

## Caring About Learning: The Nature and Nurturing of Subject-Matter Appreciation

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Many observers despair of the prospects of encouraging intrinsic values among students in a world controlled by extrinsic rewards. The purpose of this article is to explore the question of whether intrinsic objectives such as subject-matter appreciation can coexist to any degree, let alone flourish, in the face of competing, if not higher, loyalties that involve a performance ethic based on scrambling for extrinsically oriented rewards, such as high grades, and avoiding punishments in the form of failing grades. Based on research conducted in ongoing classroom contexts at the college level, it is concluded that the pursuit of high grades and valuing what one is learning are not necessarily incompatible goals as long as certain conditions prevail. More specifically, students are more likely to value what they are learning and to enjoy the achievement process more: (a) when they are attaining their grade goals, (b) when what they are studying is of personal interest, and (c) when the dominant reasons for learning are task oriented, not self-aggrandizing or failure avoidant.

Teacher: What did you get out of the class?

Student: I got an A.

Perhaps nothing frustrates teachers more than when students forsake learning for the pursuit of grades and in the process fail to appreciate the power of learning for the sake of self-expression, personal growth, and meaningful discovery. Certainly, many students are grade driven, not to say, "grade grubbing," and this preoccupation begins surprisingly early in life. Such a reaction seems inevitable in a society like ours in which a primary determinant of one's status and worth is the ability to perform successfully. And grades are widely regarded as an index of ability. As a result, nothing contributes more to the young student's sense of worth than does a good report card, nor destroys it so completely as do poor grades (Glasser, 1976; Oakes, 1985).

This dependency of one's worth on good grades intensifies as students grow older, so that by the college years, one's grade point average is often of paramount, sometimes of overweening, importance. For example, virtually without exception, we have found that college students rate achieving the highest grade possible as the main reason for undertaking school assignments, with such reasons as overcoming a personal challenge or developing an appreciation for what one is

learning rated as less important (Covington & Wiedenhaupt, 1997).

These same students as well as many educational observers are quite clear about whom they consider responsible for this scramble for grades. For instance, George Leonard (1968) pointed to society's use of grades as the primary means by which individuals are distributed proportionately across the available jobs, some of which are more attractive than others. In truth, competitive grading has long been a central mechanism for assigning talent according to job demands and availability, a reality that has also troubled David Campbell (1974), who points out that the whole frantic scrambling to win over others is essential for the kind of institutions that our schools have become—"bargain-basement personnel screening agencies for business and government" (pp. 145-146). Campbell's remark, perhaps more than any other, lays bare the fundamental incompatibility of the mission confronting all of education: Schools are not only places of learning but also places for sorting out students and giving further encouragement to those capable of learning the most and the quickest. Given this selective-sorting function of schools, it is little wonder that many students become preoccupied with grades, especially because grades not only largely determine future occupational placement but also are judged indicative of the individual's personal worth. Rightly or wrongly, students often see teachers as the main gatekeepers in this process of selective sorting and, ironically, accuse teachers of not recognizing and rarely encouraging the same intrinsic aspects

of learning that teachers, in their turn, lament that students have come to disregard—that is, feeling that one has learned something of personal value apart from any grade, of seeking to learn more on one's own, or of feeling poised, ready to learn more. These dispositions remind us of other higher order objectives in whose service the acquisition and valuing of knowledge is widely justified. Basically, these objectives involve the processes of change that we hope to initiate in our students—encouraging changes that move individuals from novice to expert and the shedding of an emotional dependency on authority so that students will eventually become independent learners (Carnegie Foundation for the Advancement of Teaching, 1989). These changes embody perhaps the most elevated purpose of all schooling: to encourage a love of learning now and for a lifetime, not only because of the presumed personal benefits of learning for the sake of perspective or for enhanced well-being (e.g., Dewey, 1938/1963), but also because task-engaged students are better, more receptive learners. For example, task-engaged students are more likely to employ deep-level, metacognitive strategies in their studies (e.g., Ames & Archer, 1987). Likewise, when students become personally involved in an assignment, they exhibit greater comprehension of the subject matter, attend to the task for longer periods, and remember more of what they learned (e.g., Alexander, Kulikowich, & Schulze, 1994; Hidi & Anderson, 1992).

Given the significance accorded these intrinsic objectives by educators, it is sobering to note that they are more often honored in the breach than in the observance. Many observers have despaired of the prospects of ever encouraging intrinsic values such as subject-matter appreciation in a world controlled by extrinsic rewards (e.g., Kohn, 1993). If high marks in school become increasingly important as students grow older, not only for the tangible future benefits they are expected to bestow—being the gateway to prestigious occupations—but also as an indication of one's personal worth, then what becomes of the value of learning? Is caring about learning marginalized?

The purpose of this article is to explore the question of whether intrinsic objectives such as subject-matter appreciation can coexist to any degree, let alone flourish, in the face of competing, if not higher, loyalties that involve a performance ethic based on external constraints and incentives such as school grades.

In addressing this question, I rely heavily on research conducted under the auspices of the Teaching/Learning Project at the University of California at Berkeley (Covington, 1992, 1998). The overall purpose of this large-scale investigation was to explore the nature of intrinsic motivation and its relation to the various extrinsic rewards that dominate classroom life. The database consists of five separate yearly cohorts of some 500 Berkeley undergraduates each year, all of whom were enrolled in different offerings of the introductory psychology course. Overall, this database represents a series of interlocking studies conducted under actual classroom condi-

tions, with each inquiry designed to address some specific aspect of the relation between intrinsic and extrinsic motivation, the facilitation of subject-matter appreciation, and the role of personal interest in learning. As a group, these studies represent a variety of methodological approaches, including the use of hypothetical, role-playing scenarios; true experimental designs; diaries; free-response essays; life-history interview data; and correlational time sample studies.

By far, the most important feature of this research is that it was fully integrated into the ongoing life of the classroom. For instance, in one study we tracked changes in student reasons for continuing work on class assignments as they progressed from week to week as well as sampling the kinds of self-inducements they used to sustain their work (e.g., "I considered denying myself little treats like taking a break, if I did not stay on schedule"). Thus, data collection became a continual and sustaining part of the curriculum. In the process, students became valued informants and involved observers—not merely passive or disinterested research subjects—involved because these investigations were situated in an authentic, high-stakes, grade-driven context of great personal significance for students. Although laboratory research has contributed immeasurably to our understanding of the issues to be discussed here, I believe we cannot truly understand how students come to appreciate and deeply hold the values of exploration and discovery unless the processes involved are also studied in the context of real-life schooling where success and failure carry enormous public promise and penalties, respectively.

A final note regarding this research: The population we have chosen to study is clearly unrepresentative of the vast majority of students who pass through the American educational system. In one sense, however, it is an ideal group to lay bare the essence of the phenomena under study. Where else does caring about what one learns hang more in the balance than among those students whose very sense of self is so completely defined by a past history of competitive accomplishments? Yet, this benefit limits the generalizability of this research. Clearly, any temptation to ascribe college dynamics wholesale to other groups differing by age, experience, and ability must be avoided. In this cautionary spirit, I offer our findings largely as a means to raise and illustrate motivational issues that may have broader application across the grade levels and for a variety of student groups.

#### OBSTACLES TO THE VALUING OF LEARNING

The most important initial question to ask in situating our inquiries was: "What are the various factors thought to undercut intrinsic valuing and personal engagement in schools?"

We identified three interlocking obstacles, each of which follow from one fundamental reality of school life: All motivational dynamics, whether they be construed as intrinsic or

extrinsic, owe their very existence to the different kinds of incentives and rewards prevailing in classrooms. Every classroom reflects some type of reward structure within which all academic work is embedded (Doyle, 1983). It is this structure that conveys information to students, explicitly or implicitly, about how they are to be evaluated and what they must do if they hope to be successful. The resulting achievement dynamics have been likened to a game, albeit a serious one (Alschuler, 1973). The purpose of this game for students is to amass as many points (rewards) as possible and to avoid losing points, which occurs when students fail to do well academically or fail to comply with the rules of the game, which include submission to teacher authority and a willingness to try hard. A wide variety of rewards for doing well is potentially available in this game. They range from edibles, such as candy and ice cream for younger students, to social reinforcers, such as teacher praise and recognition for students of all ages. Punishments also abound for noncompliance with a work ethic as well as for doing poorly in one's studies, ranging from teacher reprimands, to warnings, and even the enforced isolation of miscreants.

School grades are the ultimate embodiment of all such rewards and punishments. The overarching importance of grades comes from their formal, summative power as a single index for judging overall success and failure in school. Moreover, grades enjoy great credibility among both parents and college admissions officers. And, as already noted, grades hold extraordinary power, not only to determine who goes to college and even which college but, more importantly, the power to shape one's sense of worth as a person.

### The Nature of Rewards

The first potential obstacle to the valuing of what one learns in school concerns the nature of the rewards that dominate in the learning game, namely, the fact that gold stars, praise, and grades are by their very nature extrinsic—extrinsic because they are essentially unrelated to the act of learning itself (Condry & Chambers, 1978). For this reason, learning is in danger of becoming the means to an end, that is, for the acquisition of rewards per se, not an end in itself, so that when rewards are no longer offered or available learning is likely to wane, to say nothing of subject-matter appreciation.

Moreover, as typically administered, these rewards focus student attention on performance outcomes, such as high test scores, not on the process of learning itself, which may be attended by curiosity, personal creativity, and an appreciation for what one is learning. However, according to some observers, if teachers attempt to correct this situation and reward these intrinsic values directly—say, by praising students for pursuing their interests—then, paradoxically, these values may actually be discouraged. This phenomenon is the so-called overjustification effect. Such discouragement is thought to occur because, according to one interpretation, the

value of an already justifiable activity becomes suspect by the promise of additional rewards—hence the term *overjustification*—so that the individual believes, in effect, “If someone has to pay me to do this, then it must not be worth doing for its own sake” (Leeper, Greene & Nisbett, 1973; for a recent debate on this topic, see the Spring 1996 issue of the *Review of Educational Research*).

### Scarcity of Rewards

A second impediment to subject-matter appreciation involves not merely the presence of extrinsic rewards but the fact that the typical method for distributing them appears highly abrasive. Many classroom reward structures encourage what has been referred to as an “ability game” (Covington & Teel, 1996). The rules of this competitive game dictate that an inadequate supply of rewards (e.g., good grades) be distributed unequally with the greatest number going to the best performers or to the fastest learners. This arrangement amounts to a zero-sum scoring system. When one student (player) wins (or makes points), then other students must lose (points). Here success depends heavily on one's academic ability because rewards are more available to the most able.

According to the self-worth theory of achievement motivation (Covington, 1992; Covington & Beery, 1976), this competitive arrangement undermines task engagement by threatening one's sense of worth. Students come to perceive themselves to be only as worthy as their ability to achieve competitively, and because only a few can win at this game, the majority of students must content themselves with the dubious satisfaction of either avoiding failure or, in the event of actually failing, of at least avoiding the implication of failure—that they are incompetent, hence unworthy.

### Reasons for Achieving

The negative impact of the ability game is exacerbated by the presence of a third obstacle, one that lies within the individual, namely, the presence of trait-like personality characteristics that dispose some students to depend on extrinsic rewards for self-definition. These so-called failure avoiders (Atkinson, 1957, 1964) equate their worth with the ability to achieve high grades and in the process become preoccupied with avoiding failure, because typically in school there are insufficient rewards for all students to succeed. The self-protective strategies chosen by these students to deflect the implication that they are incompetent, ironically enough, are likely to cause the very failures they are trying to avoid. For instance, when individuals jeopardize their academic standing in school by procrastinating or by taking too heavy a course load, they virtually insure failure, but at least it is failure with honor, that is, failure that reflects little on their ability because no one else could be expected to do very well when

the academic burdens are so great, time so short, or the opportunities for study so few. For these failure-avoidant students, the reasons for achieving are concerned less with the value of what they might learn than with issues of psychological survival (Covington, 1998).

By contrast, *success-oriented* students (Atkinson, 1957, 1964) are typically drawn to the challenges posed by achieving noteworthy accomplishments, but challenges crafted within realistic limits. These students establish learning objectives slightly beyond their current capacity to achieve yet still within reach if they only work a little harder or in more effective ways. This means that failure is robbed of much of its potential threat. Because success is within the grasp of these students, failure to reach their goals does not necessarily imply incompetency, as it does for failure-avoiding students, but rather is seen as a temporary shortfall that can be redressed by renewed effort. It is for these reasons that success-oriented students tend to define their worth in terms of self-improvement, discovering new perspectives, and pushing the envelope of skills and understanding through diligence and the application of hard work.

This self-worth perspective on motivation and schooling presents a troubling picture. Basically, it portrays classrooms as battlefields where the rules favor sabotage, lackluster effort, and self-deception. In such a climate students are placed at risk for ever valuing what they have learned. Not only has it been argued here that students are discouraged from satisfying their curiosities when they are rewarded tangibly for these positive impulses but also, because of the scarcity of these rewards, the majority of students must struggle to avoid failure rather than to approach success. Nonetheless, despite these realities and an almost universal disliking for them, the college students in our samples chose to enter the fray. And in doing so they widely embrace, as their first priority, achieving the highest grades possible—an objective they often hold in contempt because they generally consider grades grossly inadequate reflections of what they have actually learned or have come to value about learning.

### Caring About Learning

Taken in their entirety, these dynamics would seem to leave little room for intrinsic task engagement. Yet, despite these formidable obstacles, our inquiries provide unmistakable signs that much of what students learn is acquired out of personal interest and not just for the sake of high grades. In fact, many of our informants sought to reassure us on this point, often protesting at what they sensed was a skepticism on our part regarding the genuineness of their positive feelings toward learning. Perhaps, after all, there is life after grades! But if true, what are the characteristics of such intrinsic knowledge from the student perspective? Why is it valued by students, and how deeply are these convictions held?

As a first step in addressing these questions, we solicited the thoughts of students by means of several open-ended essays. First, our students' collective responses reassured us that, as a minimum at least, they could readily describe and generally agree on what one informant called "surplus knowledge," that is, knowledge acquired above and beyond grade-driven considerations. Moreover, the sophistication of their analyses convinced us that what they had in mind was vivid, inescapable, and real. For instance, for some informants, surplus knowledge was distinguishable not by any specific content but rather by the reasons that lead to its acquisition—for the sake of curiosity or out of the pursuit of personal interests. Other students differentiated surplus knowledge by the means of its acquisition—through active discovery contrasted to the kind of passive acquisition involved in memorizing material for an examination. Still other students identified surplus knowledge by the emotions it creates. They spoke of these emotions as intense and uplifting, as in the distinction between *wonder* and *worry*, the latter feeling being associated with narrow performance goals.

Second, it also became clear that such knowledge was held in high regard. Students valued what they were learning for the information that it provided in making life choices and for the philosophical perspectives it promoted. Others mentioned the potential of surplus knowledge to transform an individual for the better, with frequently cited moral lessons involving increased compassion for others, patience, and personal fortitude.

Third, and finally, we wondered just how frequently students had what might be called, with apologies to Abraham Maslow (1970), "educational peak experiences," and to what degree these events were perceived to impact them positively. If such experiences were valued by students largely for their rarity, then they would likely exert little influence despite the esteem, even reverence, in which these experiences were sometimes held. We asked one cohort of several hundred introductory psychology students to note such events as they occurred on a daily basis throughout all their classes for an entire semester. Students were provided with descriptive categories based on various themes that emerged from earlier essays, including, for instance, references to "feeling that personal priorities (who you are or where you are headed) seemed clearer." Most students recorded numerous instances of such positive experiences and often rated them as having a substantial, positive impact on their thinking about themselves.

Overall, these data along with the essay material convinced us of the durability and depth of student appreciation for much of what they were learning, apart from any immediate grade benefits. But assuming that this appreciation for learning was genuine, how could such intrinsic values coexist, even thrive, in the presence of selective sorting, extrinsically conditioned rewards, and an overarching grade focus? Was it somehow a matter of balancing grade goals and sources of appreciation? And, if so, how was it managed and

at what costs? Finally, we wondered just how adversarial are grade goals and the love of learning anyway? These questions came to occupy center stage in our evolving inquiries.

We again appealed directly to our students for guidance through another series of open-ended essays. Several important points emerged from these data.

First, our informants provided us with the key to understanding why a dominant grade focus does not necessarily preclude the valuing of learning. It all depends, they suggested, on one's reasons for achieving. All students strive for the highest grade possible, but for different reasons, and it is these reasons in turn that determine the degree to which knowledge is valued. For instance, when students strive for high grades as a mark of personal worth, to impress others, or to avoid failure, learning will be valued only to the extent it serves to aggrandize one's ability status, not for any inherent merit of the material itself. If, on the other hand, the reasons for grade striving serve a task-oriented purpose, for instance, using grades as feedback for how one can improve, then one's accomplishments will be appreciated more for their positive instrumental properties.

In effect, it is not necessarily the presence of grades per se, or even a dominant grade focus among students, that influences the degree to which learning is appreciated, but rather the valuing of what one learns depends on the initial reasons for learning and the meaning students attach to their grades. This implies that striving for good grades and caring for learning are not necessarily incompatible goals.

Second, if this goal compatibility depends on one's reasons for learning, then perhaps it also depends on whether one's grade goals are achieved. Our students offered plenty of anecdotal support for this assertion. Restating their comments most simply: Being successful in one's studies promotes an appreciation for what one is learning; whereas falling short of one's grade goals either intensifies one's concentration on studying, to the exclusion of appreciation, or causes a sense of hopelessness about ever succeeding, feelings that bode ill for both the goals of achievement and appreciation.

Third, our informants also indicated that they often deliberately manipulated academic circumstances in an effort to create a tolerable balance between grade goals and caring. The most frequently mentioned of these strategies, especially among success-oriented students, was to arrange one's course of study around personal interests. As one student remarked,

I do realize ... that students are competing against fellow students, but I do not perceive it that way. The classes I am enrolled in are ones that I choose to take because I have an interest in them. Thus I am already learning for personal satisfaction.

Another student admonished his peers thus: "Students must learn how to incorporate classes they need to take with

classes they want to take ... the best of both worlds. This, in turn, causes feelings of enjoyment, and happiness in the school system." And, when success-oriented students are limited by necessity in their choice of classes, they report seeking out what might interest them even in an otherwise uninviting class. Or, failing this prospect, they find personal satisfaction in the expenditure of energy for a job well done. To cite another student, "I try to believe that as long as I put forth my best effort to learn, I definitely receive personal satisfaction." Recall that it is success-oriented students who perceive effort expenditure as the primary means to success, whereas for failure-avoiding students, the prospect of trying hard and failing anyway raises doubts about their ability, and hence effort can become a threat (Covington & Omelich, 1979) rather than a source of personal satisfaction. Perhaps this is one reason that among some failure-avoiding students we detected a sense of resignation regarding the prospects of ever appreciating what was being learned, or at least of having to postpone such enjoyment until after the joyless gauntlet of the college years had ended.

## A PROPOSAL

In summary of these essay responses, we proposed that students are more likely to value what they are learning, and to enjoy the process when: (a) they are achieving their grade goals; (b) what they are studying is of personal interest; and (c) the dominant reasons for learning are task oriented, not self-aggrandizing or failure avoidant.

Although, in retrospect, it seemed self-evident that success and failure experiences will influence one's appreciation for learning, its obviousness became clearly manifest (at least to us) largely because of the real-life context in which we conducted our investigations. To my knowledge, little prior research on valuing has considered the degree to which students were succeeding (or not) in learning the material they were expected to value. Because of this, and the clear saliency of this factor in the minds of students, we decided to conduct a more formal inquiry into these dynamics. Additionally, we were intrigued to determine the extent to which the potentially debilitating effects of a disappointing grade on valuing might be offset for students by their having at least studied a topic that interested them.

This formal study took the form of a series of role-playing scenarios that were subsequently administered to a new sample of some 500 students. They were directed to imagine themselves beginning work on a final assignment in a course. The general situation was portrayed in ways that closely approximated the actual achievement experiences of students to increase the realism of this hypothetical mode. The conditions under which this final, fictitious assignment occurred were varied along two dimensions: first, whether students had succeeded gradewise on several highly similar prior assignments or, by contrast, had consistently received disap-

pointing grades on these earlier assignments; and second, whether the subject matter of the course was personally meaningful to the students. These two conditions were crossed so that all students responded to each of the four possible combinations in a within-subject, repeated measure design. One between-subject factor was also introduced consisting of type of student, either success oriented or failure avoiding.

For all four scenarios our informants indicated (on a 7-point scale) the degree to which they would likely appreciate and value what they had learned from working on this final assignment. The mean values of these ratings for each scenario separated for success-oriented and failure-oriented students are presented in Figure 1.

### Grade Goal

The effect for achieving one's grade goal or not was significant for all levels of student type and interest. In effect, doing well in one's studies was associated with an increased valuing of what one has learned, whereas doing poorly diminished valuing. The negative impact of failure experiences on valuing is scarcely surprising. Much previous research has convincingly demonstrated that feeling unsuccessful generates fear of being judged incompetent by others (e.g., Hagtvet, 1984; Thompson, 1993, 1996) and, in turn, ability-linked anxiety is well known to narrow one's attention to matters of self-preservation, especially the creation of self-serving excuses to deflect the causes of poor performance away from insufficient ability (Urdu, Midgley, & Anderman, 1998). These fears and the defensive positioning that follows are exacerbated for failure-avoiding students (Covington &

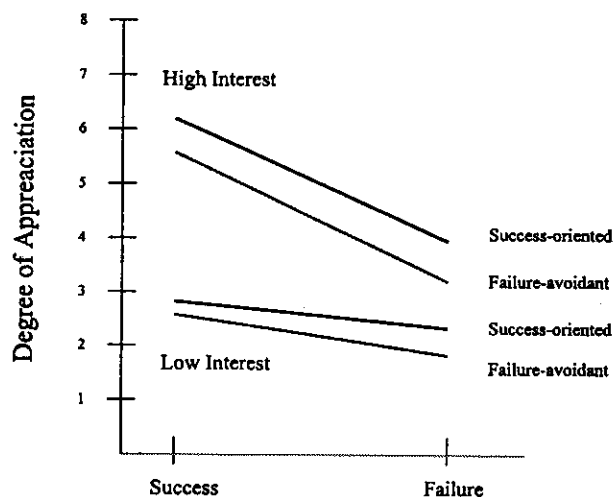


FIGURE 1 Degree of subject-matter appreciation expressed under conditions of high and low interest and success or failure for success-oriented and failure-avoidant students.

Omelič, 1981, 1988), the very students who in this study expected the least intrinsic benefits in the event of failure.

By contrast, the expectation of achieving high grades enhanced the valuing of knowledge gained. This finding might be considered somewhat unexpected, given the previously mentioned concern that providing tangible rewards might dampen intrinsic task engagement. In light of the results, however, these concerns appear at least overstated if not doubtful. At present our understanding of why extrinsic rewards might enhance, and not necessarily discourage, subject-matter appreciation is not well advanced. There is little to fall back on by way of explanation except, perhaps, the well-known generalization that human beings like and appreciate those things they do well (e.g., Renninger, Hidi, & Krapp, 1992). Although undoubtedly true, we are left wondering what the mechanisms responsible for this relation are.

To deepen our understanding in this matter, we asked one group of students to hypothesize why this generalization might be true in their experience and a second group to assess how credible these student-generated hypotheses were. The explanation judged most likely and for which the most convincing personal anecdotes were offered assumed that doing well caused positive feelings like pride, which in turn increased students' enthusiasm for what they were learning. Other possibilities with varying degrees of anecdotal support involved the observation that doing well reduces worry about failing so that students are freer to explore what is potentially most interesting to them. Another highly regarded candidate assumed that being successful stimulated students to study more, and, according to our informants, the more one learns, the more interesting the material is likely to become.

At present, we are planning further inquiries into the possible linkages between feeling successful, gradewise, and increased interest. Meanwhile, it seems clear that the relation between tangible rewards like good grades and intrinsic processes is far from simple. As a minimum at least, it appears that offering extrinsic rewards does not necessarily undermine interest in learning.

### Subject-Matter Interest

The effect for subject-matter interest was also significant at all levels of success and failure and student type. In short, people enjoy and appreciate learning more about what already interests them than about topics that hold little interest. What is intriguing about this bit of otherwise common-sense wisdom is that these results applied to failure as well as to success experiences. Indeed, what most merits our attention here is the degree to which pursuing one's interests offsets failure experiences when it comes to valuing learning. The power of this dynamic is illustrated in our data by the fact that an appreciation for what one is learning was far greater in a failing but task-interested cause than it was when the same student suc-

ceeded, gradewise, but for subject-matter content that held little or no interest.

We asked our students, what is it about the nature of interest that seems to buffer the negative effects of a disappointing grade? Although it was generally agreed that subject-matter interest is typically sustained and sometimes even created by doing well, gradewise, our informants also made it clear that interest was not simply the product of social approval or of academic success. They argued that at its core a deeply held, abiding interest possesses a private, protected side in which the rewards that sustain it are largely undiminished by a mediocre record of objective school performance. These alternative rewards involve surpassing one's own idiosyncratic standards of excellence, the playful discovery of hidden talents, and the personal freedom to pick and choose different ways of pursuing whatever invites one's attention.

Another possible explanation for why interest does not necessarily wane, despite the failure to do well, is provided by the work of Richard Newman (1990). Newman found that when individuals pursue their own interests, observers interpret requests for help as the result of being novices—that is, of being ignorant, but not stupid. In effect, in self-worth terms it is not ignorance, or the temporary lack of knowledge or skills, that is threatening. Rather it is feeling stupid that triggers ability-linked anxiety with the implication that one can never become knowledgeable. As long as students follow their interests and struggle for self-improvement and personal enlightenment, then temporary failures along the way do not necessarily count against their reputations for competency.

Another possible explanation concerns the potential impact of interests on one's perceptions of the meaning and purpose of grades. We have found that when task-interested students acknowledge that they would be graded—nothing obscures this fact of school life for long—they tend to believe that the presence of grades actually inspires them to do their best work (Covington & Wiedenaupt, 1997). This sentiment included the conviction that disappointing grades act as potential feedback for future improvement. Thus, even poor school marks may offer positive benefits for those who are pursuing their interests. This uplifting possibility stands in stark contrast to the reactions of these same students when they express little interest in an assignment. Now students tend to perceive grades as a strategy employed by teachers to ensure a minimum amount of effort! This latter meaning of grades carries with it the feeling of being controlled by others, with a resulting diminution of task engagement (Deci, 1975; Deci & Ryan, 1985, 1994).

Finally, this study underscores the positive motivational impact of successfully pursuing one's interests. It is this success-interest combination that elicits the greatest degree of subject-matter appreciation. It is not success or interest by themselves alone but a synergistic combination of the two that is reflected in a significant interaction in these data. This

combination is likely powerful for several interlocking reasons. As previously observed, a successful performance may minimize the distractions caused by the fear of failure as well as increase self-confidence in one's ability to continue succeeding, thereby elevating more positive, task-focused reasons for achieving, all in the context of already deeply held interests that also carry their own positive motivational weight.

The many questions stimulated by this modest study indicate how little we understand about the prospects of encouraging intrinsic goals in a world controlled by extrinsic rewards. However, I believe that when taken together the three factors explored here will provide important insights into these concerns and may even hold the key to a reconsideration of the long-standing assumption that intrinsic and extrinsic motives are necessarily antagonistic. In essence, based on these findings, I suggest that it is not the presence of a dominant grade focus that influences the extent to which learning is appreciated; rather, caring for what is learned depends on the reasons for the grade focus—either task oriented or failure avoidant, on whether one succeeds in achieving one's grade goals, and on one's initial interest level in the subject-matter topic being studied.

#### FAILURE WITH APPRECIATION

Naturally, as educators we seek other reasons besides subject-matter interest to encourage an appreciation for what students are learning. After all, learning cannot always be arranged around personal preferences, nor do students always succeed. What other characteristics of the teaching and learning act might promote personal valuing and subject-matter appreciation, even in a losing cause, gradewise?

We also put this question to our students. They were asked to recall a time, if any, when despite receiving a disappointing course grade, they still felt they learned a lot that was worthwhile and remained excited about the subject matter. They were asked further to describe the circumstances of this event, to indicate how intense their disappointment was (on a 7-point scale), to say why they believed they had received a disappointing grade, and finally to tell why they still found the course material worthwhile. Irrespective of the circumstances of the individual scenarios, the degree of disappointment expressed, and the alleged reasons for the poor grade, our informants consistently cited three reasons for the undiminished value of these otherwise disappointing learning experiences.

First, our students remarked on the pivotal role of teachers as models of enthusiasm for their subject. Not surprisingly, it appears that teacher enthusiasm encourages positive attitudes in the minds of students toward what they are learning, irrespective of the grade received. This result complements the findings of Ray Perry and his associates (Perry & Dickens, 1984; Perry & Magnusson, 1987), who report that teacher

charisma encourages positive, nonability attributions among students for their disappointing performances such as inadequate effort.

Second, our students also reported maintaining enthusiasm for subject-matter material, despite a disappointing course grade, when what they learned was germane to their larger life and career goals outside the classroom. In addition, appreciation comes from working on tasks over which students have some choice and control and through which they can produce things of value to others, including, for instance, the creation of educational material such as new bibliographies or instructional manuals. In effect, information that serves an instrumental purpose of high relevance to the individual is valued, irrespective of grades received.

Third, our students remarked that the negative effects of a disappointing grade were further offset, and a sense of subject-matter appreciation maintained, when instructors directly reinforced positive reasons for learning. Specifically, our evidence suggests that although virtually all students focus primarily on the prospects of getting a good grade, they are also more likely to invest greater time and energy (beyond what is necessary for a good grade) in those assignments for which there are additional tangible, yet intrinsically oriented payoffs. These payoffs include the opportunity for students to share the results of their work with other students or the chance to explain to someone more deeply and personally about why what they learned was important to them. In effect, these are the means by which individuals gain the respect of their peers and coworkers and the admiration of their mentors. I suggest these are the kinds of inducements that enhance subject-matter appreciation and sustain task preservation, even after an assignment has been completed and grade credits are no longer at issue.

These observations imply that, far from being incompatible, intrinsic and extrinsic reasons for learning are both encouraged by tangible rewards, but—and this is the important point—by different kinds of tangible rewards. This proposition sheds an entirely new light on the current debate about the allegedly harmful influence of tangible rewards on the will to learn—the so-called overjustification effect. It is not the offering of tangible rewards that undercuts personal task engagement and appreciation for what is learned as much as it is the absence of those kinds of payoffs that encourage and recognize the importance of being involved in and caring about what one is learning.

### CONCLUSION

We are left with the question of how schools can encourage the goals of subject-matter acquisition and appreciation. The issue is not fundamentally one of an incompatibility between learning and caring. The act of learning is not inherently abrasive. Quite to the contrary, learning is a natural, wholesome

process. Nor is learning inconsistent with appreciation. In fact, they are mutually reinforcing. Our informants made this clear: The more students learn about a topic, they told us, the more students are likely not only to appreciate the knowledge gained, but also to appreciate the processes by which the knowledge was attained.

Learning is abrasive and undercuts caring only when it becomes a measure of one's worth. From this self-worth perspective, a balance between learning and caring will most likely be struck when educators approach the task in a two-fold, coordinated fashion: First, we must discourage negative reasons for learning, including the avoidance of failure and the aggrandizement of one's status at the expense of others; and second, at the same time, encourage those positive reasons for learning linked to self-improvement, discovery, and creativity. To the extent these two objectives are met, subject-matter appreciation will likely flourish.

As to discouraging negative reasons for learning, we have already noted that successful achievement likely offsets ability-linked fear and dampens defensive posturing, which otherwise erodes an appreciation for what and how one is learning. Yet success alone is unlikely to ensure caring for everyone, because for some students successful performances are driven by negative reasons. For example, those students whom we have identified as *overstrivers* (Covington & Omelich, 1991) are highly successful, gradewise. However, because they succeed largely as a way to avoid failure, knowledge gained is never fully appreciated for its own sake. For such students success is seen only as a temporary respite from the continual need to prove themselves worthy in the face of additional and likely more difficult challenges in the future.

More is needed than academic success to offset the forces that distract the value of learning. Negative reasons for learning need to be addressed directly. One approach is to initiate grading policies based on absolute, or merit-based, criteria, that is, holding students to specific, clearly defined requirements so that any number of pupils can achieve a given grade as long as they live up to the quality of workmanship demanded by the teacher. This procedure has been shown to discourage negative reasons for learning associated with competitive pressure among such diverse groups as Berkeley undergraduates (Covington & Omelich, 1985) and at-risk minority students at the middle-school level (Covington & Teel, 1996; Teel, DeBruin-Parecki, & Covington, 1998). In the latter instance, investigators controlled the quality and quantity of student work by applying a simple rule: the better the grade students want, the more credit they must earn, irrespective of how well others are doing. Substantial amounts of grade credit were given based on how much students improved and for redoing assignments after having received corrective feedback. A variety of ways to express ideas was also encouraged, including drawings and role playing. As a result, these at-risk youngsters could now enter fully into the intellectual life of the classroom.

Another approach, one emphasizing positive reasons for learning, features exploratory learning and the cultivation of personal interests. We have already noted the motivational benefits of an interest-based approach and recall the idiosyncratic yet powerful rewards that our informants identified as accompanying the pursuit of one's own goals.

Finally, a word of guidance from our college informants respecting the nature of the relation between the goals of learning and caring. Our students repeatedly confirmed having feelings of great conflict regarding these goals, but not necessarily feelings of incompatibility. The conflict arises, they suggest, largely because the demands of academic life leave little room to pursue either goal fully, let alone both goals simultaneously. Given the pressure of schoolwork in the face of sometimes overwhelming personal and financial burdens, students must often choose between, say, narrowing the focus of their study, for efficiency sake, to what they believe will be tested versus attending to the personal meaning of what they are studying. Students made it clear which choice they often felt forced to make. But they also lamented what they lost in the bargain. In effect, students typically prioritized their goals, in this case, acquisition over appreciation. But that does not necessarily mean these goals are incompatible. They have merely been prioritized. From this perspective our task as educators is to help students to redress these priorities in favor of caring.

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