Intrinsic and Extrinsic Motivation

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Teachers can often readily identify students who demonstrate high or low motivation in a certain task. Motivated students engage in the task with intensity and feeling, whereas unmotivated students procrastinate and indicate in other ways that they would rather do something else. These differences exemplify the *quantitative* dimension of motivation, ranging from high to low. Teachers can often also identify highly motivated students who engage in tasks in different ways. Some may attempt to finish the task quickly, while others may seek more information. Some may persist, while others may begin enthusiastically but give-up when they encounter difficulty. These differences reflect the *qualitative* dimension of motivation. The distinction between intrinsic and extrinsic motivation has been one of the important theoretical conceptualizations of qualitative differences in engagement.

Intrinsic motivation refers to engagement in an activity with no reason other than the enjoyment and satisfaction of engagement itself. By comparison, extrinsic motivation refers to engagement that provides means to ends that go beyond the engagement itself. The goals of extrinsically motivated engagement might be the attainment of tangible rewards such as money, prizes, or other benefits; intangible rewards such as social approval, a sense of worthiness, or even a sense of conscientiousness; or the avoidance of tangible and intangible punishments such as time-out, scolding, rejection or sense of low self-worth.

The Organismic Sources of Extrinsic and Intrinsic Motivation

Motivational theorists of the early 20th century searched for general principles of behavior. Theories of the period focused primarily on the motivations triggered by organismic physiological drives or needs such as food, sleep, procreation, and security (e.g., Hull, 1943). Organisms were perceived to be motivated to behave in ways that replenish biological deficits and secure survival. Because behavior that aims to satisfy a physiological deficit is done in order to achieve a goal and not for its own sake, it represents a type of extrinsic motivation.

Taking a different approach to motivation, behaviorist psychologists (e.g., Skinner, 1953) argued that behavior can be explained by the organisms' motivation to approach pleasant and desirable outcomes and to avoid unpleasant and undesirable outcomes. Pleasant outcomes constitute a reward, and enhance the chance that a behavior will recur, whereas unpleasant outcomes constitute a punishment and reduce the chance that a behavior will recur. Behaviorist psychologists argued that human (and animal) behavior can be explained by the various rewards and punishments in the environment. Thus, from a behaviorist perspective, all motivation is extrinsic.

However, during the middle of the 20th century, several theorists challenged the mechanistic models of the drive and behaviorist perspectives. These theorists relied on observations indicating that sometimes people (and animals) engage in behavior without an apparent reward. This engagement was seen to manifest universally early in life in children's exploration and play (Berlyne, 1960; White,
1959). But it also appears among older people who engage in games and hobbies. These observations seemed to suggest that such engagement is inherently enjoyable and satisfying. This type of motivation was contrasted with behavior propelled by “extrinsic” forces, and was labeled “intrinsic” motivation (Hunt, 1965).

Researchers of the period proposed a variety of theoretical explanations for intrinsic motivation, including characteristics of activities such as novelty and fantasy and biological mechanisms such as play instincts, curiosity, and need for stimulation. In a seminal paper, White (1959) reviewed several of these theoretical explanations and argued for their integration in a motive that developed along evolution, which he termed “effectance” motivation, or need for competence. White argued that this motive propels children to explore their surroundings, manipulate objects, and interact with others in ways that promote mastery of the environment. Unlike physiological needs, which operate on a homeostatic principle—that is, they are aroused when the organism is deficient in a resource, and operate to guide action towards reducing the deficiency—effectance motivation is aroused particularly when no deficiency exists. Engagement out of effectance motivation does not have a clear end-goal; rather, it is the engagement in the activity itself that elicits positive feelings of efficacy, which constitute an “intrinsic” reward.

Taking a different ideological approach, humanistic psychologists of the mid 20th century such as Maslow (1954) and Rogers (1963) challenged the drive and behaviorist perspectives by suggesting the existence of human needs that give rise to intrinsic motivation. Maslow, for example, argued that the physiological and safety needs, which he labeled “deficiency needs,” are distinct from self-actualization needs, such as the need to develop talents, achieve comprehension, and fulfill potential, which he labeled “growth” needs. While the former provide the basis for extrinsic types of motivation, the latter provide the basis for intrinsic types of motivation.

At the beginning of the 21st century, many theorists still hold that intrinsic and extrinsic motivations are based in organismic needs. One such comprehensive theoretical framework—self-determination theory (SDT) (Deci & Ryan, 1985; Ryan & Deci, 2000)—explicitly asserts that humans are motivated by three basic psychological needs: for competence, relatedness, and autonomy. The need for competence in SDT is what White (1959) called effectance motivation. The need for relatedness refers to people’s need to belong and to feel accepted by others. The need for autonomy refers to people’s need to feel self-determined— to be the source of their own action (deCharms, 1968). Like physiological needs, these psychological needs are thought to represent necessary nourishment for psychological development and growth. When an individual's three needs are fully satisfied, engagement in action is intrinsically motivated and promotes adaptive development and well-being. When one of the needs is unsatisfied, engagement is likely to be extrinsically motivated and development may be hindered.

Models of Intrinsic and Extrinsic Motivation

Whereas organismic needs energize intrinsic and extrinsic motivations, the concept of need in itself is too general to explain engagement in specific behaviors and too vague to be a guide for empirical research (Harter, 1981; Pintrich & Schunk, 2002). Therefore, during the second half of the 20th century, researchers developed models that described how motivation triggered by needs manifests in intrinsic and extrinsic motivation in specific domains and activities. These models also explained how factors in the environment may shape and affect the type of motivation that people manifest in different domains.

In one important model of intrinsic motivation, Czikzentmihalyi (1990) focused on a phenomenological
state of full absorption in an activity, which he labeled “flow.” In this pure form of intrinsic motivation, “Concentration is so intense that there is no attention left over to think about anything irrelevant, or to worry about problems. Self-consciousness disappears, and the sense of time becomes distorted” (p. 71). Czikzentmihalyi interviewed professional artists, athletes, rock climbers, and chess players about their flow experiences and concluded that flow is most likely to be experienced when there are clear goals to be achieved and there is an optimal balance between the challenge posed by the activity and the person’s level of skill. In addition, flow is experienced when there is immediate feedback on one’s action and when the person feels a sense of control over the environment. According to Czikzentmihalyi, flow experiences promote further intrinsic motivation as well as skills in a domain. Since experiences of flow are rewarding, people are motivated to replicate the experience. Through engagement in challenging activities, skills develop and the person is motivated to seek more difficult challenges in the domain. Thus, growth of competencies and intrinsic motivation in the domain facilitate each other.

In a different program of research, Harter (1981, 1992) developed a model detailing how intrinsic motivation in different domains is shaped by experiences of success and failure as well as reinforcement from significant others. According to Harter, effectance motivation leads children to seek challenges, learn out of curiosity and for the experience of pleasure, and rely on themselves for a sense of success. When curiosity, independence, and exploration result with experiences of mastery and meet the approval and encouragement of parents or teachers, children experience pleasure, feel competent and in control of their environment, and have stronger intrinsic motivation for the domain or activity. However, when such engagement results with experiences of failure and meet disapproval by others, children feel anxious, perceive themselves to have low competence and control, and have lower intrinsic motivation. According to Harter, when parents and teachers demand compliance and employ extrinsic rewards and punishments, children develop extrinsic motivation for activities and domains.

In yet another elaborate model, self-determination theorists (Deci & Ryan, 1985; Ryan & Deci, 2000) suggested that intrinsic and extrinsic motivation can be arranged on an internal-external continuum according to the individual's perception of relative autonomy. Motivations that involve a higher perception of autonomy are more internal and represent a higher quality of engagement. Intrinsic motivation is positioned on the internal end of the continuum, and represents a perception of full autonomy in engagement. “External regulation” lies on the external end of the continuum and describes the sense of coercion and external control that individuals experience when they engage in an undesirable task in order to avoid punishment or achieve rewards. Between these poles are three other types of extrinsic motivation that vary in level of perceived relative autonomy. Whereas most activities may not be intrinsically motivating, SDT proposes that people have an organismic tendency to internalize motivation for uninteresting and enjoyable activities. However, internalization is likely to occur only if the three psychological needs for competence, relatedness, and autonomy are satisfied.

Assessing Intrinsic and Extrinsic Motivation

Researchers have used multiple methods to assess intrinsic and extrinsic motivation, either as a motivational “state”—the motivation a person has in a particular task—or as a motivational “trait”—the type of motivation a person has a tendency to display across domains and activities (Harter & Jackson, 1992). One common indicator of “state” intrinsic motivation is “free choice”—the amount of time spent on a task when alternative activities are available and no reward is offered (e.g., Deci, 1971; Lepper, Greene, & Nisbett, 1973). While an important measure in the literature, “free choice” is also somewhat problematic because there may be reasons other than intrinsic motivation for choosing a certain activity over others (e.g., wanting to prove worthiness) (Ryan, Koestner & Deci, 1991).
Perhaps the most frequently used method of assessing intrinsic and extrinsic motivation has been through participants' self-report. Early in her research, Harter (Harter & Zigler, 1974) assessed “trait” intrinsic motivation with an instrument comprised of four tasks, each targeting a different component of effectance motivation: seeking variation, preference for novelty, engagement for mastery, and preference for challenge. In each task, the child had a choice between two options indicating high or low level of effectance motivation. A few years later, Harter (1981) developed a different self-report instrument that was comprised of five scales of items, each assessing a different motivational component. Each item in the instrument contrasted intrinsic and extrinsic motivation (e.g., preference for challenging versus easy work). But several researchers, including Harter (1992) herself, recognized the possibility of adopting intrinsic and extrinsic motivation simultaneously—a possibility masked by instruments asking participants to choose either intrinsic or extrinsic motivation. Therefore, researchers divided Harter's instrument into separate intrinsic and extrinsic scales (Harter & Jackson, 1992; Lepper et al., 2005). Similar self-report scales have also been constructed by other motivational researchers (e.g., Pintrich et al., 1993; Ryan & Connell, 1989).

Intrinsic Motivation, Extrinsic Rewards, and Outcomes

The research literature is quite unanimous with regard to the benefits of intrinsic motivation to learning and development (Stipek, 1996). Engagement out of intrinsic motivation requires no external incentives and enhances motivation to engage again in the future. Studies also suggest that engagement out of intrinsic motivation is associated with enhanced comprehension, creativity, cognitive flexibility, achievement, and long-term well-being. By comparison, engagement out of extrinsic motivation may cease once the external motivator is removed. Moreover, extrinsic motivation is often associated with negative indicators of achievement and well-being. It is clear, however, that extrinsic motivation is preferable to having no motivation at all. Some perspectives also emphasize the possible motivational benefits of having both intrinsic and extrinsic motivation for an activity (Lepper & Henderlong, 2000). Unfortunately, research findings point quite consistently to a gradual decline in students' academic intrinsic motivation, and sometimes also extrinsic motivation, over years of schooling (Harter, 1981; Sansone & Morgan, 1992; Lepper et al., 2005). These trends have been attributed to the prevalence of extrinsic forces in schools such as tests and token economies, to the irrelevance of school tasks to students' lives and, more generally, to the growing mismatch between characteristics of school environments and the needs of adolescence for autonomy, self-expression, and meaningful social interaction (Eccles et al., 1993; Lepper & Henderlong, 2000).

The use of extrinsic rewards as a motivational strategy has spurred a persistent and heated debate in the literature (Sansone & Harackiewicz, 2000). Generally, humanistic motivation researchers argue that offering extrinsic rewards has detrimental effects on existing intrinsic motivation and is morally problematic (Kohn, 1993). Behaviorist researchers argue that offering extrinsic rewards has either negligible effects on intrinsic motivation or that it actually contributes to intrinsic motivation (Eisenberger & Cameron, 1996). What emerges from the research is that extrinsic rewards have no universal effect. Rather, the effect depends on the meaning of the reward to the child. Research also points to varying effects of different types of rewards and of different standards for their administration. For example, rewards that are expected, contingent on engagement or on task completion, and tangible are more likely to be detrimental to intrinsic motivation than rewards that are unexpected, not contingent, and intangible (e.g., verbal, social approval) (Lepper & Henderlong, 2000). More specifically, when positive rewards are perceived to provide valid information on student's competence—for example, performance-contingent rewards or feedback—they are likely to enhance intrinsic motivation. In contrast, when rewards are perceived as controlling and as suppressing the student's autonomy, they are likely to interfere with intrinsic motivation.
Implications for Educators

While some important variation exists (e.g., Nisan, 1992), there seems to be a wide-spread consensus among researchers and educators that enhancing intrinsic motivation among students is beneficial. Students' intrinsic motivation is enhanced when practices promote their sense of personal autonomy, when schoolwork is challenging and relevant to students, when social relationships are supportive, and when environments are physically and psychologically safe. Practices that promote these environmental characteristics include providing students with choices among activities and between ways of completing tasks, encouraging students to explore and pursue their interests, building on their backgrounds and prior experiences in constructing tasks, encouraging them to collaborate, incorporating fantasy in activities, providing feedback that is informative and frequent, and reducing rewards that are controlling (Lepper & Henderlong, 2000; Pintrich & Schunk, 2002).

Nevertheless, sometimes students are required to engage in tasks that they are not motivated to do. Thus, extrinsic motivation cannot be, and should not be, abandoned (Hidi & Harackiewicz, 2000). However, educators should pursue the internalization of students' extrinsic motivation for these tasks. Such internalization can be promoted by employing as many of the recommendations specified above as possible and, in addition, educators should make the value of the activity explicit and clear. This can be done most effectively through modeling and through providing a clear and age-appropriate rationale for the requirement (Assor et al., 2002).

Bibliography


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