Intrinsic and Extrinsic Motivation: Evaluating Benefits and Drawbacks from College Instructors' Perspectives

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A growing body of literature has been examined and discussed the effects of intrinsic and extrinsic motivation on student learning at the college level. Intrinsically motivated individuals have been able to develop high regards for learning various types of course information without the inclusion of external rewards or reinforcements. In contrast, extrinsically motivated individuals rely solely on rewards and desirable results to act as a catalyst for their motivation. Both types of motivation may not have the same effect on college student learning and performance. Intrinsically motivated individuals have a number of advantages over extrinsically motivated individuals because there is evidence showing that intrinsic motivation can promote student learning and achievement better than extrinsic motivation. From the perspectives of college instructors, this article briefly reviews the benefits and drawbacks of intrinsic and extrinsic motivation. In addition, a discussion of the significance of both types of motivation and their applications in a college classroom setting has been provided.

Research on motivation has burgeoned over the past four decades. As a result, much has been learned about the nature of students' motivation (Wigfield, 1997). During the past half century, a variety of crucial motivational beliefs, values, and goals have been identified and examined (Wigfield, 1997). These beliefs, values, and goals relate to performance of college students, choice of activities to pursue, and persistence on such activities (Gram and Weiner, 1996; Pintrich and Schunk, 1996). Even if students believe they are fully competent and proficient at an activity, they will not complete such activity if there are no incentives present.

Motivation is an internal state that arouses learners, steers them in particular directions, and keeps them engaged in certain activities (Ormrod, 2008). Motivation often determines whether and to what extent students actually learn a challenging task, especially if the cognitive and behavioral processes necessary for learning are voluntary and under their control. Once college students have learned how to do something successfully, motivation is largely responsible for whether they continue to do it (Ormrod, 2008).

College students are usually motivated in one way or the other. For instance, some students may learn the subject matter being presented in class, while others may be more interested in obtaining good grades, outperforming classmates, pleasing their instructors and parents, or simply completing assignments as quickly and painlessly as possible (Ormrod, 2008). All of these motives have an approach quality to them: a desire to achieve certain learning outcomes (Ormrod, 2008).

Intrinsic and extrinsic motivation are two major categories with which college students are engaged in the process of learning new knowledge and skills. Both types of motivation may not the exact same effect on student learning and performance at the college level (Ormrod, 2008). The objective of this article is to evaluate the benefits and drawbacks of intrinsic and extrinsic motivation in relation to student learning (achievement and performance) from the perspectives of college instructors.

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Benefits of Intrinsic Motivation

Like most college instructors, they are concerned about students' intrinsic motivation for learning (Schunk et al., 2008). College students who are intrinsically motivated have a number of advantages over students who are extrinsically motivated (Table 1). For instance, intrinsically motivated students work on academic tasks because they find them enjoyable and interesting. Task participation is its own reward and does not depend on explicit rewards or other external constraints (Schunk et al., 2008). There is evidence showing that intrinsic motivation is positively correlated with learning, achievement, perception of competence and self-efficacy, and is negatively correlated with anxiety, depression, and frustration (Gottfield, 1985 and 1990; Lepper et al., 2005).

These benefits presumably occur because college students who are intrinsically motivated engage in activities that enhance learning: students attend to instruction, actively participate in discussion, frequently review new course information, organize knowledge and relate it to what they already know, and apply skills and knowledge in different contexts (Schunk et al., 2008). They also experienced a sense of self-efficacy for learning and are not burdened down with anxiety and boredom. In turn, learning promotes intrinsic motivation (Schunk et al., 2008). As students develop skills, they perceive their progress and feel more efficacies about learning. Heightened self-efficacy and positive outcome expectations often raise additional intrinsic motivation, thus leading to further quality learning (Bandura 1986 and 1993).

Moreover, comparing to extrinsically motivated college students, intrinsically motivated individuals are more likely to pursue an academic task on their own initiative, without having to be coerced or forced to, be cognitively engaged in the task by keeping attention focused on it, and strive for true understanding of the subject matter by engaging in meaningful, rather than rote learning (Ormord.2008). These students undergo conceptual change when such change is warranted, show creativity in academic performance, persist in the face of occasional failure, experience pleasure, sometime even exhilaration, in what they are performing (Ormrod, 2008). They also regularly evaluate their own progress using their own criteria, seek out additional opportunities to pursue the academic task, and achieve at high levels (Schunk et al., 2008).

In the case of intrinsic motivation, the repetition of a college-level task does not depend on some external rewards or reinforcements since satisfaction is largely derived from overcoming a personal challenge, learning something new, or discovering items of personal interest (Covington, 2000). The role of personal interest is especially noteworthy because students are pursuing their own interests tend to offset the potentially negative effects of receiving a disappointing grade later on (Covington, 2000). In fact, the evidence suggests that students' appreciation for what they are learning is far greater than students are failing (Covington, 2000). Thus, intrinsically motivated students voluntarily participate in an academic activity without experiencing external or internal pressures to do so and without expecting rewards or reinforcements (Deci and Ryan 1985; Deci et al., 1991 and 2001; Barkoukis et al., 2008).

Furthermore, Csikszentmihalyi (1985) have proposed that college students would experience flow, an intense involvement in an activity when challenges of this activity are equal to the skills and expertise of individuals. Optimal motivation results when the level of skill or knowledge is matched to the challenge or difficulty of the academic task. Flow includes positive affect and emotions, as well as deep cognitive involvement (Schunk et al., 2008). Theory and research on flow have shown that students' affective reactions are related to their expertise and difficulty of the task (Schunk et al., 2008). Therefore, flow and positive affect are gener-

Table 1
Benefits and Drawbacks of Intrinsic Motivation for College Students

Intrinsic motivation
Benefits • Task participation is its own reward • Do not depend on explicit tangible rewards • Relate positively to learning and achievement • Relate positively to perception of competence and self-efficacy • Relate negatively to anxiety and depression • Relates negatively to stress and frustration • Attend to instruction • Actively participates in class discussion • Frequently review new course information • Organize knowledge and relate it to existing knowledge • Apply skills and knowledge to reality • Experience a sense of self-efficacy for learning • Not burdened down with anxiety and boredom • Pursue an academic task on students' own initiative • Be cognitively engaged in the task • Undertake more challenging aspects of a task • Strive for true understanding of the subject matter • Undergo conceptual change when such change is warranted • Show creativity in performance • Persist in the face of occasional failure • Experience pleasure in what they are doing • Regular evaluation or monitoring of own progress • Seek out additional opportunities to pursue a task • Achieve at high levels • Experience flow (optimal motivation) • Flow can show positive affect, emotions, and deep cognitive involvement in an activity Drawbacks • Lose track of time and space (self-awareness) when working on a task • Completely ignore authorities • Completely ignore other important (required) tasks • Not enough time to learn or perform other required tasks • Not enough time to enjoy other favorite activities • The learning process is more important than the learning product or outcome • Work with no completion or absolute deadlines

ally associated with high intrinsic motivation and outstanding academic performance over time (Schunk et al., 2008).

Drawbacks of Intrinsic Motivation

Although intrinsic motivation has numerous benefits including the flow experience, few drawbacks of intrinsic motivation should also be considered and carefully evaluated (Table 1). Csikszentmihalyi (1990, 1996, 1997, and 1999) and Csikszentmihalyi and Nakamra (1989) have been used the term "flow" to describe an intense form of intrinsic motivation, characterizing it as a state of complete absorption, focus, and concentration in a challenging activity. However, such intense form of intrinsic motivation can reach to the point that students completely lose track of time and space, completely ignore authority and other important (required) tasks, as well as not having enough time to learn or perform other essential tasks while learning and enjoying a particular academic activity (Ormrod, 2008).

Similarly, many college students have also experienced what Csikszentmihalyi (1978, 1988, 1997, and 1999) described as the flow experience, losing track of time and space (self-awareness) when becoming completely involved in a college-level activity, such as reading a book, writing a research paper, and performing an enjoyable task (Nell, 1988; Wigfield and Guthrie, 1997). Students seek a flow experience for itself, rather than for anticipated rewards (Schunk et al., 2008). The learning process is considerably more important than the learning product or outcome, often working with no completion or absolute deadlines. Hence, college students who experience flow should initially prioritize and accomplish a number of required tasks before completely losing track of time and space (self-awareness) when involving their most favorite academic activity.

Benefits of Extrinsic Motivation

Although the benefits of intrinsic motivation are numerous, the benefits of extrinsic motivation are also noteworthy, especially at the college level. Different aspects of extrinsic motivation are also distinguished (Table 2). In general, the extrinsic motivation variable is a sum of recognition, grades, and competition in learning (Wigfield, 1997). Learning for recognition is the pleasure in receiving a tangible form of recognition for success in learning. Learning for grades assesses the desire to be favorably evaluated by college students. Competition in learning is the desire to outperform others in learning, an aspect tied to the notion of performance goals (Wigfield, 1997). These three aspects simply reflect the fact that college students do much of their learning in an educational setting, where their academic performance is formally evaluated, and students compare their performance to peer performance. Thus, extrinsic motivation and performance goals, as reflected in the aspects of recognition, grades, and competition, are evident in college students' motivation for learning (Wigfield, 1997).

Extrinsic motivation may also focus on the social aspects of learning because learning is often a social activity (Wigfield, 1997). Learning often takes place in social (college or university) settings. Students learn together in class, while friends, classmates, and study partners learn together outside of college campus. Learning compliance is another social aspect of learning because of an external goal or requirement and because instructors require their students to learn new course information (Wigfield, 1997). These aspects of extrinsic motivation are based primarily on the work of performance goals, as opposed to mastery or achievement goals, in the motivation literature.

Additionally, if college instructors want students to learn new course information, extrinsic rewards work more quickly and powerfully than intrinsic ones (Lowman, 1990). Students can be motivated to learn almost anything if promised a sufficiently attractive

Table 2
Benefits and Drawbacks of Extrinsic Motivation for College Students

Extrinsic motivation
Benefits • Receiving external rewards or reinforcements (e.g. extra credit or bonus points) • Learning for recognition • Learning for high grades • Competition in learning • Competition for tangible rewards (e.g. honors and awards) • Learning compliance • Social reasons for learning • High performance goal Drawbacks • Exert only minimal effort needed to complete tasks • May stop an activity when reinforcement ceases • May slow down an activity when reinforcement is delayed • Rewards must be offered frequently and indefinitely to achieve a desirable learning outcome • Students are motivated for wrong seasons • Wrong seasons may lead students to eventual failure, frustration, and resentment • Students are worthy only because they can achieve competitively • Low satisfaction in students' college life • Low self-esteem • Low self-actualization • Poor relationship quality with peers and instructors • Less cooperative learning behavior • High anxiety and depression • High stress and frustration • Do not guarantee actual academic interest and satisfaction • Do not guarantee personal growth, enrichment, and fulfillment • Will not perform tasks if they are optional (not required) assignments • May show prejudice • May have a socially-dominant attitude

external reward. External reinforcement for engaging in a particular activity increases students' time on task, and performance is likely to improve as a result (Emmer and Evertson, 1981). Nevertheless, intrinsically motivated individuals are slower to learn new course information if topics are not very interesting to them and less certain of being effective, but they are usually more lasting once they learn the new information (Lowman, 1990). Source of intrinsic motivation lies within the individual and task: The individual finds the task enjoyable or worthwhile in and of itself (Ormrod, 2008).

Drawbacks of Extrinsic Motivation

While extrinsic motivation can certainly promote successful student learning and productive behavior, extrinsic motivation in the college classroom has a large number of drawbacks (Table 2). For instance, extrinsically motivated students may exert only the minimum behavioral and cognitive effort they need to execute an academic activity successfully. Occasionally, this may imply copying someone else's work, and students may stop an academic activity altogether as soon as reinforcement ceases (Brophy, 2004).

The potentially destructive impact of tangible rewards on the will to learn for its own sake has been documented (Covington, 2000). There is the prospect that once these rewards are considerably diminished or are no longer available, students will show little or no inclination to continue their studies (Covington, 1998). Unfortunately, external rewards and attractions must be offered frequently and indefinitely in order for the desired learning behavior to continue (Lowman, 1990).

The goal of fostering a love of learning is complicated not only by offering or withholding tangible rewards, but also by the scarcity of these rewards (Covington, 2000). In many college classrooms, an inadequately supply of rewards, such as good grades, plagues, and certifications, is distributed unequally by instructors, with the greatest number of rewards going to the best performers or to the fastest learners (Covington, 2000). This situation implies that achievement is maximized when students actually compete for a limited number of rewards. Students are motivated or aroused for the wrong reasons: to win over others and to avoid losing; such reasons may lead students to eventual failure, frustration, and resentment (Covington 1998 and 1999). In this competitive context, grades, plagues, and certifications firmly stand as a mark of worthiness, because it is widely assumed in our contemporary society that people are only as worthy as their ability to achieve competitively (Covington, 2000).

Furthermore, college students who rely primarily on extrinsic motivation tend to show lower levels of college/student life satisfaction, self-esteem, and self-actualization compared to intrinsically motivated peers (Kasser and Ryan, 1996). These students also show less cooperative learning behavior, poorer relationship with instructors, higher anxiety, stress, depression, and frustration, along with greater prejudice and socially dominant attitudes compared to their intrinsically motivated peers (Kasser and Ryan, 1996).

Educational Implications

College instructors need to provide their students with an understanding of why students are learning particular academic activities. Instructors are encouraged to help students understand the value and importance of learning for themselves, but not frequently craving for external rewards and reinforcements. This is highly recommended in terms of setting intrinsic goals rather than using extrinsic motivation (Wigfield, 1997). It has always been important for students to value and appreciate the concept of personal growth, enrichment, and achievement, rather than the ability to have only obtained recognition, good grades, and certifications for their future such as extrinsic motivation

(Wigfield, 1997).

In addition to instructors creating an environment of understanding amongst their students, instructors should use meaningful and realistic intrinsic goal-setting in the classroom (Covington, 2000). As with delayed gratification, when goals seem unattainable, instructors should implement subgoals at various stages of learning in order to help maintain a high level of motivation when instant gratification is not an option or is not immediately available. With this realization, these subgoals must be challenging and achievable to students, as well as be relevant and practical to their lives (Covington, 2000). Motivation has been a force that has energized, directed, and sustained student-learning behavior. Essentially, all students have some motivation to learn new course information. Yet, motivation of each student has varied considerably, with respect to the amount and level of intensity, as well as the type and source of motivation (Wigfield, 1997).

Apparently, intrinsic interests and satisfactions are the ideal sources of motivation in the college classroom. Previous research studies have indicated that intrinsic motivation can promote student learning and achievement better than extrinsic motivation (Schunk et al., 2008). Nevertheless, instructors must realize that the presence of extrinsic and intrinsic motivation is always not mutually exclusive. In many cases, students may be both intrinsically and extrinsically motivated (Hidi and Harackiewicz, 2000; Lepper et al., 2005). Even a single motive can have both intrinsic and extrinsic aspects. For instance, students may simultaneously strive for good grades and for verification that they have fully mastered the subject matter (Ormrod, 2008).

Learning serves multiple roles in college. Learning can be easy or challenging, individual or social, rewarded or unrewarded, and competitive or cooperative. Different levels of intrinsic and extrinsic motivation can exist within individuals at any given time (Lowman, 1990). These motives are not conceptually distinct, and each may have a separate continuum, ranging from high to low (Schunk, 2008). There can be many motives for student learning at the college level because it is clearly multi-dimensional. Ultimately, college instructors must also realize that motivation is not something that students "turn on" and "turn off" at will. Rather, motivation is the result of numerous factors, some of which are under learners' control, while others are the results of learners' past and present environmental circumstances (Ormrod, 2008).

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