



## **A Brief Overview of Self-Determination Theory: Implications for Educational Psychology**

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### **Abstract**

*Three primary aspects of human motivation were distinguished in order to conduct a multidimensional analysis of this overall concept: cognitive, affective, and behavioral. In the early 1980s, E. L. Deci and R. M. Ryan put forth one of the behavioral theories that served as the foundation for motivation research, including that on academic motivation. This approach is based on concepts such as behavioral regulation, human needs, learning, psychological adjustment, etc. The theory's founders began with the idea that a spectrum of self-determination levels, which serve as the foundation for the beginning and expression of behaviors in different areas of individual functioning, might be used to characterize human motivation. In education, Self-Determination Theory can be applied to foster students' interest in learning, motivation for self-actualization, and confidence in their own skills and talents. This article examines the main concepts of Self-Determination Theory and its implications for educational psychology.*

**Key words:** Academic learning; educational psychology; motivation; Self-Determination Theory

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## 1. Introduction

In various branches of psychology (general psychology, developmental psychology, behavioral psychology, etc.), the term *motivation* has become a key area of interest for researchers. As a mental and stimulating process, motivation is considered one of the essential fields of study, understanding which helps explain human functioning in different developmental contexts. In a general sense, motivation encompasses all intrapsychic forces that drive behaviors directed toward specific goals (Matsumoto, 2009). The study of human motivation primarily focuses on identifying the set of factors influencing the initiation, direction, intensity, and persistence of daily behaviors/efforts, whether in the workplace or in interpersonal relationships. These factors can be classified into three main categories (Strickland, 2001): a) primary or biological factors (e.g., hunger, fear, or the need for self-defense); b) needs for physical, cognitive, and emotional stimulation, or the desire to seek rewards and avoid punishment; c) learned motives acquired through socialization or shaped by experiences of reward and punishment. Thus, motivation involves understanding the underlying reasons that drive individuals to think or act in specific ways.

In various branches of applied psychology, motivation is seen as an attempt to explain why individuals engage in certain activities, why they prefer one activity over another, and what drives them to switch between activities. According to N. Sillamy (1998), motivation includes all dynamic factors that determine a person's behavior, as well as the internal objectives of that behavior, whether innate or acquired, conscious or unconscious. Motivation can manifest in various forms, ranging from basic physical needs to deeply held ideals that give profound meaning to an individual's existence. It transforms individuals into an active and selective agent in relation to their goals, whose decisions, actions, and behaviors are shaped by an internal determinism (Sandovici, 2010). In general, the concept of motivation has been analyzed from a multidimensional perspective, distinguishing three major facets: cognitive, affective, and behavioral (Oka, 2005). From a behavioral perspective, one of the theories which is foundational to research in motivation, including academic motivation, was proposed by E. L. Deci and R. M. Ryan (Deci *et al.*, 1981; Deci & Ryan, 1991, 2000). In the field of education, the theory of self-determination can be applied to stimulate students' interest in learning, foster self-realization, strengthen attachment to their school community, and boost their confidence in their own goals, skills, and abilities. This article reviews the main concepts of the Self-Determination Theory and briefly analyzes its implications for the field of educational psychology.

## 2. General highlights of Self-Determination Theory

The theory of self-determination is based on concepts such as behavioral regulation, human needs, learning, and psychological adjustment. It posits that human motivation can be described as a continuum of self-determination levels underlying the initiation and manifestation of behaviors in various areas of individual functioning (Deci & Ryan, 1991). On this continuum, three fundamental positions can be identified, each corresponding to different levels of personal autonomy in initiating and manifesting behavioral responses in various contexts: amotivation, extrinsic motivation, and intrinsic motivation. These levels function differently in contexts where individuals engage in learning processes and have an evolutionary character, meaning that a person can progress from a complete absence of motivation to perform a particular activity to a high level of intrinsic motivation. The differentiation of these three motivational dimensions is based on the premise that, even from birth, humans are driven by an innate desire to be stimulated and to learn. This desire can either be nurtured or stifled by the environment in which an individual grows and is socialized (Deci & Ryan, 1991, 2000).

The extent to which this internal force (termed *intrinsic motivation* by the authors of the Self-Determination Theory) is contingent on the fulfillment of individuals' psychological needs can significantly influence their ability to activate their own potential. This, in turn, enables

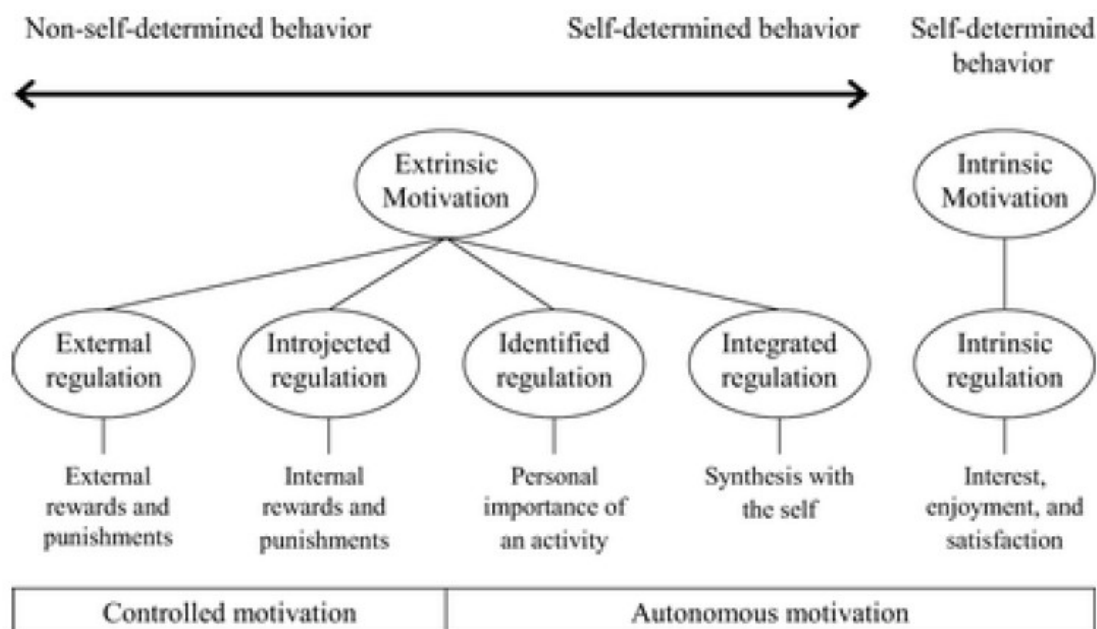
individuals to approach tasks creatively, perform complex activities, experience personal fulfillment, and achieve well-being. The theoretical model identifies three fundamental needs that serve as precursors to intrinsic motivation: the need to feel competent in one or more areas, the need for personal autonomy, and the need for social and emotional connection. Depending on how these needs interact with the environment in which a person is born and socialized, E. L. Deci and R. M. Ryan (2000) distinguish the following:

- *amotivation* which is situated at one extreme of the motivational continuum, is characterized by a person's perception of lacking control over life events, feeling incompetent, and having no clear purpose to guide his/her actions and behaviors; in practical terms, amotivation reflects the absence of intention or incentive to engage in an activity because the individual cannot perceive its relevance to his/her life;
- *extrinsic motivation* which arises when a person's actions and behaviors are influenced, regulated, and directed by external factors; these factors may include fear of punishment, the desire to earn rewards, the drive to maintain or enhance self-esteem, the avoidance of anxiety or guilt, adherence to societal norms and values, or the aspiration to broaden intellectual and social horizons; in practical terms, extrinsic motivation involves engaging in an activity (e.g., completing compulsory education) out of obligation or with the goal of achieving an expected outcome;
- *intrinsic motivation* representing the highest level of behavioral self-regulation and personal autonomy, is based on the premise that individuals choose to act in certain ways or engage deeply in particular areas of activity or projects to grow and develop personally; this is driven by innate curiosity and a desire for robust cognitive, intellectual, and emotional stimulation or the inherent pleasure derived from the activity itself, making the activity or project an end in itself.

E. L. Deci and R. M. Ryan (1991, 2000) expanded the analysis of extrinsic motivation, identifying four subtypes (Figure 1): a) *external regulation*, where behavior is controlled by external sources, such as rewards or punishments; b) *introjected regulation*, where individuals internalize the sources of behavioral control but still perceive them as external, often driven by guilt or anxiety, c) *regulation by identification*, where individuals internalize the importance of certain behaviors for achieving personal goals, viewing these behaviors as a reflection of their own values; d) *integrated regulation* is the most autonomous form of extrinsic motivation, where individuals fully assimilate the regulation of their behaviors into their sense of self, aligning actions with their self-concept and personal identity. This progression reflects the extent to which a person feels self-determined and integrates the regulation of his/her behaviors into his/her broader self-image. The four subtypes of extrinsic motivation differ in the level of self-determination persons associate with their own behaviors, in the sense that internalized or integrated behaviors lead to a greater sense of self-determination.

At the opposite pole, intrinsic motivation was initially approached as a unitary concept (Deci & Ryan, 1991, 2000). Later, R. J. Vallerand and his collaborators (1989, 1992) differentiated the concept into three domains, building on Deci and Ryan's observation that intrinsic motivation can be influenced by specific factors. The taxonomy proposed by Vallerand and collaborators includes: a) *motivation stimulated by the need for knowledge* which is based on a person's desire to engage in an activity for personal pleasure and satisfaction and the interest in learning new things; b) *motivation stimulated by the desire for personal achievement* which involves performing an activity for the satisfaction experienced by the individual in accomplishing or creating something new and in leveraging their own knowledge, skills, and talents; c) *intrinsic motivation activated by the need for physical, cognitive, or emotional stimulation*. Studies conducted between 1980 and 2000 suggested that individuals who are more intrinsically motivated tend to use strategies aimed at deeper information processing and achieve better performance in school/university studies. They also report higher levels of psychological well-being and derive more satisfaction from the various activities they undertake throughout

their lives (Grolnick & Ryan, 1989; Miserandino, 1996; Ryan & Deci, 2000; Sheldon & Kasser, 1998).



**Figure 1.** The self-determination model proposed by Deci and Ryan (retrieved from Saeed & Zyngier, 2012)

### 3. Motivation in the context of school work

The development of children and adolescents is an intergenerational process in which they are responsible for capitalizing on new learning experiences, including within the context of their educational journey. Adults are tasked with identifying and providing opportunities for young people to leverage their skills, develop positively, and integrate socially and professionally (Roeser, Eccles, & Sameroff, 2000). Children and adolescents spend a significant portion of their developmental stage engaging in school activities. The primary purpose of schooling and the institutional environment it provides is the cognitive and intellectual development. However, the benefits of schooling extend beyond this, offering opportunities to maintain physical and mental health, foster emotional and social development, cultivate and strengthen moral and civic engagement, shape value systems, and establish the beliefs and ideologies that underpin an individual's personality in later youth/adulthood.

Through the instructional and educational activities conducted by teachers in classrooms, as well as through the inherently social nature of the teaching-learning process, the school context provides children and adolescents with a wide range of cognitive, emotional, and social experiences. These experiences contribute to the maturation of self-identity and the development of personality in all its structures and dimensions. For these reasons, motivation in the educational field is an essential factor that modulates the learning experiences children and adolescents can leverage to develop in alignment with their potential and needs.

Since the 1950s and 1960s, two key concepts related to beliefs that contribute to learning motivation (not only in school activities but also in other domains of human functioning) have been intensively studied. These concepts include (Oka, 2005): a) the perception individuals have of their own abilities and effectiveness in performing an activity and b) the goals oriented toward achievement (success) in a specific field. For example, how students evaluate their own abilities in the academic domain may influence the learning tasks they choose to engage in, the quantity

and quality of effort they invest, their persistence in completing tasks, and the extent to which they achieve their own goals. Furthermore, it may affect the attributions that students make regarding the factors contributing to their success or failure and the expectations they hold regarding their own performance.

In general, as children and adolescents develop and become more mature, they form more *realistic and stable perceptions over time regarding their own skills in the academic field*. Beliefs about academic self-efficacy relate to the confidence students have in their ability to successfully accomplish various tasks and achieve results that both they and other significant individuals (e.g., parents or teachers) expect (Schunk & Mullen, 2012). The concept of self-efficacy in the learning process has also been described referring to the positive expectations a student holds regarding his/her ability to successfully complete school-related learning tasks. The well-known behavioral psychologist A. Bandura (1994) suggested that the positive perception students have of their skills and the performance they can achieve in the academic domain has beneficial effects on their level of school aspiration, interest in learning, as well as active and persistent involvement in the accomplishment of various academic tasks.

*Achievement-oriented goals* encompass the reasons why an individual engages in actions and behaviors aimed at achieving success in different activities or personal accomplishments in various areas of functioning. Two types of achievement-oriented goals have been described: a) goals focused on learning, acquiring knowledge, and mastering a domain of knowledge/activity (i.e., *learning/mastery-oriented goals*) and b) goals focused on achieving performance in a field (i.e., *performance-oriented goals*). Students inclined to set goals in the first area are focused on continually acquiring new theoretical and practical knowledge in a particular subject or developing new skills in a specific schoolwork field (Anderman & Patrick, 2012). In contrast, performance-oriented students are more concerned with gaining recognition from others for their own competencies in a particular area. Research findings revealed stronger correlations between learning-oriented goals and mastery in a field of study or practice, well-being in relation to school life, intrinsic motivation for learning and success, positive self-image (Roeser, Midgley, & Urdan, 1996), and cognitive engagement in accomplishing academic specific tasks (Fredricks, Blumenfeld, & Paris, 2004).

In the context of understanding the factors contributing to academic success, motivational factors aim to explain differences between students of various ages in their ability to solve certain types of learning tasks. This includes the ability of some students to tackle even the most difficult challenges and the tendency of others to set very high and unrealistic goals, which risk not being met (Graham & Weiner, 1996). Another essential aspect of understanding the concept of academic motivation is explaining typical behaviors aimed at achieving success in a particular activity (e.g., studying for an important exam) as a time sequence initiated at a given point, supported by effort, directed toward specific goals, modulated according to challenges, and then completed. From this perspective, psychologists need to examine several aspects (Graham & Weiner, 1996): a) what a person is doing (i.e., *selecting behaviors*); b) the period of time before initiating the activity (i.e., *timing of behaviors*); c) the amount of effort the person is willing to invest in performing the activity (i.e., *intensity of efforts*); d) how long the person is willing to stay involved in performing the activity (i.e., *persistence of efforts*); e) what the person thinks and feels while engaged in the activity (i.e., *cognitive and emotional responses accompanying behaviors*).

Education researchers have long recognized the key role that motivation plays in learning and achieving success. The early research focused on learning and success in the academic field separated cognitive and motivational factors, following distinct investigative paths that did not aim to integrate cognition and motivation into the dynamic learning process. However, since the 1980s, researchers have become aware that cognitive and motivational factors interact and jointly influence the processes of learning, knowledge acquisition, and performance in the instructional contexts provided by schools (Linnenbrink & Pintrich, 2002). In other words, it has been argued that students must possess both cognitive skills and abilities, as well as the desire to learn, in order

to achieve academic success.

The integration of cognitive and motivational factors was facilitated by the shift of focus from traditional models of motivation for learning and academic success to social-cognitive models of motivation (Pintrich & Schunk, 2002). The *social-cognitive models of academic motivation* are based on three key assumptions that help explain the dynamics and motivational mechanisms involved in the students' learning process.

Motivation is a dynamic and multidimensional phenomenon that cannot be conceptualized in a strictly quantitative manner. According to this perspective, students differ from one another in terms of their motivation for learning and success, with some being entirely unmotivated and others highly motivated. Socio-cognitive models suggest that students can be motivated to learn in various ways, and the key focus for psychologists and educators is understanding the mechanisms and factors that influence motivation for academic achievement.

Motivation is generally not a stable trait of an individual but rather a contextual field that changes according to the specific activities marking an individual's development. In other words, students' motivation for schoolwork can vary greatly depending on learning situations and socio-emotional contexts that emerge during instructional activities in the classroom/school environment. This assumption highlights that student motivation can change over time and is sensitive to the differences between learning contexts.

Student motivation is influenced not only by demographic characteristics, personality traits, cultural variables, and factors that define the learning environment of the classroom, but also by the students' efforts to regulate their own cognitions and learning behaviors. These efforts mediate the relationship between individual and contextual characteristics and the indicators of academic success. In other words, students' beliefs about their own motivation and learning mediate their commitment to schoolwork and subsequent success.

#### **4. Implications of Self-Determination Theory for the field of education**

Motivation is a fundamental factor that underpins success in the academic domain. Students with optimal motivation tend to exhibit positive attitudes and to use adaptive learning strategies, such as maintaining intrinsic interest in learning, setting clear learning goals, and self-monitoring throughout the learning process (Alderman, 2003). Moreover, motivational variables interact with a variety of cognitive, attitudinal, behavioral, and contextual factors, influencing how students adjust their efforts in the learning process (Pintrich, Marx, & Boyle, 1993). In the field of education, the Self-Determination Theory can be applied to stimulate students' interest in learning, encourage their commitment to education, and enhance their confidence in their own abilities (Deci *et al.*, 1991). These aspects can be considered formative ends of education and are expressions of intrinsic motivation and regulatory processes that take place in the academic learning activity.

Numerous studies have linked intrinsic motivation with positive outcomes in education. From a behavioral perspective, theoretical models that have been concerned with exploring and describing the processes and mechanisms involved in academic motivation among students have emphasized on the importance of using different types of incentives and rewards, including to strengthen positive learning/mastery-oriented student behaviors (Oka, 2005). According to academic motivation theorists, student behaviors can be controlled by their consequences. Thus, students are more likely to exhibit positive behaviors in the learning process when they receive rewards and avoid behaviors that lead to punishment or other unwanted outcomes. When students engage in learning and prepare thoroughly for school to obtain certain rewards that are located outside the intrinsic characteristics of learning tasks, we are talking about *extrinsic motivation*. However, some students are constantly engaging in learning and making efforts without the promise of rewards or the threat of punishment. For example, some students may persistently pursue their interests for different disciplines of study, systematically engaging in learning

activities, for the simple pleasure that those activities produce or because they want to know as much as possible in a certain theoretical and practical field. These students are characterized by *intrinsic motivation*.

For students who are intrinsically motivated in the school field, engaging in learning activities does not depend on the existence of external reinforcements, their simple achievement being valuable and satisfying (Oka, 2005). The perspective of intrinsic academic motivation implies that human individuals manifest the natural tendency to seek experiences that help them enrich their skills, arouse their curiosity and maintain/increase their autonomy (Deci & Ryan, 1991). Specific to intrinsic motivation in the academic context is the curiosity or desire of students to know as many things as possible from various fields of study (Cosmovici, 1999). Extrinsically motivated students go to school and make learning efforts either to satisfy their parents or to receive from them various material/moral rewards, either from the desire to spend time with other people and to undertake age-specific social activities, or to avoid negative repercussions of behaviors that are inconsistent with the expectations of parents and teachers. Intrinsically motivated students go to school and systematically engage in learning and study activities because they believe what they learn at school in order to grow themselves. When this belief is associated with a high level of curiosity and becomes permanent, it gives intrinsically motivated students intense feelings, self-esteem and satisfaction with the school (Cosmovici, 1999; Oka 2005). Another feature of intrinsically motivated students is the high level of aspiration for competence and academic achievement/success, and generally in a particular field of professional activity.

The findings of the studies performed on samples of students extracted from different segments of the school population highlight the benefits of intrinsic motivation and autonomous types that fall within the sphere of intrinsic motivation. Thus, it has been shown that students who are characterized by self-determined academic motivation are less likely to drop out of school, compared to students who are characterized by extrinsic motivation (Daoust, Vallerand, & Blais, 1998; Vallerand & Bissonnette, 1992). Intrinsically motivated students also tend to: a) have higher levels of school purchases (Areepattamanil & Freeman, 2008; Areepattamanil, Freeman, & Kling, 2011a,b; Gottfried, 1985; Gottfried *et al.*, 2007; Lloyd & Barenblatt, 1984); b) achieve better cognitive/intellectual performance (Gottfried & Gottfried, 1996, 2004); c) be capable of a more profound conceptual understanding (Ames & Archer, 1988; Grolnick & Ryan, 1987; Vansteenkiste *et al.*, 2004); d) be more creative (Eisenberger & Shanock, 2003; Koestner *et al.*, 1984); e) manifest higher levels of cognitive engagement and flexibility (McGraw & McCullers, 1979; Walker, Greene, & Mansell, 2006); f) persist in learning and study efforts, despite the obstacles and difficulties they face with (Vansteenkiste, Lens, & Deci, 2006; Vansteenkiste *et al.*, 2004); g) achieve better academic results (Gottfried *et al.*, 2007, 2008); h) manifest lower levels of anxiety in school work (Gottfried, 1985); i) report higher levels of well-being (Burton *et al.*, 2006; Ryan & Deci, 2000; Sheldon *et al.*, 2004; Vallerand *et al.*, 1989); j) have higher levels of self-esteem (Deci *et al.*, 1981; Deci & Ryan, 1995).

On the other hand, students who are extrinsically motivated tend to have a lower level of school purchases and achieve worse outcomes (Becker, McElvany, & Kortenbruck, 2010; Lepper, Corpus, & Iyengar, 2005; Wolters, Yu, & Pintrich, 1996), to superficially engage in learning tasks (Biggs, 1991), to experience lower levels of test/exam anxiety (Wolters, Yu, & Pintrich, 1996), to feel rather negative emotions in school life (Senecal *et al.*, 1995) and report a lower ability to adapt to academic failure (Deci & Ryan, 2000). J. I. Howard and his collaborators (2021) carried out a meta-analysis that brought together 344 samples of primary and secondary school students (total N = 223.209) from different countries. All these types of motivation were conceptualized by reference to the Self-Determination Theory and were related to 26 indicators referring to the academic performance, school-related well-being, learning-oriented goals (e.g., acquisition of new knowledge), performance-oriented goals (e.g., recognition of personal merits), persistence of efforts invested in the learning process, etc. The findings highlighted that intrinsic

motivation is positively linked to academic success and well-being indicators, while the value and importance given to learning activities (i.e., regulation by identification – which is a subtype of extrinsic motivation) correlates positively and consistently with the persistence of efforts invested in the learning process. Introjected regulation (i.e., a subtype of extrinsic motivation related to the need for internal rewards and the need to avoid punishments/losses) positively correlates with performance-oriented goals (reflecting the need of a student to recognize his/her academic skills), the persistence of learning-oriented efforts itself, as well as with impaired well-being (e.g., anxiety). Motivation driven by a desire to obtain material rewards or avoid unpleasant punishments (i.e., external regulation) is not associated with academic performance and persistence of learning-oriented efforts. Instead, this subtype of extrinsic motivation is associated with impairment of well-being. Amotivation highlights negative correlations with academic performance and persistence of learning-oriented efforts, respectively positive correlations with anxiety indicators.

## 5. Conclusions

Motivation is one of the most important concepts that researchers in the field of educational psychology study intensively. It is one of the key factors that predict engagement with school and the academic success of a student and that shapes his/her curiosity, perseverance, beliefs and attitudes about learning, schoolwork, achievement/success, and academic performance. Intrinsic motivation influences adaptive strategies based on the interest in systematic learning and study, the ability of a student to manage goals as clearly as possible, as well as efforts directed towards self-regulation of behaviors involved in the learning process. Having regard to the relationship between motivation and other variables which are relevant to the learning process and academic adjustment, we can easily understand the interest of researchers who are concerned about the investigation of academic motivation from multiple perspectives.

In recent decades, the Self-Determination Theory has become a broad framework for the study of human motivation and personality of the human individuals. This theory articulates concepts that describe and explain the extrinsic and intrinsic sources of individuals' motivation, as well as the mechanisms by which these sources influence the cognitive, social and professional development. The theory has a wide applicability, being used in various fields of scientific research, such as education, parenting, organizational behavior, sports and physical activity, religion, health-care and medicine, romantic relationships, psychological counseling and psychotherapy, etc.

Researchers used Self-Determination Theory to better understand the motivation a student has in the academic field in general, as well as the interest in a particular discipline of study. Because the theory of self-determination was developed primarily to help human individuals have a fulfilled life and experience well-being, education researchers place particular emphasis on harnessing it in the design of intervention programs conducted in schools. Such programs are meant to support students to meet their psychological needs, acquire the ability to autonomously regulate their own behaviors, reach their potentials and achieve success in the educational path.

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