teachers routinely forge implicit treaties with their students in which academic demands are lowered in exchange for students' compliance with norms of conduct in the classroom. Teachers agree not to challenge students' intellect if students agree not to challenge teachers' authority. We know, as well, that the number of high school students who admit to cheating occasionally is quite high—55% in one recent survey. Practices such as copying homework are so commonplace that students often do not regard them as cheating. . . . The general point, however, is that peer pressures direct high school students toward moderate levels of achievement but stop well short of encouraging true devotion to scholarship (Tomlinson, 1993, pg.73).

- From a chapter on the special problems of minorities in metropolitan areas (A. Garibaldi: *Creating Prescriptions for Success in Urban Schools: Turning the Corner on Pathological Explanations for Academic Failure*)

  The majority of schools in metropolitan areas today are populated by non-white youth, many of whom are African-American or Hispanic. Unfortunately, these two groups disproportionately account for high rates of academic failure and also for disciplinary actions, such as

nonpromotions, special education placements, suspensions, and expulsions resulting from misbehavior in school. . . . While school reform efforts are indeed laudable at this point in our history, answers and solutions to the more fundamental questions and problems of underachievement and educational attainment of the masses of non-white students are needed now (Tomlinson, 1993, pg. 128).

Do we have a student motivation problem in education? Our conclusion is that motivational problems occur in the contexts of the American culture, the school and peer culture, and the urban, rural, or suburban culture. These are contexts that must be taken into account, but the impact of these contexts can be reduced and schools can make changes in the learning environment that increase the number of students who stay engaged and motivated as they grow older.

Is the Lack of Motivation a Student Problem (They Just Aren't Motivated), a School Problem, a Cultural Problem, or All of These?

Psychological research over the years has described motivation in different ways. Motivation was first studied as a personality trait, as something people had in more or less degrees, perhaps depending in part on their genetic makeup and their early childhood experiences. However, much of the recent motivational research contradicts this view and demonstrates that motivation is sensitive to contexts. For example, a student may be highly motivated in geography but not in algebra. Disadvantaged students may be very unmotivated in some school environments but very motivated in others. Some teachers put a higher priority on setting up a motivating classroom environment than others. Motivation also reflects cognitive factors such as the ways in which individuals differ in how they interpret their success and failure and their beliefs about how "fixed" their ability is.

All children are born with a desire to learn, to master new skills (walking, talking) and to feel competent. The good feeling that comes from mastering a new or challenging task is the basis for life-long learning. What happens to this drive for mastery or success at new tasks as children grow and develop? As children get older, mastery is increasingly defined by feedback from others. Students depend on parents and teachers to tell them if they are "mastering" reading, for example. In addition, mastery becomes more difficult to define and often teachers are not clear about how they define mastery on a particular task. Schools, in particular, are often not designed to encourage individual feelings of mastery. Rather, they sort students into ability groups (the "A" student, the "C" or average student, the failing student) based on how they do relative to grade level expectations.

Consider the following:

> *Although children in the early grades have some difficulty following directions and completing tasks, nearly all are eager, self-confident learners. . . . Young children typically have very high (sometimes unrealistic) levels of confidence. In one of my own studies we asked kindergartners, first, second, and third graders to rate their smartness on a 1-5 scale, with "5" representing the smartest child in their class. Nearly every kindergartner and most of the first graders gave themselves a "5," including some who were actually performing very poorly compared to their classmates. By second or third grade, some students begin to lose confidence, become anxious in learning contexts, and consequently engage in activities that inhibit, rather than facilitate, learning.*
>
> *If motivational problems are not taken care of by high school, they can have serious consequences for individuals' behavior and learning. For the first six to nine years of school, students have little choice in their educational curriculum. Because they cannot avoid many tasks, motivational problems are often expressed in terms of low-effort expenditure, poor attention, high anxiety, or acting out. By high school, students have considerable choice in the type and difficulty level of the course they take or whether they remain in an educational context at all. Older students can, therefore, avoid courses or even school. Thus, while the younger child who lacks self-confidence in math may "forget" to do her homework every day, the older student may simply not take any courses in math. Or, if the older child's self-confidence is very low, she may drop out of school altogether. As choices increase, students' methods to deal with motivational problems become more drastic (Stipek, 1993, pg. 17).*

Conclusion

Many schools have not focused on improving student motivation as an important outcome. Rather they have focused mainly on improving test scores or achievement, a subtle, but significantly different, approach. A focus on student achievement often leads schools to think in terms of students as the problem or as needing something done to them. If, in addition to a focus on academic outcomes, school improvement teams focused on improving student motivation, they would be more likely to consider improvements in the learning environment and more likely to invite regular feedback from students about how they feel about school and learning.

What Kind of Motivation Are We Ultimately Hoping to Cultivate: Intrinsic or Extrinsic?

Intrinsic Motivation

Research has shown that some students report that they have "task-oriented" goals for doing their schoolwork. These students say they work to gain mastery or understanding and feel good about accomplishing challenging tasks. They can be said to have a "mastery" orientation or be intrinsically motivated. They judge their abilities according to a set of internal standards—how much they learned, how much they improved, how hard they tried, etc. When they experience difficulty, they increase their efforts because they believe effort is necessary for success or improvement. When students are motivated to learn, they willingly put forth the necessary effort to develop and to apply their skills.

Extrinsic Motivation

Other students say they feel successful when they please the teacher or do better than other students, rather than when they understand something new. In the research literature, these students are said to be primarily motivated by extrinsic factors (grades, parent approval, etc.) and by an "ability" orientation (a need to prove their ability). These students feel successful when they receive the best grade or do well with little effort, because it implies high ability. In addition, when these students experience difficulty, they are not likely to increase their effort, because it could imply low ability if they do poorly or fail.

What Advantages Are There to Providing a School Environment That Emphasizes Intrinsic, Rather Than Extrinsic, Reasons for Learning?

Researchers have found that students who report a more intrinsic approach to, or reasons for, learning tend to take on more challenging tasks, persist on tasks longer, handle failure better, and use better learning strategies. For example

- Students focused on intrinsic goals prefer challenging activities over easy tasks because they can learn from them (Elliot & Dweck, 1988; Ames & Archer, 1988).

- With an intrinsic or learning-oriented focus, students are more likely to seek instrumental forms of help that allow them to continue working on

their own (e.g., asking for hints, examples, or information rather than the answer). When students are more focused on external reasons for doing schoolwork (e.g., good grades, fear of failure), they prefer a more passive form of help-seeking that involves less cognitive effort but gets the work done (Arbreton & Roesner, 1993).

- Students who are focused on their ability to perform (e.g., extrinsic reasons) show poor recall of information when the learning tasks require deeper levels of information processing (Benware & Deci, 1984; Graham & Golan, 1991).

Thus, what may be of interest to educators who have relied on extrinsic means (grades, rewards, threats of tests) to motivate students is that students who report working for external, rather than internal, reasons use more superficial learning strategies, such as simply memorizing or rehearsing information (Ames & Archer, 1988; Graham & Golan, 1991; Meece, Blumenfeld, & Hoyle, 1988; Nolen, 1988). In short, students appear to benefit most from learning situations when they are focused on doing school work for internal or intrinsic reasons. They persist longer, try alternative problem-solving strategies, seek appropriate assistance (not "just the answer"), and use learning strategies that enhance understanding rather than rote memory.

Work Avoidance

In addition to understanding whether students seem more motivated by intrinsic or extrinsic goals, it is also important to know what percent of the population is "work avoidant" (i.e., students who work with the minimum amount of effort). The number of students with this kind of orientation may be growing, based on the number of students entering college and community college still needing remediation. In fact, some reforms, such as Tech Prep, are predicated on the assumption that the middle majority of students who choose not to go to a four year college often choose watered down courses and, in general, do their "seat time" to get their degree with little commitment and involvement. Discussions about the abundant use of social promotion focus on the tendency of these kinds of policies to produce "work avoidant" students. Students learn that there are no standards for promotion and, therefore do the bare minimum.

Even though it's helpful to analyze students' reasons for doing schoolwork in a broad way as mostly intrinsic, extrinsic, or work avoidant, students may have different reasons for doing or not doing work in different contexts. Particular students may be intrinsically motivated for one teacher but work avoidant for another. They may be intrinsically motivated on class projects but extrinsically motivated on chapter tests.

On any particular task, students are motivated to behave the way they do by some goal or reason. A student may want to avoid looking "dumb" and thus, cheat or copy others' work. A class clown may be motivated by making others laugh. Some students are more motivated by social than academic goals. Rather than thinking about students as lacking motivation, it may be helpful to think and analyze more broadly the reasons why they seem to exert different levels of effort. They choose to react to an assignment in a certain way for a reason, even if they have trouble articulating the reason.

What looks like lack of motivation may not be. For example, a student in a math class may have the desire to do well but feel so uncomfortable asking questions that might seem "dumb" that he or she doesn't ask the questions and then can't do the work. Or, a teacher may infer that because a student doesn't write very much on daily writing tasks that he or she is lazy, when, in reality, the student is having trouble coming up with interesting topics. A student may stop participating in class or asking questions when confused, and a teacher may infer it is lack of interest, when unknowingly, the teacher is reacting to student questions in ways that put down the student.

Overuse of Extrinsic Approaches to Motivating Students

Intrinsic motivation is associated with a variety of positive learning strategies. Because it is easier and comes more naturally to many of us as parents and teachers to use rewards and punishments as controllers of children's behavior, many students are more used to extrinsic rewards and to feeling controlled and told what to do, rather than valuing learning for what it can do for them. Research suggests that there is value in getting students to think more about what they are doing (the task at hand) than how they are doing it (the grade or reward or punishment they will get). **When the extent and frequency of evaluations (grades, rewards, punishments) are overdone and students are overly focused on how well they are doing, how they compare to others, or what they might get, they are less likely to perform well (Kohn, 1993)**. Kohn states

> *This may seem paradoxical, but the fact is that students overly concerned about their performance come to see learning as a means to an end, the end being the good grade or other reward they will receive. They start to think that their performance, especially when they fail, is due to innate intelligence (or its absence): "I screwed up, therefore I'm stupid." That in turn leads them to assume there isn't much point in trying harder next time, which means they are unlikely to improve. It also leads them to try to avoid difficult tasks so they can escape negative evaluation. After all, to think about your performance is to think less about what you are doing than about how you appear to others (pg. 156).*

He concludes

> *The famous "Wad-ja-get" preoccupation of students—compulsively comparing their own grades to others—is not a function of human nature but of the performance (ability) orientation that suffuses most American classrooms and stifles children's interest in what they are learning (pg. 158).*

Conclusion

The overuse of extrinsic motivators (excessive grading, rewarding, and punishing) undermines students' interest in and ability to take responsibility for, their own learning and can create fear and anxiety (Will it be on the test? Can I pass? Is this a dumb question? Will I get laughed at?).

Why Do Students Differ in Their Approach to Learning?

Why are some students more intrinsically motivated to learn (motivated to master new skills and knowledge) than others? Some reasons discussed in the literature are child-rearing practices, students' perceptions of the role of ability, the school environment, and disadvantagement and cultural considerations.

Child-Rearing Practices

Harter (1978) maintains that an intrinsic orientation results from successful learning experiences early in development that lead children to feel they can effectively and competently deal with their environment. As a result, these children develop an internal set of mastery standards to judge their accomplishments and a strong sense of confidence in their abilities (i.e., self-efficacy). Students who are primarily extrinsically motivated to learn do not develop early feelings of competency and efficacy because they have experienced a history of early failure or disapproval in response to their learning efforts.

More recent studies have analyzed differences in parent-child relations. This research suggests that parenting styles that are overly controlling or permissive can have a detrimental effect on children's motivation and achievement patterns (Dornbush, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Ginsburg & Bronstein, 1993; Grolnick & Ryan, 1989). In contrast, parenting styles that support and facilitate the development of children's autonomy are generally associated with higher levels of intrinsic motivation and perceived competence. Examples of this parenting style might include giving children input into decision making, stating expectations in a suggestive rather than directive manner, acknowledging children's needs and feelings, and providing choices or alternatives.

Once children enter school, parents' goals continue to be an important influence. Parents with different goals respond differently to their child's performance. For example, some parents emphasize good grades by giving large amounts of money for each "A." Others might emphasize that their children do their best. Some parents punish their children when they receive bad grades. This contributes to a fear of school. Others are more concerned with behavior, athletic performance, or popularity rather than school work and emphasize doing enough to get by (Stipek, 1993).

Beliefs about Ability and Effort

Dweck and Elliot (1983) suggest that students have different beliefs about the role of ability or intelligence in school success. Some students believe that their ability is a fixed entity that cannot be improved through practice or effort. Other students have an incremental view of ability. They believe they can improve their ability by investing greater effort or by trying different strategies. Dweck and Elliot maintain that these different beliefs about the role of ability are unrelated to objective measures of ability (grades or achievement test scores). For example, a low-ability student who experiences failure but believes greater effort could help him improve could maintain confidence in the possibilities for school success. Or high-ability students who perceive their ability as lower than it is, and who believe intelligence is "fixed," could doubt their ability to succeed as learning tasks become more difficult.

Although one would expect that those with the highest IQ and achievement test scores might be most confident about future attainment and less likely to attribute difficulties to a lack of ability, this is not always the case. There is, for example, research that shows that girls have a higher tendency to avoid challenges, attribute failure to a lack of ability, and to show deteriorated performance after failure than boys.

One study showed strong differences between bright girls and boys. The "A" girl students preferred tasks they were good at, and the "A" boy students preferred ones that were challenges, that they would have to work hard at to master (Licht et al, 1989). Thus, bright girls compared to bright boys (and compared to less bright girls) can exhibit less confidence, lower preference for challenging tasks, and more frequent debilitation in the face of failure or confusion. That is, they are not less motivated but, perhaps, less confident.

This finding can explain the discrepancy in boys' and girls' math achievement scores in junior high and high school. For example, new units and courses in math involve new skills, concepts, and frameworks that increase in difficulty over the high school years. Thus, given the lesser confidence of bright girls, they may be less likely to attempt the novelty and difficulty of new courses for fear of failure. Teachers need to be sensitive to the fact that even bright children (such as bright girls in math) need help in interpreting confusion as a normal part of the learning process, not as a sign that they aren't "good" in math.

School-Related Experiences

Most children begin elementary school with a desire to learn and to master new skills. Preschool teachers rarely complain about their students' motivation to learn. However, this intrinsic interest in learning rapidly declines with age and experience in school. Harter (1981) reported a systematic shift from a predominantly intrinsic motivational orientation in third grade to a more extrinsic orientation by the ninth grade. Gottfried (1985) has shown significant declines in intrinsic motivation for reading, mathematics, science, and social studies by the seventh grade. Developmental changes in students' intrinsic motivation are generally accompanied by declines in their competency and self-efficacy beliefs and by increases in their worry and anxiety. **The largest change in students' motivation occurs when they make the transition from elementary to middle school in early adolescence.**

What causes these changes? Some point to the school environment. For example, as students progress in school, there is an increased emphasis on evaluation and competition. This can heighten students' concerns about their ability and lower intrinsic motivation (Eccles, Midgley, & Adler, 1984). A study by Harter, Whitesall, and Kowalski (1992) indicates that, compared with elementary school, seventh-grade students reported a greater emphasis placed on competition, knowing the right answer, getting good grades, and being compared with others. Moreover, students who perceived these changes reported lower academic competence, more anxiety about learning, and greater extrinsic motivation compared with students who did not report these changes between elementary and junior high school.

Socio-Economic Status (SES) and Cultural Considerations

The motivational problems of students from economically disadvantaged families are often more complex and difficult to address (Braddock & McPartland, 1993). Success breeds success; that is, success on challenging tasks leads to greater confidence and interest in subsequent tasks. Disadvantaged students who start school behind in development have fewer experiences of success in school. The following factors may also be important:

- Compared with middle-class families, poor families have fewer resources to support their children's learning outside school. These students often need extra help in mastering basic and advanced skills, but placement in special programs increases the risk that these students will perceive themselves as slow learners.

- The home and community socialization patterns of disadvantaged students are sometimes mismatched to the middle-class orientation of schools. As a result, disadvantaged students frequently experience adjustment and discipline problems that can lead them to feel negatively about their schooling experiences.

- Older disadvantaged students have difficulty seeing the relevance and importance of schoolwork to their future goals, due to needs for instant gratification, high rates of unemployment in their communities, and/or lack of financial resources to further their education.

- Some minority peer cultures discourage achievement. As Brown (1993) states

  > *High achievers must weigh the risk that their academic efforts may be resented by peers and that peers will associate them with a crowd that is routinely omitted from social activities. Minority students who strive to excel academically risk being ostracized by ethnic peers for appearing to sell out their own cultural heritage for a spot in the majority culture (pg. 83).*

- Some students are distracted from learning for reasons beyond their control. Webb, Covington, and Guthrie (1993) argue

  > *School is meaningless to the student whose energies are tied up in day-to-day emotional or physical survival. We cannot overestimate the impact of these negative conditions on our nation's youth. Almost one child in four lives in poverty (Kirst, 1989); it is estimated that at least one in four girls and one in ten boys experience sexual abuse (Russell, 1984); reported cases of physical abuse are at an all-time high and rising (Barth and Perry, 1989); and gang activity and violence and general violent crime in most large cities are rising, as well (San Francisco Chronicle, April 18, 1992). At the same time, resources needed to combat these conditions, such as child protective services, income support for families, and supervised recreation programs, are increasingly strained. . . . These then are the presumptions of our 'distracted-mind' model: first, that learning is basically a pleasurable activity; second, that various conditions from inside and outside school distract students from learning; and third, that the impact of these distractions can be reduced so that more students will be motivated to remain in school and to work harder while there (pg. 116).*

Conclusion

School is one of many factors that impact student motivation. Students who come from families that encourage learning for its own rewards and who reinforce students for trying their best are likely to come to school intrinsically motivated. But the reality is that many students come to school without this kind of support and encouragement—all the more reason for schools to "invite," rather than "force," learning.

Is There Evidence That Motivational Patterns Can Be Changed?

Motivation is not an innate personality trait but a constellation of students' past successes, failures, goals, and beliefs about the value of effort, beliefs about their ability, and environmental conditions. If schools are to focus on improving student motivation as a schoolwide goal, what evidence do we have that they can be successful?

> *Research has clearly documented adaptive and maladaptive patterns of achievement behavior. The adaptive (mastery) oriented pattern is characterized by challenge seeking and high, effective persistence in the face of obstacles. Children displaying this pattern appear to enjoy exerting effort in the pursuit of task mastery. In contrast, the maladaptive (helpless) pattern is characterized by challenge avoidance and low persistence in the face of difficulty. Children displaying this pattern tend to evidence negative affect (such as anxiety) and negative self-cognitions when they confront obstacles (Dweck, 1986, pg. 1040).*

It is not purely intellectual ability that causes these differences. More important is how students come to understand and attribute their success and failure. As mentioned earlier, students, unlike infants, cannot define mastery for themselves. **Whether or not they have good feelings about their work comes from social agents who tell them how good their work is and what they can do to improve it.**

Students often need help in interpreting failure or mistakes. Failure is an important part of life. When second or third graders first experience failure—coming in last in a gymnastics meet, missing three questions on a spelling test, etc.—they may come to believe they are bad or stupid. Parents and teachers can turn this thinking around and help them understand the role of effort and practice. If parents and teachers are not there to help them learn the role of effort, with repeated failure, they may develop a "learned helplessness" attitude.

Experimental Studies Have Shown That Helping Students "Interpret" Their Failures Can Lead to Higher Motivation.

In a study of fifth-grade students, Elliot and Dweck (1988) demonstrated that patterns of learned helplessness reflected learning conditions. When the benefits of learning were emphasized (e.g., "Doing this task will sharpen your mind"), students demonstrated a mastery-oriented learning pattern. When they experienced difficulty or failure, they responded by trying different problem-solving strategies, concentrating harder, and staying focused on the task.

In contrast, when students were told their performance would be filmed and judged by "experts," they demonstrated a learned helpless pattern, especially if they lacked confidence in their ability to perform the task. When these students experienced difficulty or failure, they responded by using less effective problem-solving strategies, giving up attempts to find more effective ways of solving the problem, expressing negative affect toward the task ("I'm going to hate this part"), and blaming themselves for failure ("I'm not good at this" or "I'm confused"). These students essentially perceived their learning problems as insurmountable and stopped trying, even though they had an ability to learn.

Experimental motivational interventions have been implemented on individual children who exhibit maladaptive responses to difficulty. In particular, researchers have worked with children to teach them to attribute their failures to a lack of effort, rather than to a lack of ability. These interventions have produced changes in the degree to which these children persist in the face of failure across a variety of tasks.

Teacher-based and Schoolwide Interventions to Increase Student Motivation Also Report Success.

Carol Ames, a researcher who had been successful in improving student motivation in settings outside of the school, initiated a project in the late 1980s to work with elementary schools to change the culture of their classrooms. Her focus was on student mastery and improvement rather than on getting good grades or doing better than others. She assembled a large notebook of strategies that teachers and parents could try to help students focus on mastery. Her results (Ames, 1990) focused on comparisons to students in control groups. She found evidence that this use of new strategies by teachers led to more positive attitudes toward school, higher self-concepts of ability, an enhanced preference for challenging work, and reports of more intrinsic motivation by their students than the control-group students.

Martin Maehr and Carol Midgely, at the University of Michigan, also motivational researchers, were interested in whether motivational research could be applied at the school level to influence policies that affect students' drive for mastery. They felt that even though teachers could apply research to improving their classroom, schoolwide practices such as ability grouping might undermine what individual teachers do.

> *Given the increased impact of the overall school culture on motivation during the middle grade years (Maehr, 1991), the fact that middle school environments stress ability-focused goals more and task-focused goals less than elementary schools (Midgley, Anderman, & Hicks, 1995), and the fact that a student's overall experience in middle school is determined by the sum of his or her experiences in several classes, Maehr and Midgley (1991)*

developed a coalition project which used goal theory as a guiding principle to change the motivational climate in middle grade schools (Anderman & Maehr, 1994, pg. 299).

The study group of researchers and educators met for three years to examine policies. At the end of the project, the team had successfully implemented some changes, such as doing away with ability grouping (except in math), team teaching, block scheduling, and changes in the school awards programs. The researchers acknowledge that the kinds of schoolwide changes that were made were not unique to their project. What was unique was that the schools had better-articulated reasons for making changes and had a clear goal in mind (increasing intrinsic motivation). They could evaluate the changes made in terms of the effects on student motivation and students' personal investment in the learning process.

Conclusions

So, what are the answers to our questions?

1. What is a highly motivated student? Students who accept mistakes and learn from them, avoid shortcuts, initiate independent learning, enjoy learning and take pride in their work, and select challenging tasks.

2. Is the lack of student motivation a problem in schools? Yes, particularly at the middle and high school levels and with non-college bound and some minority peer cultures.

3. Whose problem is lack of motivation? Students live in spheres of motivational influences (parents, peer culture, school culture, classroom culture). All are important to understand.

4. What kind of motivation should schools aim to cultivate? Research suggests that better learning occurs when intrinsic rewards or "mastery of tasks" is emphasized over extrinsic motivators (grades, fear of quizzes, etc.) whenever possible. That is, an emphasis on interesting, engaging work for students produces better learning than frequent grading on predictable worksheets.

5. Why aren't more students intrinsically motivated? In addition to typical school cultures which stress extrinsic motivators (e.g. frequent grading), parental child-rearing practices, students' beliefs about the role of effort in achieving success, and the home cultural environment all are factors that affect students' motivation to learn.

6. Is there evidence that schools can increase students' motivation to learn and ultimately, life-long learning? YES!

Chapter Two

Using External Incentives To Motivate Students

Chapter Preview

Many schools, when they consider ways to increase student motivation or manage student behavior, jump immediately to rewards and consequences because that is what they know best. This chapter asks educators to consider the effectiveness of their use of rewards and punishments (consequences) in light of the research presented.

Recommendations for the use of extrinsic incentives are provided. For example, extrinsic incentives work best for routine learning tasks that hold little intrinsic appeal for students (e.g., multiplication facts). For problem-solving or creative or critical thinking tasks, research suggests incentives may be detrimental and interfere with concentration.

Studies over the last half-century show that punishment is counterproductive and that, when adults use approaches that are highly controlling and punitive, children become more hostile and disruptive. Educators might consider whether "consequences" are used for control (to obtain compliance) or whether they are used for "information" (to help students take responsibility and better understand the impact of their actions).

This chapter also describes one school district's experience with designing schoolwide extrinsic incentive programs. In 1991, the Southeastern Regional Vision for Education (SERVE) funded a research project with the Birmingham Public Schools to look at the implementation of incentive systems in four urban schools serving a number of at-risk students. The experiences of these teachers and schools are used here in looking at the issue of incentives.

We conclude that extrinsic incentives can be helpful for certain students and for certain situations, but they are clearly only a piece of the motivation puzzle, given the long-term goal of students becoming responsible for

their own learning. The most effective motivation program is one that encourages intrinsic reasons for engaging in learning tasks whenever possible and uses incentives in an individual and strategic manner.

Are extrinsic rewards overused in schools? Educators need to think carefully about when and how much to use extrinsic incentives. Because the use of rewards and punishments comes so easily and naturally to us as parents and teachers, it is often the first strategy used in an attempt to improve motivation. However, when overused, external rewards may send the message that learning is not pleasurable and rewarding in and of itself.

Many school systems have designed elaborate incentive programs to reward students for good grades and school attendance, but this idea is not new. Token economies were widely used in the 1970s to reward students for good behavior. Now, incentive programs are being implemented on a much larger scale than ever before, and many schools receive substantial support from the business community for these programs. Through such partnerships, schools now use incentives such as free pizzas, records, CD players, mountain bikes, and even cars as rewards for school attendance and achievement.

Why Use Extrinsic Incentives?

Extrinsic incentives appear to work best for routine learning tasks that hold little intrinsic appeal for students. For example, most students are not naturally inclined to learn multiplication facts. Rewards are less effective for complex or creative learning tasks because they interfere with concentration. Brophy (1987a) states

> *Rewards are better used with routine tasks than with novel ones, better with tasks intended to produce mastery or specific skills than with tasks designed to encourage incidental learning or discovery, and better with tasks for which speed of performance or quantity of output is of more concern than creativity, artistry, or craftsmanship.*

For many academic tasks, it may not be possible to experience intrinsic satisfaction from the task until one has acquired a minimal level of proficiency. Extrinsic rewards can be used to "jump start" the learning process until students are able to experience new sources of motivation from the activity itself. With regards to the development of literacy skills, Csikszentmihayi (1990) states

> *A person usually learns the rudiments of reading and writing under compulsion. The goal is to avoid punishment and to get praise of adults who are significant in our lives. But eventually, if the learning process has been successful, we begin to enjoy our ability to read. At that point the goal*

becomes intrinsic to the task itself—the anticipation of reading a book or solving a problem is enough to motivate the activity (pg. 130).

Extrinsic incentives are also effective for students who have negative attitudes toward school and who, for a variety of reasons, are not motivated by conventional methods. When all other methods fail, a reinforcement system may be very valuable, especially when tangible reinforcers are used as "primers of behavior." According to O'Leary, Becker, Evans, and Saudargas (1969), tangible reinforcers can have several immediate effects:

They may serve as a concrete demonstration to the recipient that he can succeed—no small accomplishment to an individual who has experienced persistent failures. Tangible reinforcers many also prompt an individual to engage in behavior he previously avoided, thereby creating the opportunity for increased skill and task-related satisfaction.

Consistent with these views, the Birmingham teachers who participated in the SERVE Research and Development study reported that incentives were particularly useful for students with behavior problems and with negative attitudes toward learning. They also described cases in which incentives were initially used as "primers" to induce the student to learn. As the student achieved success, the source of motivation shifted to the act of learning itself. One middle school teacher stated that

I Don't Know How to Do That!

Tammy is a fifth grader who came to my class with low self-esteem. She was very tall for her age and was a repeater. Her favorite words were, "I don't know how to do that."

I started off trying to get Tammy to try and do an assignment first before she would give up and say, "I don't know how to do that!" I found that Tammy's weakness was math. She feared math and thought it was some unknown language. She would get very disruptive or ask to be excused or go to sleep to avoid it. She was stronger in reading. So, to get Tammy involved, I started praising her for everything she said or did in reading. I would allow her time on the computer every time she did well because she loved working on it.

I began to turn some of her math problems into word problems and discuss them with her. An example was, "We have 150 pencils. I must divide them equally with the class. How many should each get, Tammy?"

Then, I would watch her reaction and try to observe how she went about getting her answer. Even though it took her a long time, she was able to find the answer by putting her problems into words. As a result, I would allow her free periods to work with lower grades or to help the principal. At the end of the week, I would give her mother a positive note saying how well Tammy performed and give Tammy a lead pencil and a diary or puzzle book. At approximately the end of the third nine weeks, I noticed Tammy would study her multiplication facts on her own. At the end of the year, she knew her 1s through 9s. I was very proud of her, and I kept praising her. At the end of each nine weeks, she received some type of incentive. It was very important to her to be able to show her mom what she could do because her mother was very critical of her.

At the end of the year, I could see that Tammy had matured. She wrote me a note that said, "You are the best teacher I ever had." ●

students need to get to the point where they are doing the work because they "know it's beneficial and it's going to help them in the end." (The "I Don't Know How to do That" account on the previous page was written by a Birmingham teacher to describe how teachers can use incentives to achieve this goal.)

Rewards and Punishments

Extrinsic incentives or reinforcers can take a number of different forms. Tangible reinforcers include material objects such as food, stickers, pencils, and crayons, to mention a few. Praise, awards, and special recognition are forms of social or symbolic reinforcement. Special privileges and extra recess time also serve as positive incentives.

It is difficult to find incentives or rewards that are universally effective. For example, special awards for skill improvement or good attendance may work for elementary school students who want adult approval, but in older students peer approval is much more critical. The Birmingham teachers found that movies and assemblies, for example, were more rewarding for older students because they allowed students to interact with their peers. Unless these rewards are valued by the peer group, they will lose their effectiveness.

Much research suggests that the "carrot" approach is more effective than the use of aversive incentives, such as threats, reprimands, and punishments. As one Birmingham teacher put it, "You can attract more flies with honey than with vinegar." Punishments as incentives to behave are particularly problematic because they often (in the long run) lead to resistance and more of the behavior that is creating the problem.

Punishments at home or school include, but are not limited to, time out, spanking/hitting, humiliation by yelling at or criticizing publicly, withholding privileges, and ignoring. School-related punishments or threats include F's and zeroes, additional assignments, trips to the principal's office, suspensions, name on board (public humiliation), group silence (heads on the desk), and citations/tickets. Alfie Kohn concludes in *Punished by Rewards* (1993b)

> *The research literature leaves no doubt that punishment is counter productive. Studies over more than a half a century show that when adults use disciplinary approaches variously described as "highly controlling," "power assertive," or just plain punitive, children become more disruptive, aggressive, and hostile (pg. 168).*

It is not the short-term results that are in doubt. Clearly, many (but not all) children will bend to power; punishment may work in the short-term to get the desired behavior.

Does Punishment Help Children Become More Responsible for Their Own Behavior?

> *No behavioral manipulation ever helped a child develop a commitment to becoming a caring and responsible person (pg. 161).*

Kohn argues that if responsibility is conceived of as conformity to school rules and general compliance and obedience, then rewards and punishments can achieve the goal. But he said,

> *If by responsibility we mean the capacity to act carefully and thoughtfully, to make ethical judgments and behave in accordance with them, then . . . extrinsic motivators take us in the wrong direction (pg. 162).*

Studies have shown that over the long term, frequent punishment or control of behavior by negative consequences leads to resistance because the child feels like his or her point of view is not important. The more children are forced into a behavior and feel out of control, the more they will resist that behavior (Kohn, 1993b).

> *Researchers have found that the more we restrict children's choices—the more controlling and heavy-handed we are—the less likely they will be to comply (pg. 169).*

The occasional time out is not the issue; rather, the issue is the degree to which the student/child perceives the environment as manipulative rather than caring. An environment with numerous rules and punishments is generally not one in which students are asked to confront why they are acting the way they are (and the impact it has on others).

Kohn (1993b) argues that negative consequences are often difficult to distinguish from punishment.

> *A list of specific rules and consequences establishes a confrontational tone; the message is not that members of a community will work together and try to help someone who stumbles, but that anyone who violates a pre-established edict is in trouble. Adults are principally defined as enforcers, obliged to prove that they follow through on threats. Children are encouraged to focus in a legalistic way on exactly what behavior is covered by each rule, how the rule will be applied, what circumstances may create exceptions, and so forth. . . . And, as with any other punitive arrangement, children learn more about the use of coercion than about how or why to act responsibly (pg. 171).*

One teacher pointed out that when students are engaged in establishing a few class rules and are responsible for setting consequences, the percent of those who don't take responsibility seriously decreases. She also suggested that educators consider the extent to which misbehavior is created by an overabundance of rules, routines, and procedures that must be followed.

Research is clear that it is the controlling nature of the administration of punishments and consequences that is the problem. When they are administered strictly to manipulate and control behavior, they teach only compliance—not responsibility. Consequences when used as part of a learning process (when the child is an active participant in understanding what he or she did and the impact it had, and thus, a partner in the process of changing or rethinking the behavior) may be more effective. Teachers might ask themselves if they are administering a "consequence" system in a way that teaches students about coercion and power, or in a way that teaches students about responsibility and self-assessment.

Summarizing Potential Problems with Incentives and Associated Recommendations

Teachers are drawn to incentives and rewards because they generally see immediate improvement in behavior. Research also shows that reinforcement strategies are particularly useful for students with behavioral problems and that even the most recalcitrant learner may respond to tangible rewards. It is important to know what not to reward, what to reward, and how and when to reward.

What Not to Reward

Rewarding the wrong things.

The effects of rewards on task performance must be considered. Students are less likely to engage in critical or creative thinking that takes time and effort when they are focused on extrinsic rewards. Numerous studies suggest that the administration of rewards can interrupt concentration, shift attention away from the task, and ultimately impair performance (Lipe and Jung, 1971). Some studies also suggest that rewards have a negative effect on students' willingness to attempt challenging tasks (Harter, 1978). Rewards can even influence how students work together. For example, one study showed that students who were offered a reward for their success in tutoring younger students tended to be more controlling and demanding than students who were not rewarded (Garbarino, 1975).

Recommendation: Rewards should be used only for tasks that have limited intrinsic appeal or for students who show little interest in learning on their own.

What to Reward

Rewarding for participation, regardless of quality of effort.

Rewards have the strongest negative effect when they are contingent on simply participating in an activity, rather than meeting a performance standard. If students are praised or rewarded regardless of how well they perform, they soon learn that the reward has no meaning. Rewards may be perceived as "bribes" when they are used just to get students to do something, regardless of how well they do it.

Recommendation: When incentives are offered for academic work or interpersonal behavior, they should be contingent on a particular level of mastery or on the attainment of certain improvement goals. Incentives should be used to inform students of the teacher's standards and to focus their attention on specific aspects of their performance (i.e., why they earned the reward).

How to Reward

Choosing inappropriate rewards.

Rewards must have value to students. In Birmingham, elementary teachers discovered that candy did not work as an incentive because children knew that if they did not win any, they could still get it on their own. Others have noticed that material rewards have less impact than social events for middle school students.

Most teachers generally use a mixture of different incentives. The Birmingham teachers used both tangible items such as stickers, treats, books, and pencils, as well as social reinforcers such as praise, special awards, and certificates. Smaller rewards and praise were given on a daily basis, whereas larger tangible awards or symbolic reinforcers were presented at the end of grading periods or the school year.

A good place to start identifying appropriate rewards is to ask students to describe the type of incentives that would motivate them. A study of this type was done by a Birmingham elementary school. The teachers were surprised to learn that what students wanted as incentives was very different from what the teachers thought would work. They also learned that students do not always need large incentives. Often a small incentive that is very popular at the time works equally well.

Recommendation: Use interesting and challenging learning activities as rewards (games, computer tasks, opportunities to tutor younger children, extra time to read or do homework, etc.). These rewards help to convey the value of learning.

Recommendation: Threats, punishment, and other aversive incentives should be avoided because they generate fear and anger, which undermine intrinsic interest in learning.

Fairness.

Rewards are sometimes used indiscriminately. Students are quick to pick up on teacher favoritism, especially when the number of rewards is limited. Some students are rewarded or praised for merely participating in an activity, while others are rewarded on the basis of their performance. Group rewards (for the "best" table) need to be carefully considered and designed. Students can turn on and develop resentments against those students who cause them to lose out on a group reward.

Recommendation: Incentives should be achievable by all students, not just the high achievers. This goal can be accomplished by using improvement as a standard for rewarding students as all students are capable of improving. Students then must continue to make progress in order to receive additional rewards.

Recommendation: Avoid rewarding students on a competitive basis (e.g., only five of the best essays will be displayed). When students compete with others for rewards, it focuses their attention on who will win or lose, rather than the content of what they are learning.

Recommendation: If rewards are given on a group basis, there should be a system of individual accountability so that students know how their own behavior contributed to the group's reward. Teachers should monitor and be aware of how losing groups respond to students who they perceive as having made them lose.

When to Reward

Time between behavior and reward.

In order to be effective, incentives must be made contingent on the behavior they are intended to increase. Most studies show that praise or reinforcement immediately following the desired behavior produces the most dramatic results. This requirement is difficult to fulfill if rewards are administered at the end of the day, week, or marking period. Such long intervals between behavior and rewards can diminish the effectiveness of a particular incentive. High school students may be able to delay payoffs for a relatively long period of time, but younger children need more immediate reinforcement or they lose interest.

Recommendation: Rewards should be used in ways that help students see the connection between their behavior and the reward. When there are long time delays, teachers should encourage students to keep personal records of their progress and improvement.

Schoolwide Incentive Programs

As mentioned previously, the Birmingham Public School system participated in a SERVE Research and Development study on the implementation of incentive programs. Four inner city pilot schools (two elementary and two middle schools) were asked to implement an incentives program. The original idea was to pilot an approach for motivating at-risk students only. However, several of the schools involved were already in the process of developing schoolwide award initiatives and did not like the idea of only targeting incentive "dollars" on the most at-risk children. The teachers identified the following advantages and disadvantages of targeted versus schoolwide recognition efforts.

Schoolwide programs that are developed and applied to the performance of students in all classes and administered in schoolwide settings

- Have the potential to reach all students
- Can reach average students through attendance and conduct awards
- Can support school improvement goals related to improving school climate (parent involvement)
- Can generate excitement within a school (field trips, meals, dances for older students)
- Can create good feelings through all school assemblies

Targeted incentive programs which are intended to improve the behavior or performance of certain at-risk segments of the student population:

- Are less expensive than schoolwide approaches
- Have less cumbersome record keeping
- Can be more helpful for certain types of students
- Are easier to manage
- Are often preferred by service groups and businesses
- Can be easier to track progress, impact
- Can help teachers build a closer relationship with students involved

At the two inner city elementary schools, the faculty went with a schoolwide incentive program. The program consisted of keeping records of student

attendance, conduct, and achievement. The committee that designed the incentive program was responsible for the following: developing procedures, writing a handbook for teachers, selecting and buying rewards, determining and communicating deadlines, publicizing the plan, answering questions, enlisting outside funding and support, and collecting and tabulating student data for rewards. The group believed that a well-run incentive program would have the following characteristics:

- Identified funding
- Clear-cut goals/purposes
- Teacher/administrator buy-in
- Guidelines in writing
- Well-publicized to all
- Positive approach to obtaining teacher involvement as opposed to threats
- Organized with schedules known in advance of due dates, rewards
- Record-keeping for teachers kept at a minimum
- Strong, respected planning committee
- Student and parent input obtained
- Monitors implementation and makes adjustments to programs as needed

The planning team at this school clearly had pride and ownership in this approach to increasing motivation and achievement. They took pride in making students feel good about their progress and achievement. Teachers sensed that incentives were not a control mechanism to bribe students, but a way to celebrate success at whatever level students can first demonstrate they are "trying." Perhaps for some students, trying means coming to school. Coming to school is a small step that can lead to other positive outcomes.

> *Philip was a bright third grader with conduct and attendance problems. His relatives were in prison and did not care about him. After we started giving him ice cream treats for improvement in attendance and conduct, he started to come to school more regularly.*

> *I've had several students who never worried about getting to school on time. When the incentive program started, they would come on time every day. A*

child who never received a reward for anything would get one for attendance because it was easy to obtain.

The incentive committee evaluated the implementation process and made adjustments as needed. They carefully chose the achievement areas for which rewards were needed. For example, based on Chapter I test scores, they determined that students needed more work on recognition and comprehension of sight words. Students received daily stickers, end-of-week stickers, and a large, tangible incentive at the end of the grading period for demonstration of word mastery. In this school, the incentive program was a good fit because the principal and teachers were committed to finding a way to reach students and setting high expectations.

At the same time, staff were aware that incentives weren't the answer to motivate all children.

Some children are just self-motivated. The incentives are an added reward. We also have students who don't care about incentives. I had two or three this year that it didn't matter what the incentive was. They had the 'I don't care' attitude; so no, this does not work for all students.

Researchers (Ames, 1992) have also been clear about the fallacy of using incentives for all students. The use of incentives can have multiple effects as a function of the student's initial level of interest. Rewards have a negative effect on performance and intrinsic motivation when students indicate some initial interest in the activity. But rewards can enhance the motivation of students who are not highly motivated to learn or who do not find an activity of initial interest (Lepper & Hoddell, 1989).

Given that incentives are effective for some students and for some situations, problems arise when these differential effects are not considered. Researchers point out that incentive systems can have unintended consequences when they are applied to entire classrooms or schools of students with varying abilities and interests. According to Ames (1992)

The relation of extrinsic rewards to individual differences is of critical importance. In the classroom, extrinsic incentives are often intended to motivate the least attentive students or those who typically perform poorly; however, the rewards are typically applied to the entire classroom or even the entire school population, as in many reading incentive programs. The hidden costs become most apparent when they are applied to these larger groups where individual differences in interest, performance, and ability are ignored (pg. 417).

Another teacher is clear that incentives are just one part of a complex motivational picture.

> *S. entered second grade with low self-esteem. She had not mastered first grade skills and was extremely shy. She received little encouragement from home. I realized she needed extra attention and time so I let her read 5 to 10 minutes by herself sometime during the school day. With encouragement, special attention, and appropriate level materials, she quickly gained self-confidence and pride. She attempted harder tasks, learned from her mistakes, and felt good about herself. In time, she made the honor roll three out of four times. She loved receiving tangibles related to school (pencils, rulers, pencil box), and she was thrilled to be recognized as a knowledgeable student. She loved helping less able and younger students.*

Clearly there are also risks associated with schoolwide incentive programs, especially honor rolls and public rewards that not all can achieve. The comments below are additional observations from the Birmingham teachers. It is important for a school that is using an incentive program to monitor closely the impact on students so that decisions about continuing the program can be based on a clear understanding of their positives and negatives.

> *Some of the children were trying for the honor roll and awards and didn't make it. They would be upset. It would take a few weeks before the child would finally come around and try again.*

> *Sometimes management and the awarding of an incentive does not mean a positive experience for students. When awards are given, children will feel bad who didn't get any. When the "good" kids are held up to the others as examples, the competition becomes a negative force.*

> *Children can become too competitive and start fighting over rewards.*

> *What about the child who put forth tremendous effort but could not master the target percentage correct to get an award? The child was punished for effort made. How can you help a child understand and feel good about progress and at the same time help him realize what mastery means and where he stands in relation to desired goals? The right program needs to include something for effort because children know whether they are in the "effort" or "mastery" group. Individualized goals for children at different levels might be one way of keeping them involved.*

The Birmingham study makes it clear that for incentive programs, as for any educational change or program,

- The purpose must be clear

- The effort must be well-managed (good planning, organization, evaluation)
- The leader must be supportive
- The teachers must want the program and understand how it fits with their school needs and philosophies
- The process must be one of continuous improvement, learning from what is attempted and moving forward

Teachers in the Birmingham study realized that an incentive program is part of a continuous improvement process to motivate students to do their best. Exploring when and how to effectively use extrinsic incentives and consequences is an ongoing process. To help generate some dialogue about what is working/not working in schools and classrooms, we offer the following discussion guide.

Discussion Guide for Use of Extrinsic Incentives and Consequences

1. Canter's (1989) Assertive Discipline has been widely used in schools. Consider the following comments from Cunningham and Allington (1996) and see if you agree:

   > *Assertive Discipline takes a stern and generally inflexible approach to discipline and behavior. His four steps—establishing rules, tracking misbehavior, using punishment, and implementing positive consequences—seem logical for an adult-centered setting. The approach is also easy to use because it simplifies and standardizes traditional school rules. However, some evidence shows that discipline and behavior problems actually increase after the system is implemented. The rigidity of the system allows for little latitude in dealing with infractions and works against developing internal self-control strategies in children. In short, Assertive Discipline does little, if anything, to address the underlying causes of behavioral problems. The approach seems to benefit educators more than children since continued misbehavior leads to suspension, solving the problem the school is having, but suspension is unlikely to enhance either the behavioral controls or achievement of the suspended child (pg. 202).*

2. Are there any children in your class or school who are often rewarded or praised for outcomes that did not require much effort? What message might that send?

3. Are there any children who are not consistently rewarded (with praise, good marks, or recognition) even when they try?

4. Are there any reinforcements that, by the way they are set up, might encourage quantity (number of books read) over quality (books that challenge)?

5. Are behavioral rewards realistically available to all children or are they more available to the "obedient" or "good" student to whom compliance comes easily?

6. Do attendance awards impact attendance rates?

Chapter Three

What Can Teachers Do to Increase Motivation in the Classroom?

Chapter Preview

Many schools are beginning to implement teacher support (peer coaching and mentoring) and professional growth systems (study groups, action research) that provide opportunities for teachers to reflect on their practice and experiment with changes (McColskey & Egelson, 1993). Such a supportive school environment is perfect for teachers to begin to assess their success at providing a classroom environment that is highly motivating and empowering.

If creating a motivating environment were easy, most teachers would have already accomplished it. As Powell (1996) concludes

> *One study interviewed teachers who were unusually skilled with students at risk of dropping out. Since the students were not voracious for academic content, the teachers appealed to their lifeworld concerns. This meant getting to know the students and their lifeworlds more closely than might appeal to many other teachers. The study confirmed the magnitude of developing motivation among many American students. The work involved was extraordinarily difficult, especially if taken seriously. Interesting lessons adapted to individual needs take more work to prepare and to teach (pg. 37).*

Thus, school leaders will need to provide time and support to teachers to work together to explore ways to increase motivation, particularly in disadvantaged schools where motivation can be a more difficult problem. If teachers are left to go it alone, it is unlikely that they will have the time, energy, or resources to make the needed changes.

The goal of any educational program must be to create a learning environment that supports or elicits students' intrinsic interest in learning. This goal is not easy to achieve, and it is not one that can be accomplished by making a few minor adjustments. There is no step-by-step process that can be outlined to make the changes needed. Rather, teachers traditionally learn by trial and error, always keeping their eye on high levels of motivation from all students.

This chapter examines how teachers can create a classroom environment that enhances intrinsic motivation to learn. The research is summarized under three categories:

1. The quality of instructional activities
2. The quality of student assessment and teacher feedback
3. The quality of the classroom climate that requires
    - High expectations for all students
    - Fostering student autonomy and choice
    - Promoting cooperation and teamwork rather than individual competition
    - Knowing the student
    - Classroom management and discipline

A teacher checklist of the factors outlined is provided at the chapter's end.

The Quality of Instructional Activities

The kind of work students do in the classroom is central to how much effort they expend. Research has shown that student work assignments can be evaluated along a variety of important dimensions that make a difference in terms of students' level of engagement.

Diversity, Variety, and Novelty of Learning Opportunities

The diversity, variety, and novelty of learning tasks have an important influence on students' motivation to learn. Brophy (1987a) observed that in most classrooms, lessons are highly predictable. Brophy suggests that such ". . . . a steady diet of routine and predictable lessons followed by routine and predictable assignments soon becomes 'the daily grind'" (p. 34). The importance of

providing a variety of learning tasks cannot be overemphasized. Even minor changes in the format of a lesson can have significant effects on students' motivation to learn.

Also, to stimulate students' curiosity, teachers can highlight ideas that are surprising or discrepant from students' current knowledge and understanding. Teachers can stimulate interest by asking higher-order questions that involve speculation, prediction, problem-solving, or debating. Students report a greater interest in learning when they have opportunities to ask questions, offer opinions, share personal experiences, or debate answers (Meece, 1991). *For more information on a successful training program in higher-order questioning, contact the Appalachian Regional Educational Laboratory and ask about their QUILT training program—P.O. Box 1348, Charleston, WV 25325, 800-624-9120.*

Tasks that call for students' active participation in the learning process can have a positive influence on motivation. "Hands-on" activities generate more interest than passive forms of learning, such as listening. For example, in science curriculum evaluations, results typically show a correlation between the teachers' use of hands-on activities, student interest in science, and student achievement scores. In evaluation studies of a North Carolina middle school science reform effort conducted by SERVE, teachers who used more hands-on activities (several per week) had students who reported greater interest in science and who scored better on state-mandated science achievement tests than students whose teachers used few hands-on activities. *The Integrated Science program developed by the University of Alabama is a middle school science curriculum that offers rich resources for teachers interested in moving to a more hands-on curriculum. For more information, contact Dr. Larry Rainey at 800-477-8151.*

Other teachers have found that problem-centered activities can increase students' interest in learning mathematics (see Wood, Cobb, & Yackel, 1992). For example, a group of second-grade teachers redesigned their mathematics curriculum so that students could have a more active role in analyzing and constructing solutions to mathematical problems. The students worked in pairs to find solutions, then discussed their solutions in whole-class discussion. In this way, the students had an opportunity to explain their answers and listen to each others' reasoning.

Because curriculum development is time consuming, some teachers may consider upgrading their instructional approaches through previously-developed research-based curriculum programs. For example, elementary teachers can receive training (a two to five year process) in teaching problem-based math through a program called Cognitively Guided Instruction. *For more information, contact Dr. George Bright or Dr. Nancy N. Vacc, University of North Carolina at Greensboro, at 910-334-3439.* The Curriculum Research and

Development Group at the University of Hawaii has developed a HALP (Hawaii Algebra Learning Project) textbook called *Algebra I: A Process* and a teacher's guide that is being used by over 16,000 students in twelve states. The curriculum uses cooperative problem-solving exercises and journaling to keep students involved and places a premium on developing students' skills at communicating their knowledge. Teachers must attend a 45-hour training course. *For more information, contact Dr. Barbara Dougherty, University of Mississippi, at 601-232-7905.*

The use of long-term projects can have positive effects on students' motivation to learn, especially if these projects are organized around a driving question or problem. Examples of project-based learning programs have been produced on science topics by the Technical Education Research Center and the National Geographic Society. These projects focus on authentic problems (e.g., acid rain), involve students in data gathering and analysis, and require students' active engagement over an extended period of time. Other types of projects include writing a school newspaper, building a scale model, researching family genealogy, and creating a video on the school's history. Proponents of project-based learning claim that these activities provide a way to bridge classroom learning and real-world experiences as well as enhance students' understanding of key concepts and principles (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palinscar, 1991).

Appropriate Difficulty Levels of Work Assignments

Student motivation to learn is also influenced by the difficulty and complexity of learning tasks. In one study of elementary school children trying to solve an anagram task, researchers studied smiling behavior related to the difficulty of the anagrams. The researchers (Harter, 1978) found that children reported being annoyed and frustrated when the anagrams were extremely difficult for them. Even the easy tasks did not produce much smiling. The most positive emotion was observed when the anagrams were challenging but solvable with some effort. Success at a challenging task is clearly rewarding.

When given a choice, most students prefer moderately difficult tasks that provide opportunities for increasing their level of competence and skills. Doyle (1983) describes four types of academic tasks: (1) memory tasks, (2) routine or procedural tasks, (3) comprehension tasks, and (4) opinion tasks. In general, the latter tasks are more intrinsically interesting to students than are tasks that require memorization or simple application of rules and procedures (Corno & Rohrkemper, 1985). Many students may say that they prefer rote-level learning tasks because they are unambiguous and easy to complete. Divergent thinking, comprehension, and opinion tasks involve more uncertainty and risk of failure. However, students report greater interest in tasks that are cognitively demanding and ambiguous in a classroom environment in which teachers support their learning efforts.

Thus, teachers can help foster an intrinsic motivation to learn by helping students develop confidence in their abilities. However, learning tasks that are too easy or too difficult will not lead to feelings of competency and efficacy. Corno and Rohrkemper (1985) define optimally challenging tasks as those that are within the child's "zone of primal development." Such activities are just above the child's existing capabilities but reachable with adequate instructional support.

Students do not always respond favorably to challenging or cognitively demanding learning activities unless they are certain they can succeed with reasonable effort. Teachers can help students maintain a task focus by supporting students' independent learning efforts. However, too much teacher assistance may lead students to believe they could not succeed on their own. The trick is to provide support that students are not yet able to provide for themselves, then withdraw that support as they become more knowledgeable or skilled in a particular area. Farnham-Diggory (1990) refers to this teaching strategy as "scaffolding and fading." Teachers can support their students' learning efforts by encouraging students to use effective learning strategies, by modeling difficult procedures, and by problem solving with students when they have difficulty.

Relevance and Meaningfulness of Instruction

Young students seem to blindly accept that what they are learning in school has value and importance. Elementary school students generally rate every subject as important and useful (Goodlad, 1984). However, students become more skeptical as they progress in school, with the most pronounced change taking place during the middle school years. At this time, students are much more able to think about the future, possible occupations, and connections between different areas of study. If teachers are going to hold the interest of their students, they will need to emphasize the value of learning for students' current and future lives as learning tasks must have a meaningful and worthwhile purpose. According to Brophy (1987b), "One cannot expect students to develop motivation to learn if activities are essentially pointless in the first place" (p. 194). Activities of this type include

> *continued practice of skills already mastered, reading about something that is too abstract or so foreign to the students' experience that it is essentially meaningless, looking up or copying definitions that are never used in assignments, and working on assignments merely to stay busy rather than to attain some worthwhile instructional objective (Brophy, 1987b, p. 194).*

When subjects are taught as discrete and isolated bodies of information, students do not see connections between what they are learning in different areas. To help students see the value of what they are learning for other subjects, the curriculum could be organized around interdisciplinary themes. For example, lessons in language arts, history, and social studies might focus

on patterns of migration during the Industrial Age and mathematics and science could be combined in a study of space travel.

Teachers may not have the time and support to make all learning tasks personally relevant and meaningful. At the very least, teachers can often point out the goal of the assignment and the skills it will help students develop. Marshall (1987) reported that in learning-oriented classes where intrinsic reasons for engaging in schoolwork were stressed teachers opened lessons by commenting on the relevance of the task, the purpose of the assignment, the enjoyment students could expect from it, and the challenge it presented. As Stipek (1993) points out, if teachers cannot offer a good explanation for completing a particular assignment, they might "reconsider the value of assigning it" (p. 97).

The Quality of Student Assessment Methods and Teacher Feedback

To develop a sense of competency and efficacy, students need clear and specific feedback that they are improving (Schunk, 1991). Thus, it is not only meaningful instructional activities that are needed, but a feedback loop that personalizes learning for each student. Assessment practices should be therefore examined carefully to see how effectively feedback is being used to help students improve and reach for higher standards.

Clear Goals and Expectations

It is difficult for students to rise to the occasion with their learning efforts if they don't know what the benchmarks are. They need to understand expectations for the subject area (long-term) and for the particular assignments. Students are not as likely to perform well if they are kept in the dark about expectations and asked to work without a real understanding of how their work or performance will be assessed. Many teachers and schools have been experimenting with rubrics for important skill areas as ways of helping students understand what is expected of them. Some examples of rubrics for key skill areas are provided below.

Clear Expectations about Writing Quality

Vicki Spandel and Ruth Culham of the Northwest Regional Lab in Portland, Oregon, have developed (and provide training on) a writing rubric that can be used across grades and a variety of assignments. The six major evaluative categories used are Ideas and Content, Organization, Voice, Word Choice, Sentence Fluency, and Conventions. Students are taught how to rate their writing on a scale of one to five using these categories. The scale for Word Choice is shown in Table 1.

Table 1

Word Choice Rating Scale*

5 = Paper was extremely clear, visual, and accurate (e.g., I picked just the right words for just the right places.)

All the words in my paper fit. The words are colorful, snappy, vital, and brisk. You won't find overdone, flowery language. Look at the energetic verbs. Some of the words and phrases are so vivid that the reader won't be able to forget them.

3 = Paper was correct but not striking (e.g., The words in my paper get the message across, but don't capture anyone's imagination or attention.)

I used everyday words pretty well, but I didn't stretch for a new or better way to say things. My words aren't specific. There are many tired-out clichés. Most of the time the reader will figure out what I mean even if a few words are goofed up.

1 = Paper was confusing, misused words, and phrases abound (e.g., My reader is often asking, "What did you mean by this?")

A lot of my words and phrases are vague: "We liked to do things" and "We were friends and stuff." My words don't make pictures yet, like: "Something neat happened." I used the same words over and over.

* Northwest Regional Educational Laboratory (Vicki Spandel and Ruth Culham)

Clear Expectations about Math Problem-Solving

The Hawaii Algebra Project is a research-based algebra curriculum that stresses communication and problem solving skills. Journal writing and daily group presentations of problem solutions are typical assessment procedures used to build communication and problem-solving skills. Students respond to around 12 journal prompts (open-ended questions) per chapter. For example, one prompt is "Is division a commutative property? Why or why not?" Students know the grading criteria for their journal responses up front and can apply the criteria themselves. For example, they know that they will receive a "4" if they respond completely, support is given for their response by using examples, the ideas are clear to the reader, the writing is legible, and further

Table 2

Group Problem-Solving Presentation Rubric*

Problem Set: _____

Group: _____

Presenter: _____

Criteria	Good	Fair	Needs Improvement
Explained clearly.	____	____	____
Explained thinking, not just steps.	____	____	____
Asked class good questions.	____	____	____
Answered class questions.	____	____	____
If answer was incorrect, used it to create a discussion.	____	____	____
Group is not rude to others.	____	____	____
Group worked together.	____	____	____

* Hawaii Algebra Project, University of Hawaii.

questions are suggested or extensions are made. They will receive a "3" if they omit one criteria, a "2" if they omit two criteria, etc.

The students in these algebra classes are also involved in developing a criteria sheet for the group problem-solving presentations and in rating the group presentations. Table 2 is a rubric they developed.

Clear Expectations about Science Problem-Solving

The Math and Science Consortium of the Far West Regional Educational Lab (now WestEd) developed a science assessment that includes student and teacher evaluations. The students score their work from 1 to 5 and justify why

Table 3

Experiment Evaluation Rubric*

	Student Rating	Student Justification	Teacher Feedback/ Comments
How well we did our experiment to find out which cleaners were bases			
How well we told about what we did to find out which base was the strongest			
How well we did our experiment to find out which base was strongest			
How well we understood and used our results to decide which base was strongest			
How well we explained our reasons for why we knew which base was strongest			

* The above science assessment task is published in *Toolkit for Professional Developers: Alternative Assessment in Math and Science* available from the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon. For more examples of rubrics for science skills, see McColskey & O'Sullivan (1993), a SERVE publication entitled *How to Assess Student Performance in Science: Going Beyond Multiple-Choice Tests* (see catalog in the back of this publication).

they gave themselves such a score; then the teacher provides feedback on the quality of students' completed work. The assessment sheet followed a five-day sequence of hands-on lessons about neutralizing acids and bases (Table 3).

As can be seen from the writing, math, and science rubric examples, laying out the criteria clearly for the skills to be developed makes school less of a guessing or "gotcha" game for students. Rubrics are not just for teachers' grading use, but they are, more importantly, a communication tool for teachers and students to use as a way of structuring directions and feedback so that students are empowered to try to improve their performance. Generalized rubrics for important skills (e.g., types of writing, math problem-solving, group presentations, journal writing, and science investigations) help students understand what is expected and thus provide guidance for completing the assignment and assessing their own work.

Multiple Methods of Assessment

Students also need multiple ways of demonstrating their competence and level of understanding. Meece (1991) reported that students' intrinsic motivation was lower in classes where students' grades were primarily based on quizzes and tests. These evaluation methods tend to unfairly disadvantage students with poor reading and writing skills. Notebooks, group work and presentations, projects, journals, portfolios, oral performances (e.g., debates, presentations, skits, peer tutoring), and graphic work (e.g., drawings, concept maps, flow charts) are all assessment methods that can be used to assess students' learning. Some students are very comfortable with oral debates about an issue, while others show the depth of their knowledge more effectively through a paper. Other students may be more excited about a skit or play. Thinking in terms of allowing students to demonstrate what they know, rather than assessing to stamp a grade and rank the student, increases student motivation.

Consider the teacher reflection below that describes the motivation change that resulted from expanding the use of assessment methods beyond multiple-choice to the completion of performance tasks and portfolios.

> *They will probably not take chemistry again unless required to do so. They may have even left discouraged that they did not, or could not, do better on a very difficult multiple-choice final. I felt disheartened that, after working very hard all year, once again my students did not do better on their final. I never gave them an opportunity to show me what they had really learned. They left not realizing the depth or breadth of their knowledge. No wonder we become discouraged. . . .*

The teacher goes on to describe, by contrast, the last day of a different class called coordinated science, where students were required to complete performance tasks and portfolios rather than multiple-choice finals.

> *The coordinated science students spent their last day reviewing their own work and realizing how much they had learned during the year. They revisited their successes and what they had liked during the year. They evaluated these pieces and how they could improve on them next year. They*

evaluated their own behavior in groups and planned on improving their interpersonal skills for achieving more success next year. . . students left school with a sense of optimism and planning for next year. Their teacher did too! (California Assessment Collaborative, 1993, pg. 104).

Feedback for Improvement

How will students know how to improve their work? Do students receive the individual feedback they need to improve, persist, and stay interested? Individual is a key word, as learning is an individual process.

According to Grant Wiggins (1993, pg. 187)

The failure to receive good feedback is a legacy of defining education as "teaching" and assessment as "testing" after teaching. Our inability to give good feedback and our inability to find the time to give feedback of any quality indicates that we fail to understand the inherent limits of "teaching" as a means of achieving mastery. We must come to see that the successful performance of complex tasks is possible only if students learn through the effective use of more timely, frequent, and helpful feedback.

The assessment environment of a classroom can vary from feedback that is very standardized and structured (test scores) to feedback that is very informal and unstructured (classroom dialogue). If the only feedback students receive is test scores, then they will likely assume that judgment, not improvement, is the teacher's goal. In one study by Meece (1991), teachers were categorized as more- or less-motivating based on the responses of their students to intrinsic motivation scales. Observations of the more- and less-motivating teachers subsequently showed that the more-motivating teachers used more informal, unstructured feedback mechanisms. The less-motivating teachers relied more exclusively on test scores as feedback for students.

Research and observation suggest that classrooms could get by with much less grading/judging/measuring of student performance and more commentary and descriptive feedback that tells the student that he or she is off track, without labeling the effort publicly. Oral feedback may be particularly underused in most classrooms. When it is used fully, the teacher appears to be coaching students, constantly encouraging them to try to articulate what they know, providing feedback on misconceptions, and reminding them of expectations (e.g, "Try to speak in complete sentences").

In an inspiring video entitled *Good Morning Miss Toliver*, award winning math teacher Kay Toliver is shown working with her math students at East Harlem Tech/PS 72 elementary school. The oral feedback students receive is continual (see reference list for ordering information on the video). Students receive

feedback on their persistence, creativity, teamwork, and skill at articulating what they learned, both orally and in journals. In oral responses, she encourages students to restate and use complete sentences. They read their journal entries out loud to others to see if they make sense. This video is a powerful statement of how much can be accomplished with informal feedback, as opposed to the formal test scores students often receive. Although classroom dialogue may be an important component of many classrooms, the subtle difference is that when a teacher is acting as a coach, the student responses are taken as opportunities to provide descriptive feedback about the adequacy of their knowledge or of their oral or thinking skills. In more traditional classrooms, the dialogue is a means for the teacher to get the desired answer and to complete the lesson.

Butler (1987) compared the effects of individual comments, numerical grades, standardized praise, or no feedback at all on sixth-grade students' motivational orientations. The results indicated that individual comments promoted higher task involvement than did grades, praise, or no feedback. Specifically, students who received comments rated the task as more interesting and attributed their effort on the task to their interest. In a subsequent study of fifth- and sixth-graders, Butler (1988) found that written comments enhanced students' interest in the task, whereas grades with or without comments decreased both interest and task performance. Specific and informative feedback may be especially important for low-achieving students who generally feel they have little control over their learning (Connell, 1985).

Sometimes it may be important to provide a critical reading of what worked or didn't work, made sense or didn't, etc., in a student response to an assignment. At higher levels, this kind of feedback takes a great deal of teacher time, so some teachers have trained the students to become peer reviewers and to ask critical questions of each other.

How often do students get "feedback for improvement" rather than a rank or comparison grade? John Thomas (1993) concludes

> *Typical feedback practices do not often extend down to the level of student performance on individual concepts or principles. In the survey we conducted with high school biology teachers, we found that although the majority of these teachers collected and graded homework assignments, only 33 percent returned homework with written comments. Similar results were obtained for quizzes; 75 percent of teachers graded quizzes, but only 25 percent provided written comments. . . . Although giving grades on quizzes and homework may be informative with respect to a student's standing in the course, it does not help students to know how to alter their study practices (pg. 160).*

Opportunities to Improve

Teachers can also enhance students' intrinsic motivation to learn by providing multiple opportunities for students to complete tasks. When students are given opportunities to redo their work, they come to view errors as a natural part of learning, not as something that signals failure or inadequacy. Students can be encouraged to redo work or rewrite papers to obtain a higher score. Teachers could base the final grade on the average of the scores so that students would try to get a high score in the first place.

Stipek (1993) describes a teacher who placed a dot next to items on written assignments that were incorrect. After students corrected their work, dots could be easily changed into marks indicating correctness. Such practices keep students focused on the process of learning. Ames and Archer (1988) found that when students perceived self-improvement, learning from errors, and sustained effort as valued classroom norms, they report greater interest in learning, greater preference for challenging tasks, and greater use of effective learning strategies.

As Wiggins (1993, book, pg. 141) states

> *A low score is not, by itself, a disincentive to further learning. The disincentive comes from having no opportunity to profit from the assessment in the form of useful feedback and opportunities to try again. In fact, a low score on a valued test, with ample opportunity to get a higher score, is an incentive to harder work and better learning.*

East Forsyth High School in Winston-Salem, North Carolina, recently made some changes to help ninth graders make a smoother transition from middle school. Some of the changes for ninth graders involved more opportunities to improve. The following is excerpted from a newspaper report in the *Winston-Salem Journal*, December 7, 1996:

> *School administrators and teachers also hope a new grading system will encourage students to work harder. Students who are doing poorly get grades of "not yet" instead of D's or F's. They are expected to keep working until they can turn the "not yet" into a grade of C, B, or A. The system is used only for ninth graders. The difference between a "not yet" and a D or F is as much about self-esteem as academic standing, officials say. One teacher said that the "not yet" grade takes away some of the anxiety her honors math students feel. Some who memorized everything in middle school are struggling with the skills they must use in high school math. The "not yet" grade keeps some students from giving up.* ●

Evaluating and Reporting on Student Progress

Research shows that student motivation declines over the school years. Although there are many factors that have been associated with this drop, a significant change that occurs in later school years is that grading practices increasingly set up a zero-sum game with winners and losers. The winners stay in the game and the losers drop out, at least in terms of commitment to effort. This reveals that it is important to be sensitive to the impact of grading practices on students' perceptions of their ability. Students as young as second grade compare notes and realize that some students are "smarter" than others. Stamping daily work with public labels ("m" for most of the time, "s" for some of the time, and "n" for needs improvement) invites negative self-evaluations and teasing.

> *Students quickly come to understand what their schools stand for and what is valued. In many schools, students perceive that demonstrating ability is the main goal and that how they stand in comparison to their peers is the measure of their success. This is a school culture that emphasizes relative ability and comparative performance and is, in our terms, "ability-focused." In contrast, in some schools (all too few) students come to understand that what is valued is mastery, hard work, taking on challenging tasks, and making academic progress. Competition and comparison are discouraged. For the purpose of contrast, we call this a "task-focused" school culture. In reality, schools are on a continuum between these two poles, but too often, particularly at the secondary level, the culture stresses and rewards the demonstration of ability rather than the development of ability (See Maehr et al, 1991, 1992, 1993).*

Evaluation reduces interest in learning for some students when tests are based on normative criteria. Normative grading means that a student's performance is judged in relation to his or her classmates; a small percent are expected to get "A"s, a slightly larger percent get "B"s, a large percent get "C"s, and a smaller percentage fail. Under this system of evaluation, low-achieving students lose interest in learning because they have little hope of outperforming higher ability students.

An interest in learning is maintained, if not enhanced, when teachers base their performance assessments on improvement or mastery, while minimizing the availability of social comparison information. According to Ames (1992), students need to have opportunities to improve their grades, to feel it's okay if they make mistakes, and to know they can improve if they apply themselves. These conditions reduce students' concerns about their ability to perform and maintain a focus on learning. Moreover, students of differing abilities have an equal opportunity to be recognized and rewarded when evaluation is based on individual improvement or mastery (MacIver, in press).

MacIver has examined the effects of an improvement-oriented grading system within a sample of economically-disadvantaged students from 15 middle schools in Baltimore, Md. The program featured three graded tasks or assignments within a given unit. At the start of the unit, a student would receive his or her base score. For each subsequent test or quiz, students were instructed to surpass their previous score by at least nine points. Students earned improvement points depending on how close they came to this goal. All students who raised their performance level across the unit received a special certificate recognizing their accomplishment. After one academic year, the author found that students in the participating classes reported expending more effort, rated their abilities and interest in learning slightly higher, and achieved higher grades than did nonparticipating students. This program enhanced students' motivation to learn because it provided a way for all students to demonstrate improvement, provided concrete goals students could strive for on every graded assignment, and recognized the improvements of all students.

Another approach might be to experiment with making a portion of a six or nine weeks grade based on improvement. For example, in language arts, one teacher used a state writing test rubric and told students that they could get an "A" for a portion of their six weeks grade if they moved their writing up a score level. Portfolios and student-led parent conferences are other approaches to helping students honor "improvement" as opposed to relative ability.

Grading and reporting have a variety of purposes and there are no easy answers. Teachers who place a high value on student motivation tend to adopt grading schemes that allow all students who work hard to succeed. Teachers who value ability tend to adopt strict cut-offs—the most able students experience success. This struggle between values (sorting students versus helping them succeed and believe in themselves) is played out in the following passages from LouAnne Johnson's book, *Dangerous Minds* (1992), a teacher's story about her experiences with a school within a school for underachieving high school students:

> *We had just received the first semester grade reports for Academy students. Almost half had failed Bud's computer application class. None had failed English. I was delighted. Bud was disgusted. . . . You can't have that many good grades, Bud insisted. Why can't an entire class of students desire to succeed?, I asked. Because an "A" doesn't mean anything if too many kids get one, Bud said. It diminishes the value. But what if everybody decides to pass and does it, I said. Simple, Bud said. . . . Then the class is too easy. Too easy! I sputtered. They passed because I told them exactly what I expected them to do. I gave them challenging assignments, but I made them believe they could do it. And I also made it very difficult and unappealing to fail. . . I spent a lot of time and energy motivating those kids to succeed, and they did (pg. 170).*

Classroom Climate

High Expectations for All Students

Students' motivation to learn is greatly influenced by their teachers' expectations for student learning. Teacher expectations can function as "self-fulfilling prophecies" in the classroom. Research has consistently shown that students generally perform better in classes where the teacher expects all students to achieve as opposed to classes where teachers do not communicate uniformly high expectations. Teacher expectations are communicated in a variety of ways. In general, high expectation students receive more learning opportunities, more corrective feedback, and more attention than do low expectation students.

The following are examples of differences found between teachers and low-expectation and high-expectation students in classroom studies conducted by Brophy (1983):

- Teachers have fewer personal contacts with low-expectation students.
- Teachers are friendlier toward high-expectation students.
- Teachers give more difficult and varied assignments to high-expectation students.
- Teachers call on high-expectation students more often.
- Teachers provide more clues or rephrase questions more often for high-expectation students when they answer incorrectly.
- Teachers wait longer for high-expectation students to answer questions.
- Teachers give high-expectation students more detailed and more accurate feedback.
- Teachers criticize low-expectation students more for incorrect answers.
- Teachers praise low-expectation students for marginal or inadequate responses.
- Teachers praise high-expectation students more frequently for correct responses.

Research also suggests that students are very aware of differential teacher treatment. For example, Weinstein and Middlestadt (1979) reported that students even in the first grade were able to identify several ways that low and

high achievers were treated differently. Examples include the following:

- The teacher watches low achievers more closely when they are working.
- The teacher asks other students to help low achievers.
- High achievers have special privileges.
- High achievers get to suggest activities.

Fostering Student Autonomy and Choice

Site-based management has been sold at least partially on the assumption that teachers know best about how to work with students in their school and that making choices and decisions about instruction at the school level will increase morale and motivation. Similarly, it can be argued that students best know what their interests and feelings are and will be more motivated if they are involved in making decisions about the learning process. Thus, teachers can also influence students' motivation to learn by providing opportunities for students to control some aspects of their learning.

Research from many different perspectives emphasizes the importance of helping students become independent learners. If students are always told what to do and how to do it, they have limited opportunity to develop a sense of personal responsibility for their learning and self-management strategies. Classroom studies have shown that students vary considerably in how they view the classroom. Some classrooms are seen as places where students can be responsible, instrumental, and autonomous. Others are seen as places where they are "pawns" (reactive, passive, and controlled by others). This research has further shown that in classroom environments where students feel more autonomous than passive, they report greater feelings of personal control, self-confidence, and intrinsic motivation to learn (Grolnick & Ryan, 1987).

When students can direct and assume responsibility for their own learning, they are more likely to believe they are engaging in learning tasks by their own volition. In contrast, when teachers control academic decisions, students come to view their learning as controlled by others (Ryan, Connell, & Deci, 1985).

A number of classroom studies demonstrate the benefits of increasing student choice, including the following:

- When high school students had an opportunity to decide for themselves how to organize their chemistry experiments, they wrote better write-ups, persisted longer, and learned more than students who had been told exactly what to do (Rainey, 1965).

- When inner-city teachers were trained to involve students as active participants in all phases of the learning process, students in these classes missed fewer days of school and scored better on standardized achievement tests than did students in conventional classrooms (deCharms, 1976).

- Elementary students made significant gains in reading achievement when their teachers were trained to (1) give students some flexibility in determining when to complete assignments, (2) set up independent learning centers, (3) contract with students for long-range assignments, and (4) allow students to correct some of their own written work (Matheny & Edwards, 1974).

- When elementary students were given some opportunities to plan and design science experiments, they reported greater intrinsic motivation to learn (Meece, 1991).

- When elementary students perceived their classroom environment as controlling and restrictive, they reported lower self-esteem, academic competence, and mastery motivation (Ryan & Grolnick, 1986).

In many classrooms, students exercise limited control over the pace of lessons, the materials used, and how to complete assignments. In a nationwide study by Goodlad (1984), 55 percent of the elementary students reported not participating at all in choosing what they did in class. At the secondary level, more than 60 percent of the students said they did not help make decisions in their classrooms. There are a number of ways teachers can promote greater student choice in the classroom. Some examples include

- Let students design some learning tasks. As suggested earlier, teachers can offer students opportunities to write review questions, design experiments, find solutions to open-ended problems, or generate questions for class discussion.

- Give students a choice of learning tasks from several different options. Stipek (1993) suggests that after reading a story, students could decide how they want to express their understanding of the story (e.g., write a summary, write a sequel, or write a story about a similar experience of their own).

- Give students some choice in how to complete activities. Students could decide if they want to work alone or with a partner. They could also make decisions concerning how to organize their time and effort in order to complete the tasks. Kohn (1993a) suggests that each day should include one block of time in which students can have complete freedom to decide what to do (e.g., work on homework, read a library book, complete a class project, or get extra help on an assignment).

Student Choice and Collaboration

You may wish to use this form to help you reflect upon the opportunities for student choice and collaboration in your classroom.

	NEVER	OCCASIONALLY	OFTEN
1. Students are allowed to design learning tasks.	_____	_____	_____
2. Students have a choice of learning tasks.	_____	_____	_____
3. Students are allowed to choose how to complete their assignments.	_____	_____	_____
4. Students are allowed to correct their work.	_____	_____	_____
5. Students are allowed to choose the work they want graded.	_____	_____	_____
6. Students are allowed to help determine the grading criteria.	_____	_____	_____
7. Students are allowed to work with their peers.	_____	_____	_____
8. Students can choose their work partner(s).	_____	_____	_____
9. Students are allowed to help their peers.	_____	_____	_____
10. Students are allowed to work on projects that involve group problem solving.	_____	_____	_____

- Allow older students to correct some of their own work. Many teachers let students use an answer key to check homework or class assignments. This strategy minimizes students' dependence on teachers for feedback and encourages them to take more responsibility for their learning.

- Allow students to help determine the criteria by which their work will be judged (e.g., decide what will make a story interesting or an experiment convincing). Involving students in discussions about grading criteria fosters better understanding and acceptance.

- Involve students in developing guidelines for classroom behavior. Students are much more likely to accept and obey rules under these conditions because they feel in control, rather than controlled by others.

Although it may sound obvious, giving students more control does not mean abdicating teacher authority. There is little evidence to suggest that students benefit from a permissive classroom environment in which they may do whatever they choose without adult guidance. Students of all ages need to know what the limits are and what is expected of them. Teachers need to find ways to increase student choice while maintaining reasonable limits and expectations for behavior.

Promoting Cooperation and Teamwork Rather Than Individual Competition

According to Ames (1992), an important goal for teachers is "to establish an environment where individual differences are accepted and all students develop a feeling of 'I belong here'" (p. 338). This objective is best achieved through varied grouping arrangements that provide opportunities for peer cooperation. Cooperative learning activities, where students work together on joint assignments or projects, promote interest in learning by minimizing individual fears of failure and competition among students (Ames, 1992). Compared with traditional methods of instruction, cooperative grouping practices also promote better relations among different ethnic groups and greater acceptance of handicapped classmates (Slavin, 1983).

Some of the more successful cooperative learning programs combine the use of heterogeneous and homogeneous ability groups. New material and skills are taught to small groups of students performing at the same level. But students then work on practice and enrichment activities in mixed ability groups (Slavin, 1990). Evidence suggests that both low- and high-ability students benefit from cooperative learning groups that provide a structure for peer tutoring. Higher achievers deepen their understanding of course material as they teach it to lower achievers, and the low achievers benefit from peer assistance. Cooperative learning groups are most effective when groups are rewarded or evaluated based on the individual learning of all group members (Slavin, 1984).

Children need group approaches to learning. Peers function as important models and teachers (Schunk, 1991). Learning often best takes place when students have opportunities to discuss, analyze, and express opinions, and receive feedback from peers. Peer collaboration is especially critical during early adolescence when the importance of peer relations is on the rise.

Research on motivation suggests that cooperative learning activities can have a positive influence on students' ability perceptions and motivational orientations. Cooperative learning tasks give students more responsibility for learning. Students must plan, organize, and problem-solve with group members. In addition, cooperative learning tasks reduce students' concerns about failure and evaluation because responsibility for learning is shared. Under these conditions, students are more likely to tutor, help, and encourage classmates (Johnson & Johnson, 1985).

There are a number of issues teachers need to consider when forming cooperative learning groups, including the following:

- Size of group. Most studies indicate that small groups of three-to-five students work best.

- Ability composition of the group. The evidence suggests that mixed-ability groups work best when there is a moderate range of abilities (highs with mediums and mediums with lows). It is best to avoid groups with a wide range of ability levels (Nastasi & Clements, 1991). Homogeneous ability groups should be avoided as much as possible because this type of grouping creates a status hierarchy in the classroom.

- Gender composition of groups. Mixed-sex groupings tend to promote better relations between boys and girls, although girls tend to take a more active role in single-sex learning groups. Groups need to be well balanced in terms of gender to facilitate the participation and learning of all students. When there are just a few girls in a group, boys tend to assume leadership roles and leave girls out of the activity (Webb, 1985).

  Cooperative learning groups need to be carefully monitored to make sure everyone is participating and contributing. Teachers should not assume that students know how to work together and cooperate (Cohen, 1986). Problems also arise when one or two students do the work for the entire group. Teachers can avoid the unequal contribution problem by rewarding groups on the basis of how well each individual member performs. To make sure groups are not penalized by the performance of less competent members, evaluation can be based on some measure of improved performance so that everyone has an equal chance to contribute to the overall evaluation of the group.

Knowing the Student

All students want to feel successful and valued, but not all students can fit the traditional mold of the "good" student. There are many ways for students to be valued in their classrooms, but the starting point for everyone is the teacher's efforts to truly understand each child and see each student as an individual. Learning styles and multiple intelligence research (Gardner, 1983) provide a framework for teachers to see students in a range of ways, rather than just as a good or bad student on traditional classroom tests.

As one Birmingham teacher explained, "All children are motivated; they are just motivated to do different things. We have to understand the three or four things that they are interested in and a way of setting goals for them. To teach well, we need to get to know the children very well." Teachers who have experienced reductions in class size (K-5) or load (high school) frequently comment that the change allows them to individualize their instruction and understand what makes each student "tick."

The following strategies support "knowing" the student:

> *In some elementary programs, parents are enlisted as partners in helping teachers to better understand the students. Even just asking the question of students and parents, "What can you tell me about yourself that would help me help you learn?" sends a powerful message: "You are valued for what you are and what you can become."*
>
> *Student projects are a way for students to demonstrate their individuality and develop pride in their work, especially if the projects are shown or exhibited in some way to other students or parents. The use of assessment tools such as journals and portfolios can also contribute to the teacher's enhanced understanding of the student. These open-ended assessment strategies also can improve home-school communications because teachers have better-quality and more personal information to give parents. Some schools are now trying student-led parent conferences as a way of personalizing the act of reporting progress.*

Even little acts of demonstrating knowledge of the student can significantly impact motivation. For example, in *Dangerous Minds* (1992), the teacher decided to send home positive notes on students who had behavior problems. In some cases, the notes caused a turnaround in behavior because of the student's realization that the teacher saw a positive side to them.

> *In addition to Bryan and Detrick, I tried to call at least two or three kids per week, just to let them know I was thinking about them. After they got over the initial wariness, they started to respond and most of my discipline problems disappeared. If I called a kid and explained, for example, that*

talking during my instruction was impolite and I'd appreciate it if he or she would try not to be rude, there was no reason for the student to create a power play out of the situation because nobody else knew what I had asked (pg. 150).

Classroom Management and Discipline

Curriculum, instruction, and assessment are obvious classroom elements that influence student motivation. Less obvious is the hidden curriculum—the way behavior is managed. Classrooms are social situations, and the way student behavior is managed has implications for student motivation. McCaslin and Good (1993) argue

> *Classroom management in practice typically remains rooted in a behavioral conception of teaching that places the responsibility for student motivation and effort largely on the shoulders of teachers. Teachers demand; students obey. Our management systems must do more than elicit submission (pg. 253).*

McCaslin and Good note that research on parenting directs teachers to look to the middle. If permissive approaches to dealing with the child are on one end and authoritarian (parent orders; child obeys) are at the other, the middle (authoritative parenting) is the way to go. These parents discuss their standards with their children, teach their children how to meet them, praise behavior that reflects self-control, provide their children with opportunities to reflect on their behavior and its impact on others, and in general, help them problem-solve and understand responsible social action as conflicts arise. Research shows that their children are more independent and have greater confidence and better self-concepts.

McCaslin and Good maintain that this kind of approach to discipline and behavior management should be considered by teachers. They argue that student obedience and compliance should not be confused with student motivation. Overuse of rewards and punishments keeps students externally rather than internally focused. The middle road to motivating students to manage their own behavior is one that keeps rewards and punishments as subtle and informative feedback mechanisms, rather than controlling and coercive.

McCaslin and Good (1993) note that current carrot-and-stick approaches to managing student discipline and behavior are inconsistent with the growing emphasis being put on a thinking curriculum.

> *There is a growing consensus that something is amiss in an education that does not include problem-solving, integration, and elaboration of meaning by self-regulated learners. Current beliefs are that a problem-solving orien-*

tation should undergird the education of all students, regardless of age, ability, gender, economic status, or location. We maintain that present enactments of management and instruction are incompatible within this context of professed educational goals. This is because management of students typically involves application of behavior modification and behavioral control programs.

Behavior modification systems of student management are compatible with a curriculum of basic skills acquisition. In both systems, concern is with the identification (by teacher), sequencing (by teacher), and reinforcement (by teacher) of student performance of discrete skills. . . . It is of particular consequence that even when curriculum changes are evoked to embrace problem-solving processes by active and constructive learners, conceptions of management remain static. Indeed, behavior-control programs stressing perfunctory punishment in addition to routinized rewards to manage student behavior are becoming increasing popular (pg. 251).

They conclude

There is a fundamental mismatch in the promotion of a problem-solving curriculum within the context of behavior control management. We cannot expect that students will profit from the incongruous messages we send when we manage for obedience and teach for exploration and risk-taking (pg. 251).

They suggest that a successful management system

- Changes over time and is adjusted to allow students to progressively assume more responsibility, both within a year and across years, as they grow older (McCaslin and Good note that many kindergarten students have more opportunity for choice and self-evaluation than do typical sixth-grade students; they suggest this is the wrong direction)

- Depends on teachers having an opportunity to share and discuss what is working and what is not

- Focuses on the goal of student self-regulation of behavior rather than just reduction of disobedience—this minimizes the use of rewards and punishments (extrinsic motivators) and maximizes the use of approaches that encourage meaningful student involvement in decisions about their behavior

- Requires an administrator's understanding that too much emphasis on teacher control over the classroom (keeping students quiet) puts pressure on teachers to be controlling and coercive with students

- Is not likely to emerge as a quick fix but requires commitment and extensive dialogue and communication among all groups (parents, students, administrators, and teachers)

Classrooms that are "caring communities" are those committed to kindness, fairness, and self-responsibility. Research found that, in classrooms which students report as "caring," students also reported greater liking for school, concern for others, more sophisticated conflict resolution skills, less feelings of loneliness, and fewer delinquent acts (Schaps, Lewis, & Watson, 1995). The article suggests the following activities that teachers can implement to build a "caring" classroom:

- Hold regular class meetings in which children voice their aspirations for the class, help shape classroom norms and practices based on these aspirations, and help solve problems that arise.

- Use activities that build a sense of unity within the class by joining students together in shared, enjoyable pursuits (e.g., creating a class song, planning a celebration, investigating an issue together).

- Use disciplinary approaches that deepen bonds with one another by helping students understand the effects of their behavior on others; by assuming the best, rather than worst, motives for their actions; by avoiding techniques that isolate or embarrass individuals; and by encouraging students to search for their own solutions and restitutions.

Assessing Teacher Needs

Chapter Three was comprehensive, with a variety of factors identified that relate to improved student motivation. As a way of summarizing, we have put the ideas in a checklist form. You are invited to individually complete the checklist, then share your questions and "needs" with others. Perhaps as part of a school improvement plan, the school might create a teacher study group with each teacher setting goals relative to areas needing improvement or enhancement.

Think of improving motivation in the classroom as a long-term journey, not a quick fix. There will be successes and failures, but a clear focus on improved motivation should be the guide to what works and doesn't. Perhaps a long-term goal for the school could be a school-developed checklist that is derived from experiences of teachers in the school rather than from the research. If made public, it could become a visible guide to teachers in a school, a concrete statement of their beliefs about what motivates students.

Improving Student Motivation by Improving Instruction, Assessment, and Climate

	No Improvement Needed	Some Improvement Needed	Much Improvement Needed
Instruction			
Instruction is varied; a steady diet of routine and predictable lessons is avoided.	____	____	____
Hands-on, problem-centered activities are used frequently to actively involve students.	____	____	____
Pacing is adjusted to match students' needs; "scaffolding and fading" are used to provide support on difficult tasks.	____	____	____
Teacher often explains to students the relevance and importance of topics studied and work assigned.	____	____	____
Assessment			
Course goals are articulated for students and progress toward goals is assessed.	____	____	____
Expectations for task performance are made clear to students through the use of rubrics for key skills and other means (anchor papers).	____	____	____
Multiple assessment methods are used including peer and student self-assessment.	____	____	____

Good informative feedback is provided to help students improve.	____	____	____
Grades are used sparingly and purposefully so that students perceive the teacher as coach rather than judge.	____	____	____
Students are provided opportunities to improve their work/grades.	____	____	____
The process of developing final grades allows all a chance at success (grades are not allocated based on a bell curve).	____	____	____
Classroom Climate			
Teacher communicates high expectations to all students.	____	____	____
Teacher fosters student choice and autonomy in learning, rule-making, and resolution of conflicts.	____	____	____
Opportunities for teamwork and cooperation are provided.	____	____	____
Teacher can articulate strategies used to get to know students as individuals.	____	____	____
Classroom management and discipline approaches minimize blind obedience and compliance and maximize strategies that create a caring community.	____	____	____

Chapter Four

Strategies for School Improvement

Chapter Preview

It is clear that to improve student motivation changes must occur at both the classroom and school level. In this chapter, we describe how efforts to enhance students' intrinsic motivation in the classroom can be subverted by schoolwide policies and practices that over emphasize raising test scores, offer too few opportunities for teacher collaboration, require strict adherence to textbook coverage, or limit resources for staff development or curriculum refinement.

School leaders must examine school policies and practices in light of the school goal to improve student motivation and in light of what we know about factors that affect student motivation.

> *Students live within educational incentive zones that are larger than what they experience in classrooms and smaller than the economic or cultural rewards available in the distant future (Powell, 1996).*

As an example of how this school-level incentive zone can be improved, we include the following description of a new program for ninth graders at East Forsyth High School in Winston-Salem, North Carolina.

> *When the school year started, the principal looked at the stressed-out faces of many of the freshmen and saw a problem. Near the end of the school year, she studied statistics about the class. Out of the four high school grades, the ninth graders had four times as many discipline problems, the highest percentage of dropouts, and the highest percentage of failures. She and the teachers decided they needed to try something different to ease the transition to high school. The following year, the ninth graders attended the Quality Academy, a program that gave them some of the security and routine of middle schools as they adjusted to*

the academic and social demands of high school. The ninth grade academy was comprised of a variety of components designed to improve student motivation and commitment to school work, including the following:

- All ninth grade students will explain their school work to their parents at student-led parent conferences twice a year. They will bring notebooks filled with their work. Any work that is missing must be explained by students to their parents at the conference.
- Every ninth grader is assigned a teacher advocate to look after them. Each teacher is assigned 9 or 10 students.
- Two buildings are designated as freshman buildings so ninth graders would be less intimidated by older students when changing classes.
- A new grading system was implemented (for ninth grade only) that uses "not yet" instead of "D" or "F" so that students can continue working on assignments and have less anxiety and fear of failure as they make the transition to high school.

Chapter Three described how teacher decisions about instruction, assessment, and classroom management can affect motivation. Decisions about curriculum, grouping, and evaluation practices made at the school level can also affect motivation. Additionally, school leaders generally decide how scarce resources are allocated for teacher professional development and instructional materials. It is therefore important to consider how the larger school environment may enhance or hinder students' motivation to learn.

Maehr and Midgley (1991) point out that efforts to foster intrinsic motivation within the classroom can be undone by practices and policies at the school level. Pressure from administrators, for example, to keep standardized test scores up can lead teachers to be more controlling and less willing to try more innovative instructional approaches. If school administrators require strict adherence to textbook lesson plans, this can undermine the efforts of individual teachers to make learning tasks more interesting, challenging, and personally meaningful for their students. Scheduling restrictions can further limit the types of learning tasks teachers are able to provide for their students. A 40-50 minute class period is more conducive to lecture and worksheet activities than to hands-on projects or cooperative learning activities that motivate students.

Managing for Results/School Improvement Planning

One of the problems identified by some management philosophies (such as Total Quality Management) is that often organizations are managed for results rather than continual improvement. A school that has a strong policy orientation towards raising test scores may be inadvertently supporting an environment that reduces student motivation.

Teaching Under Pressure

What happens when teachers are pressured to produce high student performance? Do they engage in more controlling behavior? What happens to students' performance under these conditions? To examine these questions, Fink, Boggiano, and Barrett (1990) designed an experiment in which 15 fourth-grade teachers and their students were randomly assigned to one of two learning conditions. In the first condition teachers were instructed to maximize their students' performance on a set of learning tasks; teachers in the second condition were told to simply help their students learn. Following each teaching session, students' performance on the learning tasks were assessed. The results showed that students taught by "pressured" teachers did not perform as well on the tasks as students taught by the "non-pressured" teachers. In addition, "pressured" teachers gave more hints, criticism, praise, and directives than did the "non-pressured" teachers. The authors concluded that pressures to produce high student performance can lead teachers to engage in more controlling behavior that impairs rather than enhances learning.

Creating a School Norm for Working Collaboratively

A collaborative school is one that actively discusses the practice of teaching, identifies problems, designs improvement plans, and develops programs and materials using teams. When there are clear beliefs and focused goals that guide the collaborative work, schools often achieve dramatic outcomes (increases in motivation and achievement). Conversely, when schools do not have a collaborative structure and clear goals such that faculty are empowered to improve the quality of instruction, improving conditions for students may be difficult.

As a well-known researcher of school restructuring noted

> *It is becoming increasingly clear that the task of educating very diverse learners to much higher standards of learning in a world with fast-changing educational demands will require more skillful teaching and more responsive school organizations than current educational bureaucracies allow. Many argue that new school organizations. . . . will need to rely on much greater knowledge, skill, and judgment from all "front-line workers"*

(in this case, teachers) along with collaborative and flexible forms of planning and problem-solving more responsive to the needs of clients and the realities of change. As reforms in both the business and education sectors mature, striking parallels are emerging between the organizational strategies of high performance, high involvement corporations and those of extraordinarily successful schools. Studies of effective schools frequently find smaller, more personalized structures with less departmentalization, greater use of teaching teams, and substantial teacher participation in school redesign and improvement (Darling-Hammond, 1996, pg. 147)

Thus, in order to develop and achieve goals that involve increased motivation, schools must consider how they are to structure themselves to find time to work together. A sense of school community cannot develop if there are not many and varied opportunities for teams to work together on issues, problems, policies, individual improvement, etc.

Curriculum/Assessment

Curriculum decisions should be considered in light of the goal of improving student motivation. Curriculum materials and programs that make use of hands-on activities, cooperative groups, and journaling and support higher-order thinking and challenging assignments, build on those factors that are known to increase student motivation. In addition to choosing curriculum programs carefully so that motivation is enhanced, faculty can be given time and support to revise curriculum and lesson plans to include more engaging learning activities.

Just as many argue that teachers at the school level must be involved in collective discussions and decision making about instructional materials and methods, those who have worked closely with schools on alternative assessment argue that these discussions and decisions must also be school-based.

When schools wrestle with their own standard setting, the collective struggle to define directions, to evaluate progress, and to "map backward" into new curriculum and teaching possibilities can create an engine for schoolwide change that is absent when assessment is entirely externalized. . . . Assessments that are externally developed and scored cannot transform the knowledge and understanding of teachers—and of school organizations—even if they are more performance-based than current tests (Darling-Hammond and Ancess, 1994, pg. 1).

Based on work completed with a number of schools that have developed more authentic assessment approaches, Darling-Hammond and Ancess (1994) argue that it is the process of working through assessment development issues

that leads to a personal understanding of what is worth being known by students and worth assessing by teachers.

As an example of a schoolwide authentic assessment development effort, many schools are having success with the idea of a graduation exhibition or senior project requirement in which the whole staff work together to give students an opportunity to try their wings and explore an area of interest. Students write a research paper, spend at least 15 hours creating a related project, and speak to a panel of judges about their research, project, and personal growth. The senior project breaks down some of the artificial disciplinary walls by making learning an integrated process. Students see learning as a process with setbacks and successes along the road. A common by-product of such a collaborative assessment approach is to increase the sense of connectedness among faculty and to begin to plan curriculum and instruction to achieve instructional goals that have fallen through the cracks (such as oral speaking skills).

In addition to the support of school-based assessment projects, there is a tremendous need for districts and schools to find ways to offer support to teachers in developing and improving the tests and assessments they use in the classroom. SERVE and the other regional educational laboratories have collaborated on a resource for professional development in assessment (*Toolkit for Professional Developments: Alternative Assessment*, available from the Northwest Regional Educational Laboratory in Portland, Oregon) which helps educators become better consumers and developers of assessments. It provides 21 professional development activities that engage educators in discussions about key assessment issues. Also included are 19 sample assessments in math and science for educators to adapt and use. The Toolkit is based on the assumption that classroom testing should not just be an afterthought to determine grades but an integral way of providing students with meaningful feedback on their performance related to key instructional objectives. (SERVE has a four-day workshop series on quality classroom assessment that builds on ideas from the toolkit. **Contact:** Nancy McMunn at 800-755-3277.)

School Organization and Structure that Supports Personalization

There are many different ways of organizing that can help schools foster a caring and personal environment for students. In her autobiography (*Dangerous Minds*), LouAnne Johnson describes her experiences of teaching in a "school within a school." In this model, reduced class sizes and resource periods for teachers to provide tutoring and counseling constitute a program for underachieving high school students. Students enroll voluntarily in the

tenth grade, and although they have low grade point averages and poor attendance, they have above average standardized test scores.

Johnson states

> *Students remain with the same teachers and the same classmates for three years, which allows a considerable amount of bonding to take place. It is this bonding that is the key to the success of the Academy model programs. When classes are small enough to allow individual student-teacher interaction, a minor miracle occurs: teachers teach and students learn (pg. 2).*

SERVE has recently completed a publication on reduced class size in the early grades that describes the powerful connection between size and achievement and what some states and districts are doing with this information (Egelson, Harman, & Achilles 1996). Reports on the impact of block scheduling at secondary levels also mention that the reduced teacher-to-student load has a positive impact on the degree to which students feel known and cared about. The opportunities for students to be invisible and fall between the cracks decrease as class size and teacher loads decrease. Increasingly, research is demonstrating the key role of smaller size in improving educational outcomes.

Work-Based Learning/Career Exploration

Older students are more motivated to learn when they perceive the skills and content will have value for their lives beyond high school. Schools are in the process of improving the school-to-work connections for students in a variety of ways. In some states, federal school-to-work dollars support a variety of work-based learning options. The state of Florida uses the following definitions:

- Service learning—The formal integration of service into academic instruction and vice versa. Service is integrated into students' curricula and provides structured time for students to think, talk, or write about their service activities.

- School-sponsored enterprises—A school-sponsored enterprise that engages students in providing services or producing goods for sale. Individual or sequenced high school courses are set up as actual student-run businesses.

- Clinical or field experience/practicum—Training and experience in the actual work setting requiring direct supervision by a faculty member of the program with expertise and experience in the occupation being pursued.

- Work-place mentoring—Provides individuals with career exploration opportunities to experience and learn firsthand from professionals about their chosen occupation.

- Job shadowing—Short-term, generally one day or less, exposure to the work-place designed to serve as an observational experience for a student in a career or occupational area of interest.

In addition, many believe that school counselors can play a key role in helping students with career awareness and exploration. There are several well-defined models available to schools revamping their guidance programs. Walz and Ellis (1992) discuss three model career guidance and counseling programs: Gybers Comprehensive Guidance Program Model, Myrick's Teacher Advisor Program Model, and Purkey's Invitational Learning for Counseling and Development, all proven effective for students with diverse needs. *For more information about exemplary career guidance programs, see "Exemplary Career Guidance Programs: What Should They Look Like?," Maddy-Bernstein and Cunanen, 1995, National Center for Research in Vocational Education.*

Conclusions

Efforts to increase students' intrinsic motivation will require not only significant changes in the classroom environment, but also fundamental changes in how schools organize their improvement efforts.

As others have said, if it was easy to create a classroom environment that is intrinsically motivating, teachers would have already done it. Creating this kind of environment takes planning time to reflect and discuss with colleagues and time to observe others. Time is not easy to find. Thus, a schoolwide commitment to the improvement of student motivation to learn is critical. The commitment should be a long-term one, not a quick fix.

Discussion Questions for School Improvement Teams

1. How can the school best support teachers interested in working on ways to improve students' motivation in their classrooms?

2. Have schoolwide incentive programs been evaluated through student interview, surveys, or parent focus groups to better understand their positive and negative impacts? Are they reviewed and revised based on such evaluation information?

3. List the policy areas that you believe impact student motivation schoolwide. Are committees or study groups needed to revise and monitor school policies and practices in the critical areas of curriculum, assessment, guidance, discipline, school structure, etc.?

Chapter Five

Assessing Student Motivation

Chapter Preview

As a first step toward understanding the baseline level of motivation in your classroom or school, consider

- In-depth analyses of achievement tests, grades, and other behavioral indicators—A high number of failing grades in math or in the ninth grade class, for example, can be a starting point for exploring those students' perceptions and attitudes toward school.

- Understanding the kinds and levels of motivation that students have—Do students in the classroom or school report more intrinsic than extrinsic reasons for doing their work? Published scales are available.

- Attitudes toward school and subjects and comfort in class—Attitude and comfort questions can be given to students at the beginning of the year as a way of better understanding their perceptions and feelings (positive or negative attitudes). Kay Toliver, an award-winning math teacher, described in a keynote address at a SERVE conference how important it was to her as a math teacher to collect data on attitudes from her students at the beginning of the year so she could better understand their individual needs. She has them write to her about how they feel about math.

- Informal discussions and focus groups—What can be learned from talking with groups of students? What do students say about their motivation and work habits? What are parents' perspectives?

- Action research—Are there any teachers in the school who are interested in conducting classroom research on how students respond to various efforts to improve their motivation? Can they form a study group?

There are many ways to collect data. The important thing is to begin small and find ways that provide good information. Student input and feedback are critical.

Through a variety of informal and/or formal data collection procedures, teachers, schools, and districts can begin to assess how successful they are in developing highly motivated students. This section provides some ideas relative to finding out how you are doing.

Some might say that motivation is too ambiguous to assess, and, indeed, very few schools have systematically looked at the degree of effort students expend and their level of commitment to school tasks. But the point of this chapter is that there are varied ways of "getting at" student motivation. As with most assessment, there is no single measure that will give a teacher, school, or district a "true" picture of motivation. The best approach is to look at all the evidence across a variety of assessment methods (performance, self-report, open-ended questions, behavioral observation, etc.).

Grades, Test Scores, and Other Indicators

Motivation is clearly linked to grades, test scores, and other measures of academic performance. However, a student's grade or test score should not be used as the sole measure of student motivation. Some students can work very hard but not know how to study. Thus, they do not perform well. Other students can do well seemingly without trying. Some students who do well on standardized tests may have confidence or motivational problems. In one study (Phillips, 1984) of 117 fifth graders scoring above the 75th percentile on a standardized test, 23 had low self-perceptions and persisted less on tasks than other children in the sample with higher self-perceptions. By giving up too easily, their school performance was probably more uneven, leading to the low perceptions.

Failure rates across courses or grade levels can be examined as a preliminary measure of student effort. For example, high failure rates in ninth graders compared to those of eighth or tenth graders would indicate that this population of students is struggling and losing interest. Looking for dips in achievement scores across the grade levels can provide another indication of which areas students might be working below capacity. Another approach that has been used by schools in identifying motivational problems is to compare performance on aptitude tests to performance on classroom or achievement tests.

Retention, dropout rates, and course-taking patterns at the high school level can also provide indications of problems. At the high school level, participation in higher-level academic courses and students' reasons for avoiding them should be examined closely.

Understanding the Kinds and Levels of Motivation That Students Have

Surveys of students are easy ways to collect basic information about their motivation. The following instruments are available for grades three to nine:

- Harter (1981) developed the *Scale of Intrinsic versus Extrinsic Orientation in the Classroom* for grades three through nine. Intrinsic motivation is assessed along five dimensions: (a) preference for challenging work versus easy work, (b) learning motivated by curiosity versus learning done to please the teacher, (c) desire to work independently versus dependency on the teacher, (d) independent judgment about selecting tasks versus reliance on teachers' judgment, and (e) internal criteria versus external criteria for success or failure. This 30-item survey uses a structured alternative question format in which students identify the person that is most like them. Sample items include

  Some kids like school subjects where it's pretty easy to just learn the answers, BUT other kids like those school subjects that make them think pretty hard and figure things out.

  Some kids do their schoolwork because the teacher tells them to, BUT other kids do their schoolwork to find out about a lot of things they've been wanting to know.

  Students' respond using a four-point scale, with high scores indicating greater intrinsic motivation. It does not assess intrinsic and extrinsic motivation as separate dimensions.

  A new version of this scale does assess intrinsic and extrinsic motivation as separate dimensions. Statements begin with the stem "I do my schoolwork because . . ." The six intrinsic reasons include: what I learn is interesting, I enjoy figuring things out, schoolwork is challenging, it makes me think hard, I like to solve hard problems, and I enjoy trying to understanding things I don't already know. The six extrinsic reasons include: my teacher will be pleased with me, I will get special privileges from the teacher for getting my work done, if I don't do my schoolwork my teacher will be mad or annoyed at me, and if I don't do my schoolwork, I'll get into trouble with the teacher. Each item is rated on a four-point scale from very true (4) to not very true (1). Additional information can be obtained from Professor Susan Harter, Department of Psychology, 2155 S. Race Street, University of Denver, Denver, CO 80208.

- *The Children's Academic Intrinsic Motivation Inventory (CAIM)*, developed by Gottried (1985), is a 122-item self-report inventory. It contains 5 subscales; four measure intrinsic motivation in reading, math, social stud-

ies, and science. Items in this scale are identical, except for reference to a specific subject area. Sample items include

I enjoy learning new things in_____.
I feel good inside when I know I have learned something new in_____.
I would like to learn more about_____.
I think it is interesting to do work in_____.

A fifth scale measures intrinsic motivation as a general orientation toward school learning:

I keep working on a problem until I understand it.
I enjoy doing new work in school.
I like to learn.
When I get bored I look for new things to do.

Students rate each item on a 5-point scale from (1) strongly agree to (5) strongly disagree. The scale is appropriate for students in grades five through eight. A description of this scale can be found in Gottfried (1985).

In addition to published scales assessing students' intrinsic interest in learning (enjoyment, desire to understand, preference for challenging work, etc.), teachers can experiment with items in their classrooms and assess the reasons students do work after they have completed certain assignments. Students could be given the following statements in Table 4 (without the headings) and asked to rate each statement from 1 (not very true of me) to 4 (very true of me).

Other Indicators of Motivation

Perceived Competence

Students can be asked to report on their perceptions of their academic competence. Harter, Whitesall, and Kowalski (1992) developed a scale for children which asks them questions about how well they understand their schoolwork, how easy it is for them to figure out class assignments, how smart they feel, and how well they are doing in school. Although the researchers used rating scales, teachers may find that these kinds of questions elicit more useful feedback from students if they ask them as open-ended questions.

Perceived competence or confidence may be particularly important in subjects where there is often anxiety, such as math. One way to assess confidence is to ask students the following questions:

- How good are you at mathematics? (1=not very good, 4=very good)

Table 4

Rate each statement below from 1 (not very true of me) to 4 (very true of me).

In doing my assignments this week . . .

Intrinsic Reasons				
1. I wanted to learn as much as possible.	1	2	3	4
2. I wanted to get better at (fill in the topic).	1	2	3	4
3. I wanted to learn something new.	1	2	3	4
4. I wanted to figure out the work on my own.	1	2	3	4
External/Extrinsic Reasons				
1. I wanted to make my parents happy.	1	2	3	4
2. I wanted to please my teacher.	1	2	3	4
3. I wanted to get a special reward.	1	2	3	4
4. I didn't want to get into trouble.	1	2	3	4
Social/Comparative Reasons				
1. I wanted the other students to think I was smart.	1	2	3	4
2. I wanted to get the best grade in the class.	1	2	3	4
3. I wanted to do well without trying too hard.	1	2	3	4
4. I wanted to finish first.	1	2	3	4
Work Avoidant				
1. I wanted to do as little as possible.	1	2	3	4
2. I just wanted to do what I am supposed to and get it over with.	1	2	3	4
3. I wanted to do things as easily as possible so I won't have to work very hard.	1	2	3	4

- How good are you at figuring out problems in mathematics? (1=not very good, 4=very good)
- Compared to other subjects, how good are you at math? (1=much worse, 4=much better)

- How sure are you that you will get a good grade in math if you work hard? (1=not very sure, 4=very sure)

If you collect these data, tally the percentage of "1" and "2" responses, and find all but a few of your students are in this range, then you may have some problems to work through in terms of how to provide more support and encouragement. One teacher found that her students were so math-anxious that she decided to give them the answers and then focus on how those answers were arrived at; thus, their anxiety decreased.

Attitudes Toward School or Class.

Attitude items assess how well a student likes or dislikes something, in this case, school, school subjects, or a particular subject. Although students can dislike or like school for a variety of academic and social reasons, these data can provide a starting point for better understanding how and why many students are alienated.

Comparative liking for subject areas can also provide useful information. In a program evaluation of a middle school science curriculum reform, SERVE asked the students to rate their liking of four core subjects (see below). The results were very helpful in looking at trends across the subjects. For example, whereas eighth grade science had been the most liked subject and social studies had been the least liked, when these same students moved into ninth grade, social studies was the most liked and science was the least liked. These data provide good information for school improvement teams as they look at the quality of the curriculum.

	Like a lot (3)	Like a little (2)	Do not like (1)
Math	3	2	1
Science	3	2	1
Social Studies	3	2	1
English	3	2	1

Teachers may want to assess basic enjoyment and ask their students to answer the following four items on a scale of 1 (not very much) to 4 (very much). The following items are written for mathematics but could be written for any subject.

- How much do you like doing mathematics?
- How much do you like learning about mathematics?
- How much do you like working on math assignments?
- How much do you like doing hard problems in math?

Finally, teachers may wonder about students' perceptions of the usefulness of class activities.

- How useful is what you learn in science for what you do outside of school? (1=not very useful, 4=very useful)

- In general, I find working on science assignments _____. (1=boring, 4=very interesting)

- For me personally and my career goals, being good at science is _____. (1=not important, 4=very important)

Collecting these data for a classroom, department, grade level, or school can help begin a conversation with students about their attitudes toward learning. Another more open-ended way to assess attitudes toward a subject area is to ask students to complete sentences like the following:

1. When I am working on _____, I feel _____.

2. Mathematics makes me feel _____.

3. When I get stuck on a math problem, I feel _____.

4. When I get a hard problem in math, I feel_____.

Cognitive Engagement/Learning Strategies.

Another measure related to motivation is how students learn. Items can assess the degree to which students report regulating their own learning (e.g., I went back over things I didn't understand, I asked myself some questions as I went along to make sure the work made sense to me, I tried to figure out how today's work fit with what I had learned before).

Other items assess whether students report using strategies to complete their work with minimal effort (e.g., I copied down someone else's answer, I guessed a lot so I could finish quickly, I skipped the hard parts). These are items a teacher could use after students complete assignments or tests. Students could rate the items from 1 (not like me) to 4 (a lot like me).

Comfort in Participating.

In a survey of students at a North Carolina high school, SERVE found, as part of a Tech Prep evaluation study, that many students, particularly in math class, did not feel comfortable asking questions—a very basic aspect of learning. Thus, finding out how many and which students and in which classes are experiencing discomfort in asking questions can provide some guidance about where to concentrate.

Open-Ended Questions/Interviews/Informal Discussions

Although survey items such as those provided above are quick and easy measures of students' attitudes and feelings, they are limited in the depth of understanding they allow. Qualitative data (interviews, group discussions, journal writing, etc.) can help to enhance the picture started with survey data.

Some schools are starting to conduct focus groups (small group interviews) with students to better understand the barriers to high levels of motivation. If a teacher perceives that a particular class or group of students within a class is not putting forth much effort, simply talking with them about the reasons can be a starting point for improving their commitment. For example, in one North Carolina high school, a teacher new to the school noticed that a number of her algebra students seemed determined to fail and put forth little effort to pass the course. She started talking to students about why they were "work avoidant" and found out that they did not feel comfortable in the group classroom setting; they said they felt "dumb." She set up an after-hours grade retrieval lab and found that these same students would work diligently in groups of three on computer programs to learn the same skills that they refused to study in the regular classroom. Thus, asking students why they are not doing the work is an easy, but seldom tried, approach. They may actually have good reasons for being "work avoidant."

Similarly, parents might be good sources of information about motivational problems. As reported in Webb, Covington, and Guthrie (1993), the counselors and teachers at a high school could not understand why their African-American girls took failing grades for their swimming portion of PE rather than participate. They finally decided to ask the parents and found out that the chlorine in the pool damaged the girls' hair. The school decided to offer alternative forms of exercise to the girls, and their grades improved.

Action Research

What might a teacher gain from doing action research (collecting quantitative or qualitative data) on motivation in the classroom?

Teachers informally go through an evaluation process that includes trying out new ideas or lessons, observing results, revising, and trying it again. Action research translates this kind of informal reflection process into a more systematic inquiry. The systematic inquiry might involve a teacher journal, student interviews, or audio or videotaping the classroom so that interactions can be examined later. When a teacher hits a particularly hard-to-motivate class, research on what to do when nothing seems to work might be a positive way

to deal with the situation. The excerpts below are from *Studying Your Own School* (page 50-55), which provides examples of practitioner-based research (Anderson, Herr, & Nihlen, 1994). The excerpts describe action research conducted by an eighth grade language arts teacher who was faced with a class of students for whom nothing seemed to work:

I wanted to determine what environmental factors in the classroom might influence motivation and what types of rewards are effective. I used a methodology that included a daily journal, . . . tape recording of class activities, and student interviews and questionnaires. . . . I read the students my research proposal, enlisting their help to communicate with me and to work together on the research process.

[I] began to try some interventions in the classroom; in my journal, [I] wrote about an experiment in sending notes home to parents and the risks [I] felt in trying this. . . . Searching for other positive motivators for my class, [I] mounted a motivational bulletin board with a horse on a race track, illustrating the progress the class was making in attendance, homework, and participation. [I] also devised a list of extrinsic motivators and tried to prioritize them in the way [I] thought my students would. . . .

I had assumed the number-one item would be a bonus point system where the class earning the most bonus points in one six-week period would choose their own reward. The class rated it as number ten and, after a little discussion, decided it didn't even need to be on the list. They rated teaching resources as number one. How wrong I was about them! I was also wrong about the positive notes home. I shared my fear about them being too "cool" for a positive note. Norman, Scott, and Dawn all said that's not true. They said they took their notes home and showed them. I was not only working with the class to reorganize each strategy and develop classroom incentives, but I was valuing their ideas. They cooperated fully, taking the activity seriously. . . .

Clearly, I had wasted many days assuming the class was incapable of deep reasoning. I was guilty of letting their outer appearance and low academic ability sway my attitude. . . . If I want my students to be motivated to achieve, I must care for them as persons.

At a later time, [I] asked my students to restate, in order, their four largest inhibitors of motivation. These were comparing me with another student in class, picking out a certain group of students as pets, lack of trust in students, and a teacher that always cuts you down. . . . Students had voted that getting good grades was the first source of motivation. Second to this in the students' perceptions was having parents care, followed by having a bright, caring teacher.

In examining these students grades in my class, [I] found improvements over a four week period. However, many of the students had not shown the same kind of improvement in their other classes. When [I] asked them to explain, the students placed the blame on the teachers for the most part. Remarks like "He don't like us," "She don't know how to teach," and "All she does is pass out worksheets" had been said before and were now being repeated.

[I] ended my study with an increased awareness of my role as a teacher, as well as a greater sense of my students and what motivates them. [I] also got the results [I] was looking for—that is, a class that performed at a higher level, as measured in their grades.

[If this eighth grade teacher] were to continue the research spiral, perhaps she would have the opportunity to share her own learning and classroom results in a larger arena, working with other educators in her school. This kind of dissemination of her research could have an impact beyond her classroom in the larger environment of the school, potentially creating a new context for learning for all students.

Conclusions

How do we judge the success of our schools? Often, it is through scores on state tests. But these measures are a step removed from the heartbeat of the student: their motivation to learn. School change literature suggests that successful schools are those that truly engage and involve students and motivate them for life. Test scores are not enough. Schools must have a finger on the pulse of students' emotional and cognitive reactions to their school environment. If students express significant levels of boredom, they are not likely to be optimally motivated and learning. Surveys indicate that boredom is a major problem, especially in middle and high schools. When a student who has always been happy to go to elementary school moves up to middle school and begins to hate school, asking to stay home because of how boring the day is, we have a problem. We need to know how many students are bored, uninvolved, turned off, feel like they are dumb, afraid to ask questions, etc. Without this information, it is very difficult to interpret achievement scores and to develop school improvement and teacher professional development plans.

Chapter Six

Conclusions: Using the Information in This Document

After becoming familiar with the information in this document, our first recommendation for action is that teachers and school faculty begin to collect data from students (see Chapter Five). The data collection could be both formal (surveys) and/or informal (conversations with small groups of students). It could be quantitative or qualitative. It is generally helpful to start small, and build in more data collection based on what you find with the first effort. It is critical to get to know where students are coming from before designing strategies to improve their motivation to learn.

The document is a rich resource for thinking about ways to improve student motivation to learn.

1. Although extrinsic incentives can be effective for certain situations and certain groups of students, they are not the only answer to improving test scores or student motivation. A teacher, department, or school team may want to review Chapter Two and evaluate their current use of extrinsic incentives. It may be helpful to collect teacher, parent, and student input about how well the incentives are working and their impact on students. Secondly, it may be helpful to match your use of incentives to the recommendations laid out in Chapter Two and determine where you differ from effective practices suggested by research.

   We also suggest a review process of discipline and classroom management policies to discover if they are more adult-centered than student-centered. That is, are they too controlling and heavy-handed or are consequences used in a way that encourages students to think about their actions and discuss the impact of their actions with others? It may be helpful to read the research on popular programs such as Assertive Discipline to better understand the potential positive and negative impacts. At the school level, it may be helpful to establish an ongoing classroom management/discipline committee that can read the research, collect input, and continually revise school programs based on what is learned.

2. Chapter Three is designed to help individuals or groups of teachers (grade levels, departments, etc.) think about what they can do in the classroom to increase student motivation to learn.

   The *Teacher Checklist of Factors to Improve Student Motivation* will hopefully prove useful to teachers as a self-assessment tool. Some teachers may feel they are doing well on the "Instruction" factors but are weak on the "Assessment" factors, or strong on "Assessment" but weak on "Classroom Climate." Needs for improvement may also vary from year to year depending on the class population. The "Classroom Climate" factors may be fine one year but the next year with a more difficult class, they may need to be reconsidered again.

   We see the checklist as a resource to refer to in setting professional improvement goals from year to year. Chapter Three could be the basis for goal-setting as required in some school teacher evaluation plans. If so, it is critical that teacher goals be those chosen by them, based on their interests and self-perceptions, not forced on them by administrators. If it is somewhat threatening for teachers to publicly identify goals to submit to the principal, perhaps, grade levels or departments could set team or grade-level goals (e.g., to develop common rubrics for key skills expected to be mastered by students).

   The school media specialist might be enlisted to compile resources in some of the areas of most interest to teachers (e.g., rubric development, cooperative groups, hands-on/problem-centered instructional activities). Principals are critical in supporting study groups and other ways for teachers to work together and support each other, sharing resources developed and ideas that work to increase student motivation. Perhaps, an "improving motivation" teacher study group could be supported with release time and other resources (with teachers participating on a volunteer basis for a year). Teachers who are frustrated by a lack of student motivation would most likely welcome a supportive, collegial environment in which to express their frustrations and explore ways to change.

3. The school leadership and school improvement team are critical users of the information in this document. It is they who can help determine the extent to which the school has a "motivation" problem. They are the ones who can make the larger commitment to collecting needed data (Chapter Five) and to making the improvement of students' motivation to learn a visible school improvement goal. School leaders can use Chapter Four as a starting point for thinking about strategies to consider at the school level that may increase student motivation. This process is not a "quick fix." Rather it is a commitment to adding improved student motivation to the typical student achievement goals and then going beyond simply imple-

menting an incentive or consequences (extrinsic rewards and punishments) action plan. The expanded look should include a commitment to:

a. Assessing student motivation (even the addition of 4 to 5 student focus groups a year on the topic would be significant)

b. Using these data to reflect on the total school program (management style, curriculum design, assessment practices, opportunities for teachers to work together to improve their practice, class size and structure, degree of personalization, and school-to-work connections)

c. Developing action plans and continually revising them as needed.

Perhaps once a year (as a school improvement evaluation activity), teachers could volunteer for participation on committees to reflect on the components of the schoolwide program listed above (e.g., curriculum quality and resources, adequacy of school-to-work connections, professional development needs). They could also consider strengths and weaknesses to report to the school improvement team for future action.

Finally, perhaps the most important recommendation of all for school leaders is simply to start supporting conversations and planning around improving motivation. If teachers aren't talking about these issues, improvements are unlikely.

For Further Reading

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