

研究ノート

Motivation in Education

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要 旨

本稿では、人間の動機づけを研究し、研究成果を正規の学習環境に応用している。まず、さまざまな理論的背景の研究者が使用している基本用語を紹介している。そこから、論点は自己決定理論 (SDT) の枠組みに移る。教育の実践に向け、この理論の原理と理論から予想される影響を共により詳細に考察するためである。SDT では内発的動機づけに不可欠な3つの構成要素、即ち自律性、有能感、および関連性を提案している。さらに、これら大分類の要素の具体的な面を調べる下位理論として以下の5つがある。認知的評価理論 (CET)、有機的統合理論 (OIT)、因果志向性理論 (COT)、基本的欲求理論 (BPNT)、および目標内容理論 (GCT) である。下位理論のうち CET が、何よりもまず内発的動機づけに関係している。SDT の枠組みと CET の範囲内における研究で特に議論的となる領域は、内発的動機づけに対する報酬の影響である。さまざまなタイプの報酬のアンダーマイニング効果を示す証拠について検討し、正規の学習環境のための代替アプローチを提案する。最後に、行政、体制、現場および教室の各レベルで SDT の裏付けとなる研究成果を取り入れた教育改革を提言している。

This paper is concerned with research into human motivation and the applications of research findings to formal learning environments. The discussion begins with an introduction to the basic

terminology that is used by researchers from different theoretical backgrounds. From there, the focus moves to the framework of Self-Determination Theory (SDT) for a closer look at both the tenets of the theory and its implications for educational practice. SDT proposes three essential components for intrinsic motivation: autonomy, competence, and relatedness. In addition, there are five sub-theories that examine specific aspects of these larger components: Cognitive Evaluation Theory (CET), Organismic Integration Theory (OIT), Causality Orientations Theory (COT), Basic Psychological Needs Theory (BPNT), and Goal Contents Theory (GCT). The sub-theory CET is primarily concerned with intrinsic motivation. A particularly controversial area of research within the SDT framework and CET is the effect of rewards on intrinsic motivation. The evidence for the undermining effects of rewards of various types is discussed and alternative approaches for formal learning environments are proposed. Finally, educational reforms that incorporate the findings in support of SDT at the governmental, system, site, and classroom levels are suggested.

Keywords/キーワード :

Self-Determination Theory (SDT)/自己決定理論 (SDT)

Cognitive Evaluation Theory (CET)/認知的評価理論 (CET)

Organismic Integration Theory (OIT)/有機的統合理論 (OIT)

Causality Orientations Theory (COT)/因果志向性理論 (COT)

Basic Psychological Needs Theory (BPNT)/基本的欲求理論 (BPNT)

Goal Contents Theory (GCT)/目標内容理論 (GCT)

Introduction

This paper will explore current thought and research into motivation. We will look at theories of motivation in general and then focus on the tenets of Self-Determination Theory (SDT), in particular. Keeping the research in mind, we will address a number of questions: *What inspires teachers, and what moves learners? How do our learning*

organizations and systems affect the motivation of groups and individuals? and How might future changes in formal learning environments affect motivation?

Many discussions of motivation begin by making a distinction between intrinsic and extrinsic motivation. Intrinsic motivation is characterized as that which comes from within the individual. It inspires action even when there is no perceived external stimulus or reward. Extrinsic motivation, in contrast, provides incentive to engage in action which may not be inherently pleasing or engaging, but which may offer benefits in terms of perceived potential outcomes.

This is, of course, a vast oversimplification of the way humans are motivated. It is made more complicated by questions about the role of motivations of which one is not consciously aware (are they intrinsic, even when prompted by a desire for fame or wealth?) and the processes by which intrinsic motivation may become extrinsic (and, according to some studies, extinguished) or extrinsic motivation may be internalized. So, while these terms may be useful for conceptualizing the discussion, they are, at best, a starting point.

The Terminology of Motivation

Motivation is a topic of interest to researchers in a variety of fields including psychology, human development, education, sociology, and business. In addition, the philosophical underpinnings and orientations of researchers vary, even within the field of academic motivation studies. As a result, perspectives vary and, in some cases, researchers have developed constructs and terminology that express similar ideas using different terms.

In the late 1990s, Murphy and Alexander conducted a literature review of motivation terminology used in studies of academic achievement and academic development (2000, pp. 3–6). The stated purposes of the review were to identify terms being used in these studies and to document the meanings of the terms as defined by the researchers (3). The terms were then summarized and compared, and some conceptual issues relevant to our discussion were addressed (3, 28–29, 37–42).

As a result of their analysis, Murphy and Alexander derived twenty terms related to motivation and academic achievement (8). The first was, naturally, the word motivation itself. Within that category, two more terms, intrinsic and extrinsic, have been described

above. Then three subcategories of the broad term motivation were delineated: goal, interest, and self-schema. On page 28 of their article, Murphy and Alexander summarized the main concepts and terms in each of these categories.

As one might expect, Murphy and Alexander's review identified six terms under the broad category of goal, in addition to the category of social goal (8). In their summary, they narrow this to four terms, citing two as synonyms (28).

Here is a representation of their findings (from Fig. 1, page 8) adapted to equate the synonyms described on page 28:

MOTIVATION			
<u>Goal</u>		<u>Interest</u>	<u>Self-schema</u>
Goal Orientation			
Mastery Goal also: Learning Goal	Intrinsic	Individual	Agency
Performance Goal also: Ego Goal	Extrinsic	Situational	Attribution
Work-avoidant Goal			Self-competence
			Self-efficacy
Social Goal			

There are overlapping areas in these terms. For example, performance/ego goals are driven by concern over what others might think or how one's abilities might be viewed by others, so they could also be considered within the domain of social goals (Murphy & Alexander, 2000, p. 34). It is also worthwhile to note that the terms attribution, self-competence, and self-efficacy relate to one's evaluation of oneself with respect to particular tasks or goals, not necessarily to oneself in general.

Murphy and Alexander point out an important consideration in the research into self-schema constructs, one that was not overtly taken into account in the literature they reviewed. They questioned the apparent assumptions by researchers that an individual can accurately identify and report her or his own needs, motivations, and goals (37-38). This author agrees and, based on inquiries into unconscious learning (Lewicki, Hill, & Czerwiska, 1992), wonders about the role of the unconscious in motivation and how

such could be effectively studied. Some research also suggests that implicit learning (unconscious learning) may be mediated by unconscious goals after priming for goal attainment (Eitam, Hassin, & Schul, 2008). Unconscious learning and unconscious motivation are difficult to study, but research in these areas might provide valuable insights into ways we could create more interesting, engaging learning environments.

Another conceptual issue addressed by Murphy and Alexander is the impression given by some of the terminology that there are dichotomous relationships between the types of motivation under study (37–41). Does such a relationship exist between intrinsic and extrinsic motivation, for example, or between individual or situational motivation? Our realities are more complex than the terminology often suggests; an important point to keep in mind when considering the implications of the research to classrooms and other formal learning environments. They also argue that other factors—cognitive and strategic—which are not addressed in the terminology impact individual motivation, concluding that motivation constructs can probably not truly be considered independent variables (Murphy and Alexander 41).

Finally, Murphy and Alexander note the trend, at least in the literature they reviewed, away from the view of motivation as a personality trait toward a more situated view of motivation as a state of mind in a particular context or within a particular domain (41–42). This is a crucial distinction. If motivation is seen as a trait, how much influence is possible through a change in curriculum or environment? However, if motivation is situational, we can productively challenge ourselves to create motivationally supportive formal learning environments. A third perspective is also possible: the view that some motivational traits are inherent, but that their expression can be supported or thwarted based on the environments in which a person functions.

Motivational Theories—In Brief

The reader is likely familiar with Maslow’s hierarchy of needs, on which he based his theory of motivation and personality. Of motivational theory he said

Sound motivational theory should . . . assume that motivation is constant, never ending, fluctuating, and complex, and that it is an almost universal characteristic of practically every organismic state of affairs. (Maslow, 1987, p. 7)

While allowing for the effects of the environment on motivation, Maslow drew a distinction between behavior theory and motivation theory, arguing that “behavior is determined by several classes of determinants, of which motivation is one and environmental forces are another” (11).

In contrast to this view, many who study motivation in academic settings today do not theoretically distinguish between behavior and motivation in precisely the way that Maslow proposed; instead, they look at cognitive and social constructs, sometimes in addition to needs and affective factors, when developing theories and designing research on motivation and motivated behavior (Pintrich, 2003, p. 670).

Maslow’s hierarchy of needs and a person’s desires to satisfy them can be considered intrinsic. He held that these needs were universal to humans, but that they could manifest in myriad ways based on environmental conditions and an individual’s culture and history (Maslow 28–29). This is important because, if his theory is valid, although individuals may behave differently in different contexts, the assumption is that motivation is highly individual and individually constructed. In the situated view, motivation is seen largely as a result of socio-cultural constructs and interactions with the environment (Pintrich 680–681). This differentiation echoes an earlier philosophical and psychological argument about the roles of nature vs. nurture in human development. Just as our discussions of human development have become more sophisticated in their recognition of the interplay of nature and nurture, so must our views of motivational factors take into account the complexity of the interactions between intrapsychological and social-cultural influences (see Pintrich 681).

There are many goal-oriented approaches to the study of motivation in the classroom. Ames discusses two goal constructs that are widely used and that appear in the chart in the terminology section of this paper. They are mastery goals and performance goals. Ames describes these orientations and explains why mastery goals are more likely to result in persistence over time and a focus on the intrinsic value of learning, while performance goals foster a “failure-avoiding pattern of motivation” (Ames, *Classrooms: Goals, Structures, and Student Motivation*, 1992, pp. 261–263). Mastery goals focus on individual improvement and the belief that increased effort is related to increased competency. In contrast, competition, rewards, successes and failures which are displayed publicly in the classroom foster a performance goal orientation. Performance goals create a culture of competition and comparison in which ability and self-worth become linked

in students' minds. In such a culture, students are less likely to take on challenging tasks and so to avoid the possibility of failure (Ames & Archer, 1988, pp. 260, 265; Ames, 1992, pp. 261–263).

The Expectancy-Value Theory of achievement motivation describes a complex interplay of aptitudes, beliefs, previous experiences, goals, self-schema, interest, expectancy, and perceived/subjective assessment of the utility vs. cost of a particular task or domain (Wigfield & Eccles, 2000, p. 69).

Self-Determination Theory (SDT) has been developed to try to integrate both the intrinsic and extrinsic factors in human motivation, thus incorporating both the intrapsychological and social-cultural aspects of other research frameworks (About the Theory; Pintrich, 2003, p. 670; Ryan & Deci, Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well Being, 2000, pp. 68–69). As a meta-theory, SDT encompasses five mini-theories: Cognitive Evaluation Theory (CET), Oganismic Integration Theory (OIT), Causality Orientations Theory (COT), Basic Psychological Needs Theory (BPNT), and Goal Contents Theory (GCT). Although SDT incorporates needs and context, the needs identified by the theory are not identical to those named by Maslow. The conceptual framework on which SDT is based identifies three basic needs on which psychological health and well-being depend: competence, relatedness, and autonomy (Ryan and Deci 68, About the Theory). The following are brief summaries of these sub-theories as explained on the selfdetermination.org website:

- CET addresses the topic of the impact of social contexts on intrinsic motivation. Competence and autonomy are considered crucial aspects of intrinsic motivation in this theory.
- OIT primarily considers extrinsic motivation and proposes a continuum of internalization through which an individual may develop autonomy with regard to extrinsic conditions.
- GCT also addresses intrinsic and extrinsic motivation. The theory contrasts goals with intrinsic value, such as those related to community and personal growth, with goals that are extrinsically oriented, such as those related to wealth and fame. The theory argues that goals that support the three basic needs of autonomy, relatedness, and competency will support psychological well-being, while extrinsically oriented goals will negatively impact well-being.
- COT is concerned with individual orientations toward environments, identifying

three primary types. They are the autonomy orientation, the control orientation, and the impersonal/amotivated orientation.

- BPNT proposes the three basic needs outlined above (autonomy, competence, and relatedness) and argues that environments that support these needs promote psychological well-being.

Although the sub-theories address different aspects of SDT, they all rest on the foundational tenet that support of the basic needs for autonomy, competency, and relatedness results in positive motivation and healthy personal development.

Although there are more gradations and variations of these general theories, such as evolutionary approaches (see Bernard, Mills and Swenson), this brief overview will suffice for our discussion.

More About Self-Determination Theory

There is a large body of research that supports the SDT perspective (Vansteenkiste, Simons and Lens; Gillet, Vallerand and Lafrenière; Wiest, Wong and Cervantes; Noels, Clément and Pelletier; Hagger and Chatzisarantis, the work of Deci and Ryan, and many more. See the selfdeterminationtheory.org website or the reference section of any of these papers for excellent starting points). Because this body of research is so large and the theory robust, we will do well to examine it further.

While Deci and Ryan began with the distinction between intrinsic and extrinsic motivation (Deci & Ryan, 1985), over time they began to distinguish different types of extrinsic motivation (Ryan & Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, 2000). They recognized that extrinsic motivation varies in the degree to which it is inclusive of autonomy, that is, extrinsic motivations may be more or less internalized (Ryan & Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, 2000, pp. 60–65). Thus, they conceived a continuum of extrinsic motivation with categories of increasing autonomy: amotivation, external regulation, introjection, identification, and integration (Ryan & Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, 2000, p. 61). Hayamizu's work in Japan has supported this model, suggesting that these concepts may not be limited to a particular society or world view. Although presented as a continuum, the authors explain that the model is not meant to be seen as sequential.

The study of extrinsic motivation and this continuum fall into the sub-category of SDT called Organismic Integration Theory (OIT), as mentioned earlier in this paper. In their review of the evolution of SDT, Ryan and Deci explain that external regulation was the only type of extrinsic motivation recognized by Skinner and the behaviorist theorists. SDT's more nuanced approach offers greater possibilities for understanding complex interactions with our academic (and many other) environments.

Studies have shown that the more externally regulated are motivations, the less interest and effort students display and the more students are likely to blame others for negative outcomes (Ryan & Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, 2000, p. 63). So, a greater internalization of extrinsic motivations should lead to benefits in terms of active engagement and persistence by learners, and this has been shown to be the case. If this is accurate, then creating learning environments that foster the internalization of extrinsic factors may be one way to support positive academic outcomes.

There seems to be general agreement regarding the role of autonomy in motivation. With regard to external motivation, SDT argues that the greater the internalization of extrinsic factors, the more autonomy or ownership a student feels toward them. But how can we foster such internalization? Ryan and Deci propose that a feeling of connectedness to the group that values the extrinsically motivated behaviors—a peer group, family, or society—will positively impact the internalization process (Ryan & Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, 2000, p. 64). This feeling of connection they term *relatedness*. The identification with a social or peer group can, however, work against positive academic outcomes when the group perceives itself as not able to achieve academically. Therefore, it is important to create a culture of learning within academic environments in which there is a demonstrated ability to achieve. Thus, the third basic need proposed by SDT, competence, must also be fostered.

Rewards and Intrinsic Motivation

There is a great deal of discussion among researchers and practitioners about the role of rewards in promoting motivation. A well known experiment conducted by Lepper and his colleagues in 1973 concluded that rewards can produce an undermining effect in intrinsic motivation (Lepper, Greene, & Nisbett, *Undermining Children's Intrinsic*

Interest With External Reward: A Test of the “Undermining” Hypothesis, 1973). In the experiment, a group of children who initially showed interest in a drawing activity demonstrated a decreased interest after they had been presented with an award for participation in the activity. In contrast, the interest displayed by children who were not rewarded remained unchanged. In addition, the drawings of the non-award group were judged (independently, by a blind panel of judges) to be of higher quality than those of the award group. These results contraindicated the unrestrained use of token economies in classrooms, where the behaviorist expectation that rewards would encourage any desired behavior prevailed.

Since the time of Lepper’s experiment, many refinements have been made in the study of rewards and their effects on motivation. As Lepper himself points out in his conclusions to the original experiment, his study addressed a situation in which there was initially a high degree of intrinsic motivation to engage in the activity. He cautions that the results might not be applicable in cases in which the intrinsic interest is low and motivation must be encouraged extrinsically (Lepper, Greene, & Nisbett, *Undermining Children’s Intrinsic Interest With External Reward: A Test of the “Undermining” Hypothesis*, 1973, p. 136).

Self-Determination Theory, and in particular, Cognitive Evaluation Theory (CET) posits that autonomy is integral to intrinsic motivation. The undermining effect of rewards on intrinsic motivation and autonomy has been an active area of research by SDT investigators for decades.

However, in 1994, Cameron and Pierce published an article in the *Review of Educational Research* that took CET to task (Cameron & Pierce, *Reinforcement, Reward, and Intrinsic Motivation: A Meta-Analysis*, 1994). There followed a heated discussion in the literature about the validity of the undermining effect of rewards on intrinsic motivation (Deci, Koestner, & Ryan, *The Undermining Effect Is a Reality After All—Extrinsic Rewards, Task Interest, and Self-Determination: Reply to Eisenberger, Pierce, and Cameron* (1999) and Lepper, Henderlong, and Gingras (1999), 1999; Deci, Koestner, & Ryan, *A Meta-Analytic Review of Experiments Examining the Effects of Rewards on Intrinsic Motivation*, 1999; Lepper, Henderlong, & Gingras, *Understanding the Effects of Extrinsic Rewards on Intrinsic Motivation—The Uses and Abuses of Meta-Analysis: Comment on Deci, Koestner, and Ryan* (1999), 1999; Eisenberger, Pierce, & Cameron, *Effects of Reward on Intrinsic Motivation—Negative, Neutral, and Positive: Comment*

on Deci, Koestner, and Ryan (1999), 1999; Eisenberger, Pierce, & Cameron, Effects of Reward on Intrinsic Motivation—Negative, Neutral, and Positive: Comment on Deci, Koestner, and Ryan (1999), 1999; Cameron & Pierce, The Debate About Rewards and Intrinsic Motivation: Protests And Accusations Do Not Alter the Results, 1996; Kohn, By All Available Means: Cameron and Pierce’s Defense of Extrinsic Motivators, 1996). In 2001, Deci, Koestner, and Ryan published another article in which they summarized this debate and the results of their meta-analysis, also including the implications of the research for formal learning environments (Deci, Koestner, & Ryan, Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again, 2001). In this article they reiterate the tenets of CET: the basic needs underlying intrinsic motivation are competence and self-determination/autonomy (p. 3). They further explain that external events that increase perceived self-determination and competence will likewise enhance intrinsic motivation, while those that decrease one’s perception of either self-determination or competence will have a negative effect on intrinsic motivation (3). These effects are seen in reward conditions, as well as in conditions of evaluations, competition, deadlines, and externally imposed goals (3). In addition, CET distinguishes between the informational aspects and the controlling aspects of rewards, and between verbal and tangible rewards (3).

In the case of verbal rewards, CET argues that the informational aspects of verbal rewards have the potential to enhance intrinsic motivation by enhancing perceived competence (Deci, Koestner, & Ryan, Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again, 2001, p. 3). At the same time, verbal rewards may have a strong controlling aspect, which can decrease intrinsic motivation (Deci, Koestner, & Ryan, Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again, 2001, pp. 3–4). The context in which the verbal reward is given will influence whether the verbal reward is seen primarily as informational or as controlling. Thus, the classroom climate is paramount in this respect.

Tangible rewards, on the other hand, are typically offered to encourage behavior that is not intrinsically motivated; thus, tangible rewards are typically seen as controlling (Deci, Koestner, & Ryan, Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again, 2001, p. 4). This is particularly true when the rewards are offered in advance of the behavior, that is, when the behavior is in response to an expected reward. If rewards are offered spontaneously, without any prior knowledge,

they are less likely to be perceived as controlling and therefore less likely to affect intrinsic motivation.

Since rewards that are not offered spontaneously necessarily involve an attempt to control behavior, and since CET posits autonomy/self-determination as a basic psychological need, such rewards are necessarily predicted to have a negative impact on intrinsic motivation. However, these types of rewards may also provide information about competence. CET makes predictions about the effect of tangible rewards on intrinsic motivation based, in part, on the informational aspects of the rewards (Deci, Koestner, & Ryan, *Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again*, 2001, pp. 4–5). To analyze this, CET identifies three types of contingencies with regard to rewards: task-noncontingent rewards, task-contingent rewards, and performance-contingent rewards (Deci, Koestner, & Ryan, *Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again*, 2001, pp. 4–5). Some researchers further distinguish between two types of task-contingent rewards: completion-contingent rewards and engagement-contingent rewards. Here is a summary of the predicted impact of each type of tangible reward on intrinsic motivation based on CET:

Reward Type	Description	Effect on Perceived Competence	Effect on Perceived Self-Determination	Effect on Intrinsic Motivation
Task-noncontingent	Not related to a task, e.g. reward for participating in an experiment	None	None	None
Task-contingent/ engagement	Requires engaging in an activity but does not require completion	None	Controlling	Undermining
Task-contingent/ completion	Requires completion of an activity	Depends on the level of skill required	Controlling/ possibly informational	Undermining with some potential offset based on skill required

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Performance-contingent/ standard-based	Requires performing to a pre-set standard	Typically comparison- based, controlling effect tends to outweigh competency effect	Controlling	Undermining
Performance-contingent/ excellence based	Recognizes excellent performance	Positive	Controlling/ Informational	Undermining offset by competency

In addition to the factors described in the chart, as with verbal rewards, the interpersonal context in which rewards are administered is seen as vital. The undermining effects of rewards can be mitigated by a context which is perceived as supportive. In contrast, a context which is perceived as controlling can enhance the undermining effects (Deci, Koestner, & Ryan, *Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again*, 2001, pp. 5–6).

The results of Deci, Koestner, and Ryan’s meta-analysis support the predictions of CET (7–15). In their summary and conclusions, they specify the results pertaining to verbal and tangible rewards. Verbal rewards tended to enhance intrinsic motivation except with children or when offered in a controlling manner (15). They also found that unexpected tangible rewards and task noncontingent rewards had no effect on intrinsic motivation. However, their analysis found that tangible rewards had a substantial undermining effect, especially with children (15).

Praise

Praise is a verbal reward. While praise is often taken for granted as a positive reinforcer of intrinsic motivation (at least in the U.S.), the research suggests that the reality is more complex than this. In their review of the research literature on praise, Henderlong and Lepper conclude that praise can have a range of effects from beneficial through negligible to harmful (p. 791). The potential negative impact of praise on intrinsic motivation can be a result of the way praise is delivered. For example, if the praise is perceived as insincere or controlling, it can have a detrimental effect. Furthermore, praise that has short-term positive effects on intrinsic motivation may have unintended long-term effects, as when later setbacks occur in a domain in which a child previously

felt competent due to praise (790). In such cases, one might question whether the praise actually enhanced intrinsic motivation or whether it became an extrinsic motivator.

The context in which praise is delivered is also important. As mentioned previously, if the environment is perceived as supportive, praise and other rewards may be received as supportive as well. But when the environment is perceived as controlling, praise and rewards may have a negative effect on intrinsic motivation. Furthermore, praise that portrays competence via social comparison or that is delivered publicly may have unintended negative effects (Henderlong & Lepper, 2002, pp. 788, 791). Insincere praise or verbal rewards for easy tasks can also have an undermining effect as they convey a message of lack of competence. Teachers and parents who praise lavishly may not consider the potentially shaming effects of their behavior.

The often unacknowledged aspect of praise that can be particularly problematic is the fact that praise is a judgment (Kohn, *Punished by Rewards: The Trouble With Gold Stars, Incentive Plans, A's, Praise, and Other Bribes*, 1993, pp. 102–103). As such, it implies or underscores an imbalance of power, which may not be welcomed by the recipient.

In their review, Henderlong and Lepper point out the potential differences in the cultural context of praise. In comparing attitudes toward and effects of praise on U.S. and Canadian students with those in China, Japan, and other collectivist cultures, they point out that praise tends to be used infrequently in collectivist cultures and that its effects may be quite different in those contexts (788–789). Collectivist cultures, they propose, tend to value self-improvement more than self-enhancement, and tend to more closely equate effort and ability. It would be interesting to see more research that compares the uses and results of praise across cultures.

Intangible Rewards

So far, we have discussed praise and tangible rewards, but what about extrinsically-motivated intangible rewards? Do they have the same undermining effects as tangible rewards? Vansteenkiste and his colleagues have studied this in terms of goal framing with both adults and children (Vansteenkiste M. , Simons, Lens, Soenens, & Matos, *Examining the Motivational Impact of Intrinsic Versus Extrinsic Goal Framing and Autonomy-Supportive Versus Internally Controlling Communication Style on Early*

Adolescents' Academic Achievement, 2005). Their research suggests that goals which are motivated by such rewards as financial success or physical attractiveness may motivate behavior, but that the learning tasks involved may be only superficially or rigidly achieved, that is, deep learning and incorporation of the learned material is undermined by these extrinsic goal orientations.

Grades as Rewards

Grades may be seen as a particular sort of intangible reward. If the research regarding the undermining effects of rewards on intrinsic motivation is accurate, and if one of our goals in formal educational settings is to inspire a love of learning, then our system of evaluation by grading may be seriously flawed. In his book *Punished by Rewards*, Kohn takes a specific look at grading and even asks whether grading is needed at all (1993, pp. 200–210). In arguing against the use of grades, Kohn refers to the research results we have been discussing. These studies demonstrate that, once rewards are introduced for intrinsically motivating tasks, the intrinsic motivation tends to disappear, to be replaced by the extrinsic motivator: the reward. Grades can operate this way, as well, particularly in situations where they are seen as controlling. Kohn also cites research that demonstrates that when people are working for rewards, including grades, they tend to choose the easiest way to achieve the reward (1993, pp. 65–67), which is not necessarily the easiest way to achieve the task (or necessarily even related to the task activity, as with getting the answers to assignments in ways that don't involve doing the task). The task may become secondary to the reward. Kohn summarizes the issue this way:

Do rewards motivate people? Absolutely. They motivate people to get rewards. (67)

Finally, Kohn questions the rationale of grading as a way to provide meaningful feedback to learners about their progress. Studies indicate that a single instructor may assign different grades to the same work submitted at two different times, and that the same work graded by two different teachers will often be given two different grades (201). These studies call into question the perceived objectivity of grades and thus the validity of the feedback. Furthermore, there are much more productive ways to offer feedback, such as by commenting on specifics of an assignment or engaging in dialogue with the

learner. As Kohn argues, the problem with grades is not just that they don't provide meaningful feedback about performance, but also that they fix the learner's attention on the performance and away from the learning (202).

While it is unlikely that our systems of grading are unlikely to disappear anytime soon, we can try to minimize the focus on grading in the classroom. Students can benefit by engaging in interesting tasks that have meaning for them. We can also devise evaluation systems that are framed as supports to learning rather than as sorting devices. With the current emphasis on ever more standardized testing, it can be challenging to implement such changes. But the research suggests that it is vital that we do so if we want to keep inspiration for learning alive in our schools.

What Inspires Teachers?

Teachers presumably have the same needs for support of autonomy, competence, and relatedness as students have. While there has been a lot of research documenting and analyzing student motivation, research on teacher motivation is more scarce. However, providing supportive environments for teachers seems vital to the health of our educational systems. So, let's take a look at what such supportive environments might look like within the framework of SDT.

How can educational environments support teachers' feelings of autonomy? A wonderful example can be found in Deborah Kinney's book *Born to Rise* which documents her experiences in creating the Harlem Village Academies. Kinney admits that in her perfectionism and intense desire to create an environment in which student learners could thrive, she overlooked the importance of supporting autonomy in teacher learning and leadership during the early years of the schools (195–197). Interestingly, it was through discussions with business leaders that she came to understand how important the work culture is to supporting and sustaining the well being of teachers. When Kinney began to share leadership of the schools with the teachers, the school culture began to change and thrive; teachers took a more active role in designing the learning environment and found innovative ways to support one another in developing competence in the classroom (198–212).

Unfortunately, many school environments do not support teacher leadership, nor do they allow teachers autonomy in terms of developing professional competence. Just as

autocracy in the classroom can undermine the intrinsic motivation of students, so can an autocratic administration undermine teacher motivation and performance.

Although SDT looks at autonomy, competence, and relatedness as separate components, in life these are interrelated. What Kinney found was that an increase in teacher autonomy led to an increase in the teachers' support of one another. This culture of mutual support enhanced relatedness among the teachers. As a result, more experienced and skilled teachers found non-competitive and non-threatening ways to nurture new teachers, supporting competency and improving the working and learning culture of the school.

The Motivation To Educate

At the heart of this question about motivation in education is the deeper question *Why do we educate?* This is a question with a complex array of answers and among the possibilities are many on which we cannot all agree. A related question is *How should education benefit society and the individual?* In societies where education is compulsory and free up to a certain age, perceived benefits must exist to justify such a large expenditure of funds.

One perceived benefit of education to society is economic. It is believed that a well-educated work force will help a nation's economy to prosper, and likewise, will enable individuals to have a standard of living that supports health and well-being. But we might ask ourselves what characteristics and skills are needed by individuals in such a work force, and how our systems of education do or do not support their cultivation. Do we need individuals with specific skills? Do we need workers who are innovative and flexible? Do we need people who can effectively evaluate and integrate new learning? Do we need lifelong learners?

In countries with democratic governments, another perceived benefit is that individuals who are taught to think clearly and evaluate evidence will be better able to make sound political decisions. In nations with jury forms of criminal justice systems, such skills are also needed to make fair judgments. How can our systems of education support these qualities and skills?

Another perceived benefit by some is that formal learning environments can encourage the development of prosocial behaviors and effective social skills. Again

we can ask ourselves whether our current systems of education support this kind of development and, if not, how we can improve in this area.

And finally, some believe that cultivating a deep love of learning can help sustain a high quality of life for individuals and communities. Are we cultivating this in our current educational systems?

Thoughts for Future Directions

According to the tenets of Self-Determination Theory, humans have an intrinsic desire to learn, and this desire is fueled by the basic psychological needs for autonomy, competence, and relatedness. If we want to engage individuals at all levels of our educational systems in meaningful growth and learning experiences, we need to design environments and systems that support these needs. We can do that by developing educational policies at the governmental level that support the creation of systems that encourage autonomy and competence rather than imposing rewards and sanctions that undermine intrinsic motivation. At the system level, we need to encourage shared leadership which leads to mutual ownership of the educational culture, supporting autonomy, competence, and relatedness within the academic system and in conjunction with the communities they serve. At the site level, be it in physical or in digital space, we must support teacher autonomy and create non-threatening environments for enhancing competency. We need to facilitate community-building between and among teachers, learners, and families. The support of those learning communities must create safe places in which learners can take the necessary risks that nurture the intrinsic desire to learn and grow.

This all sounds wonderful, but our own habitual ways of thinking and our current educational climate will typically contravene these efforts. What can we do?

- Start in our own communities, creating learning environments based on the tenets of SDT and see what works. SDT is not a prescriptive set of rules, but rather a philosophy that can help guide the creation of a learning culture.
- Design and implement meaningful research into teacher motivation, applying the results to support and enhance the well-being of teachers.
- Communicate within and beyond our learning communities.
- Participate in enhancing the intrinsic motivation in others and in yourself.

- Innovate: try new things.

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