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SELF-DETERMINATION THEORY: INCREASING MOTIVATION IN MIDDLE

SCHOOL STUDENTS

by

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ABSTRACT

Self-Determination Theory: Increasing Motivation in Middle School Students

Research shows that motivation declines when students enter middle school. Because of this, middle school teachers face the difficult challenge of motivating their students to learn. Although intrinsic motivation results in higher conceptual learning, not all activities in a classroom are intrinsically motivated. Self-Determination Theorists propose that through the process of internalization, students' motivation towards extrinsically motivated activities could reach levels in which the behavioral qualities are comparable to those of intrinsic motivation. The internalization process is dependent on environmental supports for autonomy, competence, relatedness, and task relevance. A handbook based on strategies and concrete examples was developed for middle school teachers to use to maintain intrinsic motivation and promote self-determined behavior in students when engaged in extrinsically motivated activities.

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Chapter 1

INTRODUCTION

Motivation is instrumental to the academic success of students. As such, teachers are responsible for keeping students motivated towards learning. In order to increase student motivation, teachers need to understand the dynamics of motivation. When examining motivational aspects, researchers differentiate between intrinsic and extrinsic motivation. Intrinsic motivation represents self-determined behavior that promotes higher levels of conceptual learning (Deci and Ryan, 1985; Lepper, Henderlong Corpus, & Iyengar, 2005; Ryan & Deci, 2000a). Not all of the activities performed in school inspire intrinsic motivation. Self-Determination Theorists purpose levels of extrinsic motivation that share the qualities of behavior demonstrated in intrinsic motivation (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2002). In addition, they describe the environmental supports necessary for maintaining levels of intrinsic motivation and promoting self-determined levels of extrinsic motivation. This provides a foundation for teachers to understand the elements that influence motivating students to learn.

Statement of Problem

Teachers struggle to find ways to increase student motivation. This struggle is especially prevalent in middle schools. Researchers cite a decline in the academic motivation of middle school students (Anderman & Maehr, 1994; Midgley & Urdan, 1992; Ryan, 2001). Because of this decline, middle school teachers face a difficult

challenge in regards to teaching. Middle school teachers need to understand how to maintain intrinsic motivation and to promote higher levels of conceptual learning when students lack intrinsic motivation.

Purpose of the Project

The purpose of this applied research project was to prepare a handbook for middle school teachers. The handbook provides information to teachers about the applicability of the Self-Determination Theory of motivation. It includes descriptions of practical strategies based on this theory of motivation to incorporate into instruction in order to maintain intrinsic motivation and promote self-determined behavior for activities that are extrinsically motivated.

List of Definitions

Some of the terms presented in this project have different meanings depending on the context used. For clarity purposes, the following terms require defining.

1. Autonomy - Autonomy refers to actions originating from inside of self, or self-initiating (Deci et al., 1991; Ryan & Deci, 2002).

2. Competence - Competence refers to understanding how to and being effective at attaining various outcomes (Deci et al., 1991; Ryan & Deci, 2002).

3. Extrinsic motivation - Extrinsic motivation refers to behavior that stems from external contingencies (Deci et al., 1991; Ryan & Deci, 2000a).

4. Intrinsic motivation - Intrinsic motivation refers to behavior that occurs for no other reason besides the enjoyment and interest involved with the activity (Deci & Ryan, 1985; Deci & Ryan, 2000; Deci et al., 1991).

5. Relatedness - Relatedness refers to feeling connection with others (Deci et al., 1991; Ryan & Deci, 2002).

6. Self-determination - Self-determination refers to having choice dictate behavior. It is acting out of ones own volition or will (Deci & Ryan, 1985).

Chapter Summary

Research shows that academic motivation declines as students enter middle school. Because of this, middle school teachers face the difficult challenge of motivating students to learn. The behavioral qualities that characterize intrinsic motivation are associated with higher levels of conceptual learning and the willingness to engage. Middle school teachers would benefit from strategies that support students in achieving these motivational qualities. Chapter 2 includes a review of the literature pertaining to the Self-Determination Theory of motivation. Within the framework of this theory, there are foundations for attaining motivational qualities associated with higher learning, even for activities that are extrinsically motivated.

Chapter 2

REVIEW OF LITERATURE

The purpose of this project was to develop a handbook of strategies and examples
that middle school teachers can use to maintain intrinsic motivation and promote self-
determined behavior in students when activities are extrinsically motivated. When
referring to motivation, it is important to understand what motivation is and how people
measure it. Ryan and Deci (2000a) stated, "To be motivated means to be moved to do
something" (p. 54). Wlodkowski (1999b) stated, "Motivation is the natural human
capacity to direct energy in the pursuit of a goal" (p. 7-8). He further indicated that one
of the outcomes of motivation was "engagement in learning" (p. 9). Although there are
many behavioral outcomes that serve as measures of motivation, in the context of this
project, student engagement and academic performance demonstrate motivation. In order
to increase engagement in learning and promote successful academic performance,
teachers must face the difficult challenge of motivating students. Legault, Pelletier, and
Green-Demers (2006) described the teenage lack of motivation towards academics as a
prominent problem facing educators.

Motivation in Middle School Students

The teenage lack of academic motivation is especially apparent when students
advance into middle school. Research indicates that academic motivation decreases as
students transition into middle schools (Anderman & Maehr, 1994; Ryan, 2001). During
interviews, Midgley and Urdan (1992) confirmed that parents and teachers detected

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changes in the attitudes toward learning by middle school students as compared to their attitudes during elementary school. Coinciding with the changes in the motivation and attitudes of middle school students, Ryan (2001) found an average decline in students' grades between the end of their elementary school year and the end of their first year in middle school.

Researchers expressed varied ideas as to the cause of middle school students' decline in academic motivation, but they generally agree that adolescence is a time of change. Any one of these changes could, in isolation or in combination, influence academic motivation. Eccles, et al. (1993) described some of the changes associated with adolescence as pubertal and cognitive development, role identification, discovery of sexuality, and school changes. Some researchers agreed that because adolescence is a time of extreme physiological and psychological change, a decrease in academic motivation was not surprising. Before isolating which of these changes serves to decrease motivation, it is important to identify the developmental changes that occur.

Adolescent Developmental Changes

Significant developmental change characterizes adolescence. Berger (2005) summarized various research on adolescent development and described the different changes that occur. She described the physiological changes involved with puberty including the associated physical changes. For girls, the visible changes are in height, breast development, pubic hair growth, and widening of the hips. For boys, the visible changes are in height and muscularity, deepening of the voice, facial and pubic hair growth, and development of sexual organs (p. 341). Berger indicated that hormonal changes result in increased sexual urges. Additionally, hormonal changes affect

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adolescent emotional state because of the associated physical changes. Their bodies are changing in ways that take adjustment time, and as their bodies become sexually mature, expectations of mature behavior increase (Berger, 2005). Besides the physiological and physical changes that occur during adolescence, cognitive thinking abilities also develop (Berger, 2005; Midgley & Urdan, 1992). Adolescents increasingly seek decision-making opportunities (Berger, 2005; Midgley & Feldlaufer, 1987). They want independence and strive to identify who they are. Berger described adolescents as focused on themselves and worried about how their peers perceive them. Adolescence is a time when peer relationships become critical and it becomes increasingly important to fit in (Berger, 2005; Midgley & Urdan, 1992; Ryan 2001). The social development and the increase in peer importance that occurs during adolescence is one characteristic of adolescence targeted by researchers when examining factors that could have a negative affect on motivation.

Social and Peer Influences on Motivation

Researchers propose that the significance placed on peer relationships in adolescence affects motivational levels of middle school students. Ryan (2001) found that adolescence is a time when peer group relations become increasingly important to students. She indicated that peer group norms were a factor influencing academic motivation. Ryan determined that peer group affiliations affected the changes seen in students during middle school. During the study, Ryan found that although there was an overall average decline in students' motivation and academic performance, students who affiliated with groups that exhibited high academic achievement demonstrated less of a decline (p. 1146). On the other hand, students who associated with peers who did not

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enjoy school exhibited more of a motivational decline. Juvonen and Cadigan (2002) also found that peer involvements were a strong factor affecting middle school students. When they surveyed middle school students, they determined that the students felt that the need for peer approval had a significant influence on their behavior. Similarly, in interviews with parents and teachers of middle school students, Midgley and Urdan (1992) found that the prevalent reasons cited for the decline in middle school students' motivation were social aspects such as peer pressure and their need to fit in. The parents and teachers felt that students' social needs outweighed their academic needs.

Adolescent Developmental Needs and Middle School Conflicts

In addition to the preoccupation with peers, researchers study the change in school dynamics as a factor affecting the motivation of middle school students. In an attempt to discover the impact adolescent changes had on middle school students' motivation, Simmons and Blyth (1987) studied changes such as puberty, self-esteem, and peer relationships. They found that in and of themselves, these changes did not necessarily have widespread negative impacts. Simmons and Blyth found that the transition to middle school, timed with the adolescent changes, was the critical factor. They found evidence that the move into the larger, less personal environment of middle school may be too soon for some students (p. 346).

Along the same lines as the Simmons and Blyth study, researchers proposed that disconnects between adolescent developmental needs and the middle school environment caused the decline in middle school students' motivation. (Eccles et al.,1993; Feldlaufer, Midgley, & Eccles, 1988; Midgley & Feldlaufer, 1987). Adolescents have increasing need for control in their lives, cognitive engagement, and social acceptance (Berger,

2005: Feldlaufer et al., 1988; Midgley & Urdan, 1992). In studies involving pre- and post-junior high students and teachers, Midgley and Feldlaufer (1987) found that students sought more decision-making opportunities in junior high. They also found, however, that both teachers and students reported fewer opportunities for students to participate in decision-making after the transition into junior high. In a similar study involving pre- and post-middle school students, teachers, and outside observers, Feldlaufer et al. (1988) found that students had less opportunity for input in their classes. Additionally, there was a reduction in students' autonomy after the transition from elementary school to junior high. These researchers found that at a time when adolescents developmentally needed an increase in independent decision-making opportunities, they entered environments in which fewer of these opportunities were available.

In addition to fewer opportunities to take control of their learning, the social dynamics in middle school are different from those in elementary school. Researchers study these dynamics to ascertain their affects on the motivation of middle school students. Feldlaufer et al. (1988) found that students perceived the teachers in junior high as less caring, less friendly, and not as supportive as teachers in elementary school. Students interviewed by Anderman (2003) reported that their feelings of belongingness decreased in middle school. Davis (2006) also indicted that students reported feeling less connection with their teachers and peers in middle school. Davis found a reciprocal dynamic between the relationship students have with their teachers and their academic motivation. Academic motivation affected the quality of student-teacher relationships and in turn, the student-teacher relationships predicted student motivation (p. 207). The research findings highlight the complexity of the factors that affect the motivation of

middle school students. Regardless of the causes of the decline in motivation in middle school students, it is important to examine ways to increase it. This requires an understanding of the types and characteristics of motivation.

<div align="center">Types and Characteristics of Motivation</div>

In an attempt to understand its dimensions, researchers study the types and the characteristics of motivation. Deci and Ryan (1985) proposed three types of motivation. The first type of motivation is actually a lack of motivation called amotivation. Amotivation is not intentional behavior because it constitutes a lack of willingness to behave, not acting at all, or merely going through the motions (Ryan & Deci, 2000a, 2000b). Amotivation also occurs if students do not value or see the relevance of the activity (Ryan & Deci, 2000a, 2000b; Schunk, Pintrich, & Meece, 2008). The other two types of motivation are intrinsic and extrinsic, and they result in intentional behavior (Deci & Ryan, 1985; Ryan & Deci, 2000a).

In addition to the types of motivation, researchers study the characteristics of motivation. Ryan and Deci (2000a) indicated that a complete explanation of motivation included both the quantity of energy put towards the activity and the reasons for engaging in the activity. Vansteenkiste, Lens, and Deci (2006) proposed that the quality of motivation is the aspect of motivation that dictates learning. Furthermore, the quality of motivation results from intentional behavior and involves a determination as to whether or not the learning is motivated intrinsically or extrinsically.

<div align="center">*Intrinsic Motivation*</div>

Before assessing whether or not a person is intrinsically or extrinsically motivated, it is important to determine what constitutes intrinsic and extrinsic motivation.

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White (1959) proposed the notion of a motivation that was separate from, and not explained by, the drive theories of the time. He described this 'competence' as a motivational aspect that involved the ability to interact with the environment. White theorized that any learning that came from interaction with the environment was secondary to the experience itself. The interaction involved experimenting, exploring, and play for the "sole reward of engaging in it" (p. 323). White's ideas formulated the basis for the notion of intrinsic motivation. In addition to White, de Charms contributed to the description of intrinsic motivation. He proposed that intrinsic motivation stemmed from personal causation and represented an internal locus of control (de Charms, 1968). In other words, intrinsic motivation stemmed from inside the person.

Researchers expanded on the work of White and de Charms to formulate a widely accepted description of what constitutes intrinsic motivation. Intrinsic motivation occurs when a person engages in an activity for no other reason besides the enjoyment and interest involved with the activity (Deci & Ryan, 1985; Deci & Ryan, 2000; Deci, Vallerand, Pelletier, & Ryan, 1991). An example of intrinsic motivation in the classroom is students reading solely for the enjoyment of reading. Vansteenkiste et al. (2006) described intrinsic motivation as a manifestation of the human propensity for learning, growth, and development. Because intrinsic motivation stems from within the person, it is self-determined. Qualities associated with intrinsic motivation are self-regulation and willingness to engage in a behavior (Dec et al., 1991). Deci and Ryan (1985) proposed that someone who is intrinsically motivated is free from both external and internal pressures. They indicated that when innate curiosity and interest increase learning, intrinsic motivation is the basis.

Extrinsic Motivation

Whereas an internal locus of control characterizes intrinsic motivation, an external locus of control characterizes extrinsic motivation (de Charms, 1968). In other words, unlike intrinsically motivated behavior, people do not engage in extrinsically motivated behaviors because of sheer interest and enjoyment for the activity (Deci & Ryan, 1985; Deci et al., 1991). Engagement in extrinsically motivated behavior stems from external contingencies such as rewards, avoidance of punishment, guilt, self-esteem aspirations, and valued outcomes. An example of extrinsic motivation in the classroom is students reading because they see it as a means to obtaining the knowledge needed to pass a test. People engage in extrinsically motivated behavior because they perceive the behavior as necessary to obtaining an external outcome (Deci et al., 1991; Ryan & Deci, 2000a).

Educational Differences between Intrinsic and Extrinsic Motivation

The educational importance of distinguishing between intrinsic and extrinsic motivation lies in the differences in learning these types of motivation promote. To this end, researchers explored the effects of intrinsic and extrinsic motivation on learning. Self-Determination Theorists indicate that intrinsic goals rather than extrinsic goals promote academic adjustment. Emphasis placed on intrinsic goals is more conducive to learning than emphasis on extrinsic goals (Vansteenkiste et al., 2006). In their study on motivation in middle school students, Lepper, Henderlong Corpus, and Iyengar (2005) found that performance, as measured in class and on standardized tests, had a positive correlation with intrinsic motivation and a negative correlation with extrinsic motivation. According to Ryan and Deci (2000a), intrinsic motivation led to higher-level learning.

Additionally, Deci and Ryan (1985) indicated that extrinsically motivated regulation of a behavior resulted in less conceptual learning. These results support the contention that intrinsic motivation promotes higher-level learning.

<center>Self-Determined Levels of Extrinsic Motivation</center>

If higher-level learning results from intrinsic motivation, the question remaining pertains to how students achieve higher-level learning on activities that are not intrinsically motivated. Deci and Ryan (1985) postulated that forms of extrinsic motivation could reach levels of self-determination and conceptual learning comparable to that of intrinsic motivation. Their theory is the Organismic Integration Theory, which is a sub theory of the Self-Determination Theory. Deci and Ryan (1985) further indicated that the theory proposes that people incorporate new elements from both their internal and external surroundings into the structures they already have in place. According to Ryan and Deci (2002), the premise behind the Organismic Integration Theory is the natural inclination of people to "integrate their ongoing experiences" (p. 15). As part of the Organismic Integration Theory, theorists distinguished between self-determined, or autonomous, and controlled behavior. They delineated different levels of intentional behavior ranging between amotivation (controlled) on one extreme, to self-determined (autonomous) behavior on the other (Deci et al., 1991; Ryan & Deci, 2000b; Ryan & Deci, 2002). Specifically, levels of autonomy move from "amotivation or unwillingness, to passive compliance, to active commitment" (Ryan & Deci, 2000a, p. 60). Self-Determination Theorists base the distinction between the levels of autonomy on the regulatory processes involved with the behavior. Choice regulates self-determined, autonomous behavior and compliance regulates behavior that is controlled (Deci et al.,

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1991). A key aspect of the Organismic Integration Theory is the evaluation of the

processes and factors influencing how controlled regulation becomes autonomous. In

other words, researchers study how extrinsically motivated activities can become self-

determined.

Internalization

Ryan and Deci (1985) described the process in which extrinsically motivated

activities became self-determined as internalization. Internalization "refers to the process

through which an individual acquires an attitude, belief, or behavioral regulation, and

progressively transforms it into a personal value, goal, or organization" (p. 130).

Internalization is an active process in which a person becomes more self-determined

despite external controls or contingencies. In addition, internalization is an inherent and

naturally occurring process (Deci & Ryan, 1985; Deci & Ryan, 2000; Ryan & Deci,

2002). The internalization levels represent a continuum moving from controlled to

autonomous motivation. Deci et al. (1991) indicated that internalization is the process

whereby external forces are no longer required because the regulation of behavior

becomes internal. It is through internalization that different levels of autonomous

behavior develop.

Four Levels of Extrinsically Motivated Behavior

Self-Determination Theorists describe different levels of autonomy based on the

extent of the internalization of the behavior's regulation. They suggest that extrinsic

motivation falls on a continuum moving from amotivation towards self-determined

behavior (Deci & Ryan, 1985; Deci et al., 1991; Ryan & Deci, 2000b; Ryan & Deci,

2002). Amotivation is at one end of the continuum and intrinsic motivation at the other.

Between the two extremes are four levels of extrinsically motivated behavior differentiated based on the degree of the internalization of the behavior's regulation. Deci and Ryan (2000) indicated that moving upward in internalization levels results in higher commitment and performance, higher levels of internal regulation, and higher value internalization. The four levels of extrinsically motivated behavior are external regulation, introjected regulation, identified regulation, and integrated regulation.

External Regulation

The first level of extrinsically motivated behavior is external regulation. Deci et al. (1991) described external regulation as lacking internalization, with the regulation of behavior remaining external. Vansteenkiste et al. (2006) indicated that external regulation consists of behavior based on external factors. These factors include deadlines, punishments, threats, rewards, and other desired external consequences. There is no internalization with external regulation because external controls regulate the behavior (Deci & Ryan, 2000; Ryan & Deci, 2000a; Vansteenkiste et al., 2006). When students say they have to do their homework or they cannot go out with their friends, external regulation is the level of motivation exhibited.

Introjected Regulation

The second level of extrinsically motivated behavior on the continuum is introjected regulation. Deci et al. (1991) described introjected regulation as having rudimentary internalization. The person internalizes the demand for the behavior, but only engages in the behavior out of a sense of internal pressure, rather than out of choice. The internal pressures can either be the attainment of feelings associated with self-worth or the avoidance of feelings associated with guilt (Deci, Eghrari, Patrick, & Leone, 1994;

Deci & Ryan 2000; Ryan & Deci, 2000a; Ryan & Deci, 2002; Vansteenkiste et al., 2006).

A student who wants to do well on a test to appear smart depicts introjected regulation. Ryan and Deci (2002) considered introjected regulation as being controlling versus autonomous due to the fact the person is engaging in the activity because of pressure rather than free choice. Deci and Ryan (1985) described introjected regulation as behavior constituting the management of the internal conflict of whether or not to engage in a behavior. They further described introjected regulation as representing the first level of internalization of behavior regulation because even though its basis is internal pressure, it does not require external contingencies such as rewards or punishments.

Identified Regulation

The third level of extrinsically motivated behavior is identified regulation. Deci and Ryan (1985) indicated that with identified regulation, the person 'identifies' with the regulation and thus experiences less conflict around decisions to engage in the activity. They further indicated that identification involves the person seeing relevance in the task, attaching personal importance to it, and accepting its regulation. The person engages in the activity because they personally identify with the value of the outcome (Deci & Ryan, 2000; Ryan & Deci, 2000a; Ryan & Deci, 2002; Vansteenkiste et al., 2006). An example of identified regulation is students doing extra work so they can get into a good college. Ryan and Deci (2002) considered identified regulation as being autonomous or self-determined. Despite higher levels of autonomy, Deci et al. (1991) indicated that identified regulation still constitutes extrinsic motivation because the basis of the performance of the activity is its perceived usefulness rather than solely for the interest and enjoyment that engaging in the activity provides.

Integrated Regulation

The final level of extrinsically motivated behavior is integrated regulation. Deci and Ryan (1985) indicated that with integrated regulation, both the regulation of the behavior and the value placed on the outcome integrate fully within the person such that it becomes a part of the person. They considered integration as the optimal internalization of regulation because the person accepts responsibility for regulation of the behavior and sees the value in engaging in the activity. Deci and Ryan (2000) considered integrated regulation as resulting in 'self-determined extrinsic motivation' (p. 236). At this level, the behavior is self-regulated. Students operating at an integrated regulation level may say that studying hard is part of who they are. At the level of integration, the person does not feel internal tension or conflict when engaging in the activity (Deci et al., 1994; Deci & Ryan, 2000; Ryan & Deci, 2000a). Ryan and Deci (2002) perceived integrated regulation and intrinsic motivation as sharing many characteristics. Deci et al. (1991) indicated that because integrated regulation has the characteristics of intrinsic motivation, qualities normally associated with intrinsic motivation, such as willingness and conceptual understanding, could determine the extent of the internalization of extrinsic regulation. Deci and Ryan (1985) purported that integrated regulation was the inherent result of internalization when operating in an environment that supported rather than stifled natural tendencies towards self-determined behavior. It is important to note that Ryan and Deci (2000a) were clear that surpassing the integrated regulation level of internalization would not lead to intrinsic motivation. Integrated regulation is still a form of extrinsic motivation because although the activity is important to the person, the person does not engage in the activity because it is in and

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of itself interesting (Deci et al., 1991; Ryan & Deci, 2000b; Ryan & Deci, 2002). Deci et al. (1994) indicated that environmental supports would determine the level of regulation internalization that occurs within the student engaging in uninteresting tasks.

Environmental Supports for Higher Level Internalization

Differences in the degree of internalization result from environmental influences (Deci & Ryan, 1985; Ryan & Deci, 2000b; Ryan & Deci, 2002). Deci and Ryan (1985) proposed the Cognitive Evaluation Theory as a sub theory of the Self-Determination Theory. They proposed this sub theory as an explanation of the factors that affect intrinsic motivation. As part of the Cognitive Evaluation Theory, theorists base their ideas of environmental supports on the premise that these supports represent human psychological needs. These theorists focus on three specific needs: autonomy, competency, and relatedness (Deci et al., 1991). Autonomy involves being self-regulating. Competency is the ability to attain certain outcomes and the belief that the outcomes are obtainable. Relatedness involves establishing safe relationships with others. Deci et al. (1991) indicated that meeting peoples' needs for autonomy, competency, and relatedness enhanced motivation and performance. They further proposed that people have an inherent motivation, because of the need for autonomy, competence, and relatedness, to internalize the regulation of activities they find useful but not interesting. The extent of this internalization is a factor of the social context. In other words, the degree of internalization is a function of the opportunities people have to meet their needs for autonomy, competency, and relatedness. Deci and Ryan (2000) also indicated that humans' natural tendencies towards intrinsic motivation and the integration of extrinsic regulation require the provision of supports for competency, relatedness, and

autonomy. In addition, they described the critical point of the internalization process as being the satisfaction of the psychological needs for autonomy, competency, and relatedness during engagement in activities that are extrinsically motivated. Furthermore, in order to internalize the regulation of activities to autonomous levels of motivation, understanding the relevance of the tasks is also necessary (Ryan & Deci, 2000b). In order to provide environmental conditions necessary for higher levels of internalization, researchers examine supports for autonomy, competency, relatedness, and task relevance.

Autonomy

Autonomy supports increase the internalization of regulation of extrinsically motivated behavior thus increasing motivation. Deci and Ryan (2000) described autonomy as being self-regulation. Vansteenkiste et al. (2006) indicated that meeting psychological needs by increasing the environmental supports for autonomy increased the level of the internalization of extrinsic motivation and enhanced the levels of intrinsic motivation. This pathway led to higher level learning outcomes. Lavigne, Vallerand, and Miquelon (2007) found that students' motivation and intentions towards science increased when their teachers provided high levels of autonomy support. Deci and Ryan (1985) indicated that environmental conditions that created undo pressure and external control hindered the internalization process. The internalization process is an intrinsic process in that it occurs spontaneously and inherently. Deci and Ryan (1985) indicated that external contributors could change the person's focus to the external contingencies and thus negate the internalization process. The external contingencies served to control the person's behavior.

Vansteenkiste et al. (2006) indicated that classroom environments could be autonomous-supporting or controlling. They determined that autonomous versus controlled regulation was a key construct in the levels of internalization of extrinsic motivation and in the maintenance of intrinsic motivation. Choice was the basis of autonomous motivation while coercion and pressure were the basis of controlled motivation. Vansteenkiste et al. identified two types of controlled environments. One environment constituted external control and involved coercion through external pressures. The other constituted internal control in which the learners themselves initiate pressure. Vansteenkiste et al. determined that both of these controlling environments resulted in the lower levels of internalization called external regulation and introjection. Neither external regulation nor introjection represents autonomous behavior. Deci and Ryan (1985) determined that teachers promoted intrinsic motivation when they supported autonomy and stifled intrinsic motivation when they were controlling. According to Ryan and Deci (2000b), the critical component for increasing motivation is finding strategies to promote the autonomous rather than controlled regulation of extrinsically motivated behavior. Strategies that promote autonomy are providing choice, effort-promoting feedback, non-controlling teacher language, and giving students responsibility.

Providing Choice

One of the key strategies cited by researchers as increasing autonomy is providing students with choice. Deci and Ryan (2000) indicated that promoting choice satisfied autonomy needs. According to Deci and Ryan (1985), self-determination involved choice and was a key component in intrinsically motivated behavior as well as some types of extrinsic behavior. Urdan and Schoenfelder (2006) found that autonomy

supportive teachers gave students choices concerning how to complete work and what to work on. Anderman and Leake (2005) indicated that although teachers could not give free reign to their students, providing choices in activities and assignments as often as possible would increase students' sense of autonomy. Furthermore, Deci et al. (1994) noted that when providing choice was not possible for certain activities, explaining the reason for the lack of choice mitigated the negative effects on autonomy.

Research showed choice to be a support that increased engagement and motivation in classrooms. Reeve, Jang, Carrell, Jeon, and Barch (2004) determined that providing high school students with choices increased student engagement. In addition, Oginsky (2003) found that giving students their choice in assignments increased intrinsic levels of motivation in middle school students. Suarez (2007) implemented a tiered instructional program and found that middle school math students' motivation and performance increased. Students were able to choose which level of assignments they wanted to complete. He labeled the levels green, blue, and black. The green choice was set at a level that exhibited proficiency, and the blue and black represented levels above proficiency. Suarez felt that the combination of choosing tasks at their skill level and being able to make decisions regarding their learning increased the students' responsibility for their learning.

Effort-Promoting Feedback

Another environmental support that increases autonomy is the use of feedback that promotes effort and improvement. Urdan and Schoenfelder (2006) indicated that autonomy supportive teachers provided students with descriptive performance feedback rather than just a grade. This encouraged students to identify areas that needed

improvement and encouraged them to work towards it. Urdan and Schienfelder described autonomy supportive teachers as those who give students time to work through problems without stepping in with too much assistance. In addition, Reeve and Jang (2006) identified teacher behaviors that increased students' perceptions of autonomy. These included the use of praise for improvement, encouraging effort, offering hints that enabled students to make progress, and being responsive to students' perspectives. Alternatively, they indicated not giving students time to try to solve problems before providing them the answers stifled autonomy.

Non-Controlling Teacher Language

Non-controlling, flexible language also supports autonomy. Deci et al. (1994) indicated that autonomy supportive teachers do not use pressure to motivate behavior. In their study of high school students, Reeve et al. (2004) found that the use of non-controlling language, as measured by active task involvement and attempts to take responsibility for their learning, increased the students' level of engagement. In addition, teachers who empathized with their students supported their autonomy and increased their motivation (Deci et al., 1994; Deci & Ryan, 2000b). Equally prominent in studies was the adverse affects that controlling language had on autonomy. Urdan and Schoenfelder (2006) found controlling teachers used controlling language. They also found these teachers used threats as a means of controlling student behavior. Examples of controlling language are phrases such as 'should', 'have to', 'ought', 'need to', and 'must'. Reeve and Jang (2006) indicated that controlling language such as commands stifled autonomy in students. Vansteenkiste et al. (2006) included guilt inducing language as controlling because it creates internal pressure.

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Giving Students Responsibility and Input

Encouraging students to take responsibility for their learning allows them to become more autonomous. Ames (1992) summarized giving students responsibility as allowing them to make decisions concerning their learning and providing opportunities for them to become independent learners that take responsibility. Sagor (2003) indicated that one example of involving students in classroom decision-making was to determine classroom rules collectively. In this case, the teacher would share certain expectations that were not negotiable, explaining the reasoning behind them, and then the students would discuss and agree on additional classroom expectations. Another example of assisting students in making decisions and taking responsibility is teaching them goal-setting strategies. According to Sagor (2003), teaching effective goal-setting involved assisting students in setting attainable goals, assisting them in developing plans to reach the goals, and showing them how to monitor their progress towards attaining the goals. Wlodkowski (1999a) stated that students felt more control over their learning when they set personal goals. Anderman and Leake (2005) proposed that encouraging students to view their successes and failures as something under their control would increase their responsibility for their learning. Zimmerman and Kitsantas (2005) indicated that self-monitoring and self-assessments provided opportunities for students to track their progress. Sagor (2003) stated that self-reflections should focus on both the final product and students' learnings throughout the process. According to Wlodkowski (1999a), various types of journaling and reflection activities effectively allow students to monitor and assess their progress. Self-monitoring and self-assessment activities assist students in making decisions and taking responsibility for their learning.

In addition to encouraging students' responsibility for learning, autonomy

supportive teachers listen to their students. These teachers encourage students to share

their opinions because ultimately it is the students' responsibility to learn. Urdan and

Schoenfelder (2006) found that autonomy supportive teachers promoted student input and

showed care for their students. Controlling teachers discouraged student opinions.

Legault et al. (2006) indicated that providing opportunities for students to take initiative

and seeking and respecting student opinions increased students' autonomy. Encouraging

students to take responsibility for their learning does not mean that teachers should totally

step out of the picture. Legault et al. stated that autonomy supports still provided

structure and guidance, but also allowed students to take responsibility.

Competency

The next environmental support that increases the internalization of the regulation

of extrinsically motivated behavior is competency. Humans have a psychological need to

feel competent. Ryan and Deci (2002) proposed that competence was more than the

attainment of a skill or capability. They indicated that confidence represents a sense of

competency. Building into activities supports for competency enhances intrinsic

motivation (Ryan & Deci, 2000a). Deci and Ryan (1985) described competency as

important because the environment will control a person if they do not have the skills

needed to manage within it. Self-determined behavior is not possible if the person is

externally controlled. In addition, Legault et al. (2006) found that the lack of competency

supports led to amotivation through reduced ability beliefs. They also found that teachers

had the strongest impact on competency beliefs. Because of this, it is important for

teachers to incorporate strategies in their classrooms that support competency. Two

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categories of strategies found to support competency are providing students with optimal challenges and using performance feedback.

Provide Optimal Challenge

One support that increases students' perception of competency is providing them with optimal challenges. Self-Determination Theorists indicate support for competency constitutes finding optimal challenges (Deci et al.1991; Ryan & Deci 2000a; Urdan & Schoenfelder, 2006). Finding what constitutes optimal challenge can be difficult. Deci and Ryan (1985) described optimal challenge as the activity being challenging enough to inspire natural curiosity towards exploration, but not so difficult as to be unobtainable to the person. In addition to ensuring that tasks match the ability levels of the students, Anderman and Leake (2005) suggested teaching students how to break the tasks into small sections. As students complete the sections, they could see their progress and their confidence would increase with each step. According to Anderman and Leake, teachers need to model how to work through challenging and difficult tasks rather than stressing the perfect completion of tasks. Deci and Ryan (1985) stated that providing optimal challenges was a key factor for reaching integrated internalization.

Performance Feedback

The second competency support is performance feedback. Positive, constructive performance feedback increased students' feelings of competency (Deci et al., 1991; Ryan & Deci, 2000a; Legault et al., 2006). Deci and Ryan (2000) indicated that positive feedback aided in satisfying competency needs, but students must feel that they are responsible for their competency. Teachers can facilitate this by providing specific feedback that stresses improvement. Legault et al. (2006) described effective

competency supports as those that conveyed useful information in ways that allowed the students to practice their learning.

In addition to promoting improvement, Anderman and Leake (2005) suggested that teachers use a wide array of assessments so that students would have different ways to demonstrate their understanding of the concepts. Two examples of alternative forms of assessments are performance-based assessments and portfolios. Performance-based assessments provide teachers with information about students' knowledge of concepts and their abilities to apply this knowledge (Brualdi, 1998). Portfolios are a collection of a student's work. The use of portfolios support competency because they provide both teachers and students with evidence of improvement and development (Sagor, 2003).

Regardless of the method used to assess students, Anderman and Leake (2005) indicated that teachers needed to limit the opportunities for performance comparison between students. In other words, teachers should avoid making students performance information public within the class. Ames (1992) stressed that student evaluations should be private and convey the message that mistakes are part of leaning. Positive, constructive performance feedback that promoted improvement facilitated internalization of regulation (Deci & Ryan, 1985; Elliot et al. 2000).

Relatedness

Relatedness is another support found to increase internalization to levels of motivation that approximate intrinsic motivation. Researchers proposed that there is a relationship between feelings of relatedness and motivation. Ryan and Deci (2000b) indicated that researchers found a correlation between feelings of relatedness and increased intrinsic motivation. In a study based on middle school students, Nelson and

DeBacker (2008) found that class belongingness influenced the students' motivation to learn. Both Anderman (2003) and Davis (2006) proposed that the relationship between students' sense of belonging and academic motivation was reciprocal. They found that academic motivation affected the quality of student-teacher relationships and the student-teacher relationship predicted student motivation. Furrer and Skinner (2003) studied grades three through six and concluded that the students' sense of relatedness was an important determinant of their academic performance and motivation. Two categories of strategies found to support relatedness are creating an environment of mutual respect and increasing opportunities for students to work together in cooperative learning groups.

Environment of Mutual Respect

The first strategy for increasing a student's feelings of relatedness is to create a classroom environment that encourages mutual respect. Ryan and Deci (2000a) indicated that teachers instilled a sense of belongingness in their classrooms by respecting and caring for students. As Anderman and Leake (2005) described, in an atmosphere of mutual respect, students feel comfortable contributing their ideas. They further indicated that a characteristic of respectful classrooms was the provision of equal opportunities for all of the students. Along the same lines, Sagor (2003) stated that in respectful classrooms, teachers designed lessons that provided opportunities for students' diverse learning styles, intelligences, and cultural differences. In addition, Patrick, Ryan, and Kaplan (2007) determined that teachers created an atmosphere of mutual respect by prohibiting students from making fun of others, encouraging students to value the contributions of others, and requiring students to be considerate of the feelings of others.

They found that student engagement increased when students felt that the classroom environment promoted support for relatedness.

Cooperative Learning

Students' sense of relatedness increases by providing opportunities for students to work together. Legault et al. (2006) proposed that relatedness supports involved providing opportunities to connect with others.   According to Deci et al. (1991), support for relatedness involved engineering opportunities for peer acceptance. In order to increase students' sense of belonging, Anderman and Leake (2005) suggested incorporating activities that created opportunities for students to work with their peers, such as cooperative learning.

There are numerous cooperative learning structures.   For example, Sagor (2003) identified three common formats that cooperative learning groups could take. The first was the Team-Games-Tournament (TGT) format in which students develop a team identity, practice together, and then compete against opposing teams for points (p. 88). The second format Sagor identified was the Student Teams Achievement Divisions (STAD). The STAD works in a similar manner as the TGT, except that the awards of team points results from individual improvement above students' previous average test scores (p. 89). The last cooperative learning format highlighted by Sagor was the Jigsaw in which the responsibility for learning a portion of the content lies with each member of a group. Each group member becomes their subject area expert, and then works within an expert group to teach the subject area to the other members of the team (p. 90). Schunk et al. (2008) indicated that the various formats of cooperative learning translated into two main groups. These groups were 'task specialization' in which each member

took responsibility for one part of the task, and 'group study' in which the members of a group collectively worked together towards a common goal. Regardless of the format used, Wlodkowski (1999b) concluded that collaborative learning was a strategy that created an environment that promoted connections to and respect for others.

Task Relevance

Although understanding the relevance of the task is not a psychological need under the Self-Determination Theory, students need to understand the relevance, or value of the activities in order to internalize their regulation. Ryan and Deci (2000b) indicated that the relevance, or value of an extrinsically motivated activity was an important factor affecting the internalization of the regulation of the behavior. Legault et al. (2006) purported that the more a person internalizes the reasons for engaging in a behavior, the more self-determined the behavior becomes. This is especially important for behaviors that are not intrinsically motivated. According to Vansteenkiste et al. (2006), the relevance of or the connection of personal meaning to an activity would increase motivation even when the activity was not deemed interesting. Legault et al. (2006) determined that if a task was routine, boring, and deemed as unimportant, amotivation would result. Furthermore, they proposed that even if a student did not find an activity intrinsically motivating, they would internalize its regulation and perform it willingly if they saw its value. Therefore, in order to increase the internalization process, the task design should highlight the meaning or relevance of the activity (Ames, 1992).

Wlodkowski (1999b) proposed that teachers needed to create meaning and relevance for student tasks. Understanding students' interests helps teachers create personal meaning for activities. McCarty and Siccone (2001) emphasized the use of

interest surveys as an effective way for teachers to understand their students' interests. Wlodkowski (1999a) stated that in addition to personal interest, teachers created situational interest by using environmental conditions, such as surprise, novelty, computers, role-playing and simulation, various forms of media, and ambiguity. Along the same lines, Schunk et al. (2008) proposed the use of fantasy and make-believe to engage students' interest.

In addition to using interest to create meaning, Wlodkowski (1999a) indicated that using real-life problems as a format for learning increased the task relevance and personal meaning. The name of this strategy is problem-based learning. According to Harada and Kim (2003), problem-based learning provided students' with opportunities to work on issues that mattered to them. Examples used in their study were students learning about nutrition by designing nutritious lunch menus for the school and students investigating the water quality in the habitat of an endangered shrimp. Johnson (2004) found that simulated problems were also effective at helping students construct personal meaning. The example Johnson used was students analyzing rock samples for NASA.

Besides actively creating meaning and relevance, Deci et al. (1994) determined that simply supplying a rationale that assisted students in finding personal meaning and value for tasks advanced the internalization process to levels of integration. Reeve et al. (2004) found that supports such as identifying and communicating task relevance and importance increased high school student engagement. According to Deci and Ryan (2000), the assimilation of the relevance of the task or task value was important in the internalization of regulation of the behavior.

Interrelationships between Environmental Supports and Internalization

Researchers have attempted to determine which, if any, of the environmental supports were more critical to the internalization process. Deci et al. (1994) found that two or three of the supports worked together to promote higher levels of internalization. Deci et al. (1991) indicated that meeting any one of the needs for autonomy, competency, and relatedness would increase motivation, but meeting the need for autonomy was necessary for self-determined rather than controlled behavior. Specifically, degrees of internalized regulation could occur in the presence of relatedness and competency supports, but autonomy supports were required for the behavior to be self-determined (Deci & Ryan, 2000; Deci et al., 1991; Ryan & Deci, 2000b; Ryan & Deci, 2002). Researchers found that competency and relatedness supports would increase motivation and result in introjected and some levels of identification regulation styles, however, autonomy supports were required for self-determined behavior that came from intrinsic motivation or integrated extrinsic motivation (Deci & Ryan, 2000; Ryan & Deci, 2000a; Ryan & Deci, 2002). This research indicates that in order for teachers to promote self-determination in their students, they must provide autonomy supports.

The relationships between the needs for autonomy, competency, and relatedness are complex. Urdan and Schoenfelder (2006) found that the human needs for autonomy, competency, and relatedness intertwine. For example, students being autonomous and independent while working on activities promoted a feeling of competence. When students felt competent, their confidence increased, which in turn helped them to feel acceptance within the class. Lavigne et al. (2007) found similar results. They found that supports for autonomy increased not only the students' perceptions of autonomy, but also

their perceptions of competency. They determined that allowing students to make decisions and providing them with choices relating to their education implied that the students had the competency necessary to make decisions about their learning. As such, many of the specific strategies used to promote one environmental support also promote one or more of the other environmental supports. The significance of the research is that creating an environment inclusive of all three supports will strengthen the effects of each individual support.

<div align="center">Chapter Summary</div>

Academic motivation declines in students during their transition from elementary school into middle school. Middle school teachers face the challenge of bringing student motivation to levels that support learning. Behavioral qualities associated with intrinsic motivation promote higher conceptual learning. Unfortunately, not all activities in school are intrinsically motivated. Self-Determination Theorists indicate that through a process called internalization, the regulation of extrinsically motivated behaviors can result in student willingness to engage and conceptual learning levels comparable to intrinsic motivation. This process is dependent on meeting the students' needs for autonomy, competency, and relatedness. In addition, an understanding of the task relevance is important to the internalization process. Supports for these needs are critical for both the maintenance of intrinsic motivation and the promotion of intrinsic characteristics in extrinsically motivated activities. Chapter 3 provides the methodology used to develop a handbook of strategies and examples for middle school teachers to use to incorporate autonomy, competency, relatedness, and task relevance supports in their teaching.

Chapter 3

METHOD

The purpose of this project was to develop a handbook for middle school teachers. The handbook provides teachers with a foundation of knowledge on the Self-Determination Theory of motivation. Included in the handbook are strategies and examples teachers can use to incorporate the environmental supports needed for maintaining intrinsic motivation and enhancing self-determined behavior in students towards extrinsically motivated activities.

Target Population

This project's primary target population was middle school teachers. Although geared towards use by middle school teachers, the strategies presented would be applicable for teachers to use with students of all ages.

Procedures

A review of literature started with an examination of various studies concerning the causes of the decline in motivation when students enter middle school. Additional areas examined were different types of motivation; their affects on learning outcomes; and research on the Self-Determination Theory of motivation. Included in the review of literature was an examination of the process through which extrinsically motivated behavior attains learning qualities similar to those of intrinsic motivation. Finally, a review of the research on the environmental supports needed for this process to take place was also included. Based on the research of ways teachers can use these supports in their

classrooms to foster motivation, a handbook was prepared. Additional strategies and examples for the handbook came from best practices this researcher observed in classroom settings. The completed handbook includes an overview of the different types of motivation, provides teachers with an explanation of the Self-Determination Theory of motivation, and describes the environmental supports that promote learning-effective forms of motivation. Finally, the handbook also describes specific strategies that teachers can incorporate in their teaching to provide the foundation for those environmental supports.

Goal of the Project

The goal of this project was to provide teachers with strategies to increase the motivation of middle school students to levels characterized by self-determined behavior. The strategies and examples presented in the handbook are not inclusive of all the possible strategies available to teachers to increase student motivation. The included strategies serve as examples to demonstrate ways to incorporate the environmental supports necessary to promote higher levels of motivation in students.

Peer Assessment

Four colleagues who teach middle school students evaluated the handbook. The first colleague teaches sixth grade math at a public middle school. This teacher has been teaching for four years. The second colleague is a seventh grade science teacher at a public middle school. This teacher has been teaching for 12 years. Because there were two science teachers who evaluated the project handbook, this teacher is referred to as science teacher A. The third colleague is a public middle school special education teacher who has been teaching for six years. The fourth teacher is a seventh grade public middle

school science teacher who has been teaching for 15 years. This teacher is referred to as science teacher B. The pages of the handbook were copied into a power point slide show so that the handbook could be emailed and easily viewed. Each evaluator was emailed a copy of the handbook along with an evaluation survey. The survey contained questions pertaining to the usefulness of the information, the applicability of the strategies, and the readability of the handbook. A sample of the peer evaluation survey is included in Appendix A. The evaluators were asked to review the handbook and email the completed evaluation survey back within three days. The peer feedback and suggestions are discussed in Chapter 5 of this project.

Chapter Summary

Research shows that middle school teachers face the challenge of teaching students whose academic motivation is declining. Given the importance of motivation in terms of student engagement and academic performance, middle school teachers would benefit from strategies that support forms of motivation associated with higher levels of learning. The procedures of this project provided the foundation for a handbook that middle school teachers could reference for these strategies. The strategies were designed to support students' needs for autonomy, competence, and relatedness. Strategies were also presented for increasing task relevance. Chapter 4 includes the completed handbook.

Chapter 4

RESULTS

The purpose of this project was to develop a handbook of strategies and examples that middle school teachers can use to maintain intrinsic motivation and promote self-determined behavior in students when activities are extrinsically motivated.

The Handbook

The handbook has four sections. The first section contains information about the types of motivation. A description of the different levels of extrinsic motivation is contained in the second section. The supports necessary for increasing students' motivation are discussed in the third section. Included in the third section are strategies and examples of these strategies that teachers can use in their classrooms. The final section contains examples of activities that incorporate different strategies for increasing student motivation.

Self-Determination Theory: Increasing Motivation in Middle School Students

A Handbook for Teachers
by Mary I. Morrow

Table of Contents:

Section	**Page**

Introduction

Background

Researchers have found that the academic motivation of students declines as they enter middle school. Factors that may influence middle school students' motivation are:

- The developmental changes that occur at adolescence

- The increased focus on social acceptance

- A misfit between the developmental needs of adolescents and the middle school environment.

Adolescents have increasing needs to make independent decisions and feel connected to others. Researchers determined that students had less opportunity to make decisions and felt less connection with their teachers and peers once they entered middle school.

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The Challenge

Motivation is instrumental to the academic success of students. As such, teachers are responsible for keeping students motivated towards learning. Regardless of the reasons for the decline in middle school students' motivation, middle school teachers face the difficult challenge of motivating their students. In order to increase student motivation, teachers need to understand the dynamics of motivation.

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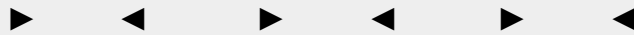
The dynamics of motivation discussed in this handbook are based on the Self-Determination Theory of motivation. To be self-determined means to act out of your own volition or will. Under this theory, self-determination is present in the highest levels of motivation and represents an optimal learning condition. The challenge for teachers is to help students reach these levels of motivation.

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The Handbook

This handbook was designed as a resource for teachers to use to understand the Self-Determination Theory of motivation and as a tool to promote high levels of motivation and self-determined behavior in their students. The handbook is divided into four sections. The information contained in each section is as follows:

Section 1: Types of motivation.

Section 2: Descriptions of the different levels of extrinsic motivation

Section 3: Supports necessary for increasing students' motivation.

Section 4: Examples of activities that incorporate different strategies for increasing student motivation.

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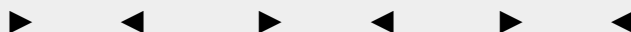
The examples used in the handbook are based on information obtained from a review of literature as well as best practices I have observed in classrooms. They can be modified to fit the different subjects taught in middle school. These examples are not meant to be all-inclusive. They are designed to give teachers ideas of ways they can incorporate the strategies into their classrooms and instruction.

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Motivation

What is motivation?

**"To be motivated means to
be moved to do something"
(Ryan & Deci, 2000a, p. 54)**

**"Motivation is the natural human
capacity to direct energy in the
pursuit of a goal"
(Wlodkowski, 1999b, p.7-8)**

**"Engagement in learning" is
one of the outcomes of
motivation
(Wlodkowski, 1999b, p. 9)**

Motivation is a key ingredient to learning. The result of motivation can be seen through students' engagement and academic performance. The types of motivation teachers will see are amotivation, extrinsic motivation, and intrinsic motivation. Students can exhibit one type of motivation towards a particular activity and another type towards another activity.

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Amotivation: Amotivation is a lack of motivation.

Example: A student not wanting to or not completing a reading assignment is amotivated.

Characteristics:
- Lack of willingness to engage
- Merely going through the motions
- Not acting at all
- No value associated with the activity

- -

Extrinsic Motivation: Extrinsic motivation refers to engagement in a behavior because of external contingencies/outcomes. This type of motivation stems from external sources.

Example: A student reading in order to gain the knowledge necessary to pass a test is extrinsically motivated.

Characteristics:
- Engagement due to:
    - Rewards
    - Avoidance of punishment
    - Guilt
    - Self-esteem aspirations
    - Valued outcomes
- Negatively correlated with performance
- Resulted in lower levels of conceptual learning

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Intrinsic Motivation: Intrinsic motivation refers to engagement in a behavior for no other reason than enjoyment and interest in the activity. This type of motivation stems from within a person.

Example: A student reading solely for the enjoyment of reading is intrinsically motivated.

Characteristics:

- Self-determination (own volition)
- Self-regulation
- Self-initiation
- Willingness to engage
- Positive correlation with performance
- Results in higher levels of conceptual learning

- -

> **The characteristics associated with intrinsic motivation result in higher-level learning and increased engagement**

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Levels of Extrinsic Motivation

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Extrinsic Motivation and Higher Level-Learning:
Can extrinsically motivated students achieve higher-level learning?

The characteristics associated with intrinsic motivation result In higher-level learning and increased engagement. Teachers would have an easy time teaching if all students were intrinsically motivated towards all learning activities. Unfortunately, this is not the case. The question remaining is 'Can students attain higher-level learning if they are extrinsically rather than intrinsically motivated?'

Based on the Self-Determination Theory of motivation, the answer to this question is yes. Students can achieve higher-level learning even when they are extrinsically motivated.

One of the premises of the theory is that there are four different levels of extrinsic motivation. Each level represents the degree to which the student 'internalizes' or takes responsibility for the regulation of a behavior. The more this occurs, the more likely it is for students to achieve higher-level learning. The four levels of extrinsic motivation are:

- External regulation
- Introjected regulation
- Identified regulation
- Integrated regulation.

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1) External Regulation: External regulation refers to the level of internalization in which behavior is driven by external factors such as rewards, punishments, threats, and other external contingencies.

Example: Students who do their homework so they do not have to stay after school are externally regulated.

- -

2) Introjected Regulation: Introjected regulation refers to the level of internalization in which behavior is driven by internal pressures such as guilt and self esteem aspirations.

Example: Students who study hard because they want to appear smart to their friends are exhibiting introjected regulation.

- -

3) Identified Regulation: Identified regulation refers to the level of internalization in which behavior is driven by personally identifying with the perceived usefulness of the outcome.

Example: Students who study hard so they can get into a good college are exhibiting identified regulation.

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4) Integrated Regulation: Integrated regulation refers to the
level of internalization in which behavior is driven by full
integration of the responsibility and value associated with the
behavior such that it becomes a part of the person. This level
of extrinsic motivation results in characteristics that mirror
those associated with intrinsic motivation.

  Example: Students who study hard because studying hard is
‘who they are’ are exhibiting integrated regulation.

- -

Intrinsic Motivation

===============
  Integrated Regulation

  Identified Regulation   **Extrinsic
                                     Motivation**

  Introjected Regulation

  External Regulation

Adapted from Ryan   ===============
and Deci, (2000b)   **Amotivation**
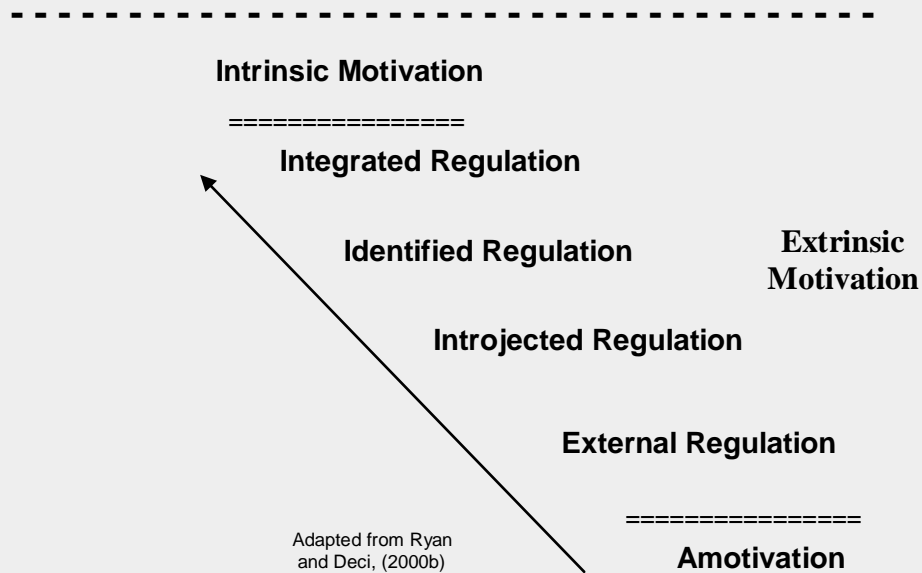
  As students move upward in levels of extrinsic motivation,
they identify more with the value of the activity, become more
responsible for their behavior, and they become more willing to
engage. They become more self-determined.

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What this Means for Teachers

Teachers can use this information to target the levels of extrinsic motivation that can result in higher-level learning.

- External and introjected regulation are lower levels of extrinsic motivation. Neither external nor introjected regulation result in higher-level learning. Once the external contingency (such as a reward, threat, or punishment) or internal pressure (such as guilt) is removed, the motivation towards the activity diminishes. With this in mind, teachers know to minimize the use of external contingencies and avoid pressure inducing tactics.

- Identified and integrated regulation are higher levels of extrinsic motivation. These are the extrinsic motivational levels that are conducive to higher-level learning. These are the levels of extrinsic motivation that teachers want their students to reach. Teachers can provide supports in their classrooms to promote these levels of motivation.

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Classroom Supports for Increasing Motivation

What are the Needed Supports?

The Self-Determination Theory of motivation is based on the idea that humans have psychological needs for autonomy, competency and relatedness.

* Autonomy refers to actions originating from within a person, or self-initiating.

* Competency is the ability to attain certain outcomes and the belief that the outcomes are attainable. Confidence represents a sense of competency.

* Relatedness involves establishing safe relationships and feeling connections with others.

* Students must also see the relevance or value associated with the activities.

In order for students to internalize a behavior's regulation and increase their level of extrinsic motivation, these needs must be met. Teachers can provide supports in their classrooms to help students meet these needs. These supports not only assist students in reaching self-determined levels of extrinsic motivation, they also assist in maintaining intrinsic motivation.

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Classroom Autonomy Support Strategies

- **Providing Choice**

- **Effort Promoting Feedback**

- **Non-Controlling Teacher Language**

- **Giving Students Responsibility and Input**

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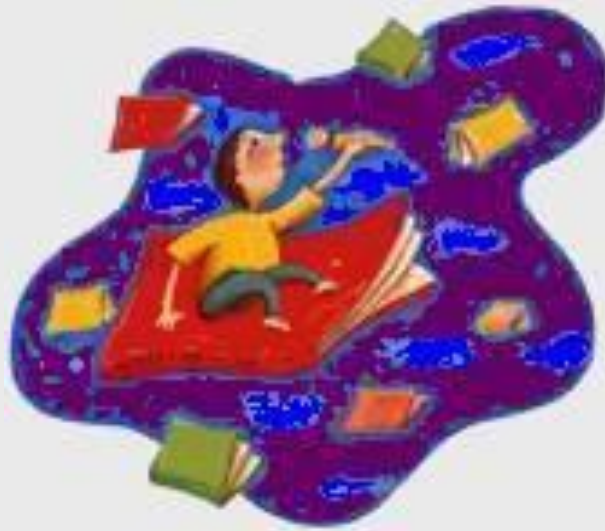
Providing Choice: One of the key strategies for increasing autonomy is providing students with choice. This does not mean teachers should give free reign to their students. It means that teachers should provide students with different types of choices as often as possible. When providing choice is not possible for an activity, explain the reasons why. Choices can be made individually, collectively as a class, or within a small group depending on the activity involved.

- -

In the Classroom:

- Let students choose their partners or groups for some activities some of the time.

- Give students a syllabus of unit requirements and let them choose what to work on during class on certain days.

- Let students choose from a variety of formats that could be used for final work products. Examples are presentations, reports, posters, skits, songs, diaries, letters, and interviews.

- Let students choose which problems to work on. For example, give them a choice of two out of three essays to complete on a test.

- Let students choose their topic area for unit projects. For example, let them choose which poet to research for an English unit or which endangered animal to research for a science unit.

- Give students a choice between different activities that promote the same learning. For example, give students a choice of different science labs that explore the same concepts within a unit.

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Effort-Promoting Feedback: Students' sense of autonomy is enhanced by feedback that focuses on effort and improvement. Not only does this support promote autonomy, it has a strong overlap in supporting competency.

- -

In the Classroom:

• Provide students with descriptive feedback rather than just a grade. Be specific about what is good and what needs improvement. Use praise for improvement.

• Help students identify areas for improvement and encourage them to work towards it. For example, have students submit drafts of their work and then meet with them to review the drafts.

• Give students time to work through problems before stepping in with too much assistance. Offer students hints that enable them to make progress.

• Make a portion of students' grading criteria inclusive of effort and improvement.

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Non-Controlling Teacher Language: Non-controlling, flexible language supports autonomy and increases student engagement. Conversely, controlling teachers stifle students' autonomy. Every time teachers interact with students, there is an opportunity to incorporate this support.

- -

In the Classroom:

• Use language that is supportive such as 'can', 'choose to', 'try', and 'work towards'.

• Do not use controlling language such as 'should', 'must', 'have to', 'ought', and 'need to'.

• Do not use pressure to motivate behavior. An example of using pressure is telling students they are down to the wire and will end up with a 'D' if they do not do well on the test.

• Avoid issuing commands. For example, rather than ordering students to get back work, ask them if there is a reason why they are not working.

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Giving Students Responsibility and Input: Encouraging students to take responsibility for their learning and listening to their input helps students to become independent learners. This involves giving students more responsibility but still providing structure and guidance.

- -

In the Classroom:

• Provide opportunities for students to participate in decisions that affect their learning. For example, have students participate collectively in determining some of the classroom expectations, and as a class, create the rubrics to evaluate unit projects.

• Teach students goal setting strategies for their learning as a whole as well as for specific projects.
    • Assist them in setting attainable goals
    • Assist them in developing plans to reach the goals
    • Assist them in monitoring progress towards their goals
    • Assist them in re-evaluating their goals as needed

• Teach students to self-reflect and self-assess.
    • Have students use journals to reflect on their learning
    • Have students use the project evaluation criteria (such as a project rubric) to evaluate their own work
    • Have students reflect on their learning and effort when they finish a unit

• Seek, listen to, and use students' input. For example, ask students what tools you provide work best, which activities they enjoy the most, and which activities help them learn the most.

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Classroom Competency Support Strategies

- **Provide Optimal Challenge**

- **Performance Feedback**

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Providing Optimal Challenges: Providing optimal challenges helps students feel competent. An optimal challenge is one that inspires the student's curiosity but is not so difficult that it is unobtainable. Understanding students' ability levels is key to finding optimal challenges. Use tasks at the optimal level of challenge as tools to assist students in becoming competent.

- -

In the Classroom:

• Provide students with a choice between different proficiency levels of activities. For example, provide three levels of math problems for students to choose to complete for homework or on an exam. Set the lowest level to demonstrate concept proficiency and the next two levels increase in difficulty.

• Teach students to break larger more complex tasks into smaller sections. The sections are more manageable and as students complete the sections, they see their progress and build confidence.

• Model how to work through challenging and difficult tasks rather than stressing their perfect completion.

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Performance Feedback: Teachers can help students build their sense of competency by providing them with positive, constructive, and private performance feedback. Stress that making mistakes is a part of learning.

- -

In the Classroom:

• Use a wide variety of assessments so that students have different ways to demonstrate their understanding of concepts.

• Use performance-based assessments that demonstrate a student's ability to apply their knowledge of the concepts.

• Have students put together a portfolio. This is a collection of a student's work that provides both the student and the teacher evidence of improvement and development. For example, have students accumulate their science lab reports in a portfolio to demonstrate their progression using the scientific method.

• Provide students opportunities to correct and learn from their mistakes. For example, give students the opportunity to re-take a test or complete an additional assignment to improve their performance if they did not initially demonstrate understanding of the concepts.

• Limit the opportunities for performance comparison between students. Avoid any form of making students' performance information public within the class.

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Classroom Relatedness Support Strategies

- **Environment of Mutual Respect**

 - **Cooperative Learning**

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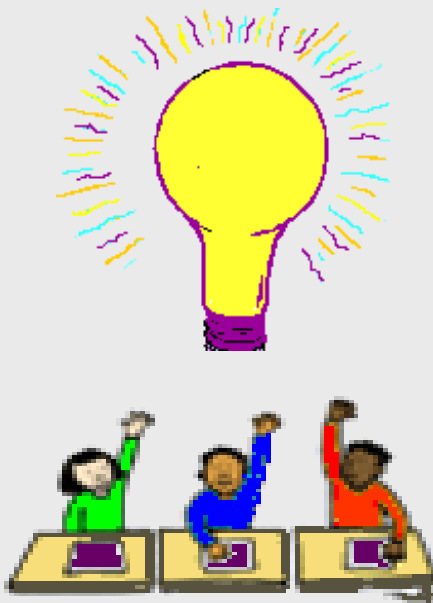
Environment of Mutual Respect: Creating a classroom environment of mutual respect helps students form connections with others. Creating this environment involves teachers respecting and caring for students, and encouraging students to treat each other respectfully. In an environment of mutual respect, students feel comfortable contributing their ideas.

- -

In the Classroom:

• Provide equal opportunities for all of the students.

• Get to know your students and show interest in them.

• Design lessons and activities that provide opportunities for different learning styles. For example, have students read Romeo and Juliet, watch and listen to parts of the play on video, and then act out some of the play's scenes.

• Design lessons and activities that provide opportunities for different intelligences and cultural differences.

• Have a no tolerance policy against students making fun of others.

• Encourage students to value the contributions and differences of others.

• Model being considerate towards the feelings of others and encourage students to do the same.

27

Cooperative Learning: Providing opportunities for students to work together helps them connect with and respect others. Collaboration with their peers helps students share ideas and gain acceptance. Teachers can engineer opportunities for peer acceptance by designing activities so that the members of the group rely on each other for successful completion. When using cooperative learning formats, design them to include an element in which students' individual performance is evaluated.

- -

In the Classroom:

• Use a jigsaw or task specialization cooperative learning structure for classroom activities. In this structure, each group member has responsibility for a portion of the subject content required for the activity. Each student then shares their information with the other group members.

• Design group activities so that students collectively work towards a common goal. For example, have small groups write a skit that teaches the class about the Boston Tea Party.

• Use a Teams-Game-Tournament (TGT) format for cooperative learning. Students develop a team identity, study together, and then compete against other teams for points.

• Use a Student Teams Achievement Divisions (STAD) approach for cooperative learning. Students develop a team identity, study together, and then compete against other teams. In this format, points are awarded based on individual team member's improvement over their previous average scores.

28

Creating Relevance For Classroom Tasks

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Task Relevance: Students who identify with the relevance of and connect personal meaning to an activity are more likely to exhibit independence when engaging in it. They will perform the activity more willingly if they see its value even if they do not find the activity interesting.

- -

In the Classroom:

• Use interest surveys to discover students' interests and incorporate them into lessons and activities to create personal meaning. For example, have students describe the similarities that food chains have with scenes from their favorite science fiction movie.

• Create situational interest by using surprise, novelty, computers, simulation, role-play, fantasy, make-believe, various forms of media, and mystery. For example, have students analyze mystery rock samples from space for NASA, have students assume the roles of surfs and lords of the feudal period, or have students describe living in a fantasy world that has no gravity.

• Use problem-based learning as a format for learning concepts. Students are more likely to connect to the relevance of an activity if it relates to real life issues. For example, have students learn about nutrition by designing nutritious lunch menus for the school.

• Explain to students the reasons for engaging in activities to help them understand the relevance and value. For example, explain that learning how the body processes fats, proteins, and carbohydrates will help them make food choices that will keep their bodies healthy and fit.

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Tips for Incorporating the Supports

• Any combination of supports for autonomy, competency, relatedness, and task relevance will increase student motivation. However, in order for students to become self-determined in their learning, which is an optimal learning condition, opportunities for students to meet their needs for autonomy must be provided.

• Many of the strategies used to promote one support also promote one or more of the other supports. For example, effort promoting feedback can increase both a student's sense of autonomy and competency. Creating a classroom environment inclusive of all of the supports will strengthen the effects of each individual support.

• Supports for autonomy, competency, relatedness, and task relevance need to be incorporated not only in the overall framework of the classroom, but also in the design of learning activities.

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Examples of Activities
Incorporating Motivational Supports

Problem-based learning – science example

Environmental Effects of Pollution: Activity designed to help students learn about environmental relationships and the effects of pollution.

- Students will work in small groups.
- Each group will choose a form of pollution to investigate (i.e. water, air, ground, etc…). Each student in the group will be responsible for investigating a particular aspect relating to the pollution. Aspects to be investigated are:
  - Causes and sources of the pollution
  - Effects on wildlife and the environment
  - Students will design an experiment that would test the environmental effects of pollution (and run it if possible)
  - Possible outcomes if the pollution continues
- The groups will propose a solution that takes into account the stakeholders' interests.
- The groups will prepare a presentation for the class. The presentation format will be decided within each group (i.e. a power point, poster, book, newspaper, skit, song, etc…).
- Each group will prepare a letter to one of the stakeholders chosen by the group (i.e. EPA, community newspaper, a conservation group, polluting business etc…). The letter will outline the students' findings and their recommendations.
- The teacher will meet with the groups during their investigation stage and students will submit drafts of their letter so that the teacher can provide them ongoing feedback.

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Supports Included in the Pollution Example

- Students choosing the form of pollution to investigate
    - Autonomy – Providing choice
    - Task Relevance – Personal meaning attached to the chosen pollution

- Students working in small groups with each student being responsible for an aspect of the investigation
    - Relatedness – Cooperative learning (Jigsaw format)

- Groups choosing the format for the class presentation
    - Autonomy – Providing choice
    - Relatedness – Environment of mutual respect (differences in intelligences and equal opportunities for students)

- Students choosing target audience for letter
    - Autonomy – Providing choice
    - Task Relevance – Personal meaning attached to the chosen audience

- Teachers meeting with the groups and students submitting drafts for teacher feedback
    - Autonomy – Effort promoting feedback
    - Competency – Performance feedback

- Students demonstrating their learning in the letter written
    - Competency – Performance feedback (performance-based assessment)

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Problem-based learning – social studies example
Learning about Different Countries: Activity is designed to help students learn about different countries

- Students will work in small groups.
- Each group will choose a country to evaluate as a potential location for the next Olympics (either summer or winter, their choice). Each student in the group will be responsible for investigating a particular aspect relating to their chosen country. Aspects to be investigated are:
    - Demographic information (i.e. climate, population, terrain, size etc…)
    - Culture of the people living in the country
    - History of the country
    - Political climate
- Based on their evaluations, the groups will make a recommendation as to whether or not the country should be considered for hosting the Olympics.
- The groups will prepare a class presentation to share their recommendations. The presentation format will be decided within each group (i.e. power point, poster, book, newspaper, etc…).
- The groups will prepare a letter to the Olympic Commission detailing the country information, their recommendations, and the reasons for their recommendation.
- The teacher will meet with the groups during their investigation stage and students will submit drafts of their letter so that the teacher can provide them ongoing feedback.

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Supports Included in the Learning the Countries Example

- Students choosing which country to investigate
    - Autonomy – Providing choice
    - Task Relevance – Personal meaning attached to chosen country

- Students working in small groups with each student being responsible for an aspect of the investigation
    - Relatedness – Cooperative learning (Jigsaw format)

- Groups choosing the format for the class presentation
    - Autonomy – Providing choice
    - Relatedness – Environment of mutual respect (differences in intelligences and equal opportunities for students)

- Teachers meeting with the groups and students submitting drafts for teacher feedback
    - Autonomy – Effort promoting feedback
    - Competency – Performance feedback

- Students demonstrating their learning in the letter written
    - Competency – Performance feedback (Performance-based assessment)

- Using the Olympics, a real life issue as a format for learning
    - Task Relevance – Problem-based learning

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Performance-based assessment – science example

Demonstrate learning of cell structures: This activity is designed so that students can demonstrate and practice what they have learned about the cell structures and their functions. This activity had two parts. One part is a project and the other is a role-play activity.

Part 1: Project

- Students will work in small groups. Students within the group will choose among themselves which cell structures they will be responsible for researching.

- Each student will research their assigned cell structures and functions from their choice of a variety of available media such as interactive websites, trade books, and textbooks. There will be media available for different ability levels. Students will share their research with other members of their group.

- Students will then pretend that they are a mad scientist that has been shrunk and inserted into a cell. Their mission is to document the structures they see and these structures' functions. In addition, they will report on what happens if a cell structure stops functioning.

- Students will individually prepare a summary of their journey into a cell. Choices for the presentation format include a diary of their journey in the cell, a poster, a short story, an interview with the cell structures, or a power point presentation. Students will include labeled drawings of the cell structures in their presentations.

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Supports Included in the Cell Structures Example

Part 1: Project

- Students choosing which structures to investigate
    - Autonomy – Providing choice

- Students choosing which media to use for their research
    - Autonomy – Providing choice
    - Competency – Optimal challenge (choosing media to match their abilities)
    - Relatedness – Allows for differences in learning styles
    - Task Relevance – Situational interest (different media)

- Students working in small groups with each student being responsible for an aspect of the investigation
    - Relatedness – Cooperative learning (Jigsaw format)

- Students pretending to be mad scientists injected into a cell
    - Task Relevance –Situational interest (make-believe)

- Students choosing the format for the class presentation
    - Autonomy – Providing choice
    - Relatedness – Environment of mutual respect (differences in intelligences)

- Students demonstrating their learning in the presentation
    - Competency – Performance feedback (Performance-based assessment)

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Performance-based assessment – science example

Demonstrate learning of cell structures: (cont.)

Part 2: Role-play activity

• Students will work together grouped by their seating sections.

• Students within each section will choose which cell structure they will portray.

• During the role play activities (which span the unit), students will pretend to be their assigned cell structure. Students will work together within their seating section to accomplish tasks just as the cell structures work together within the cell.

• Each student can only perform the function of their cell structure and periodically, one of the structures will not function so that students can experience what would happen if this occurred in the in the cell.

• Example: Introductory role play activity

1) Nucleus: Give instructions to the cell to make proteins

2) Mitochondria: Provides energy for cellular functioning
   a) give everyone a Jolly Rancher as 'energy'

3) Ribosomes: Makes proteins
   a) take out 2 pieces of paper and write the word protein on one and crinkle the other into a ball (repeat 5 times)
   b) give the 'protein' one at a time to the endoplasmic reticulum
   c) leave the crinkled one on your desk (defective protein)

4) Endoplasmic reticulum (ER): Moves proteins within the cell
   a) pass the 'protein' to the Golgi Complex

5) Golgi: Processes proteins for transport out of the cell
   a) Stack the 'protein' paper on the edge of the desk for transport out of the cell

6) Lysosome: Digests old cells and invading material
   a) go pick up the crinkled paper (defective protein) and throw it away

Note: Teacher will have the mitochondria of one group fail to give a Jolly Rancher (energy) to the ER.

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Supports Included in the Cell Structures Example

Part 2: Role-play activity

- Students choosing which cell structure they want to portray
    - Autonomy – Providing choice

- Students working in small groups towards a common goal
    - Relatedness – Cooperative learning

- Students pretending to be cell structures
    - Relatedness – Opportunity for kinesthetic learning styles
    - Task Relevance – Situational interest (make-believe and role-play)

- Students demonstrating their learning through role-play
    - Competency – Performance feedback (Performance-based assessment)

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Performance-based assessment – Mathematics Example

Demonstrate learning of algebraic equations: This activity is designed so that students can demonstrate and practice what they have learned about algebraic equations.

- Students will work in small groups. They are on a secret mission and must get a message back to headquarters.
- Students will create a secret code using their choice of difficulty level of algebraic equations. They will provide an interpretation key so that other students can translate their code by solving the equations. For example a solution of x =3 may represent the letter 'c'.
- Each group will prepare a 'message' that can be determined by solving all of the algebraic equations and interpreting the solutions based on the key. Each message must have at least 20 equations (five per group member).
- The groups will trade secret messages with another group and decode the message. Each member will translate five equations.

Example:

Equations	Answers	Key
X+5=13	X=8	8 = H
X-2+6=13	X=9	9 = I

Decoded message: HI

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Supports Included in the Algebraic Equations Example

- Students choosing what level of difficulty to use in their equations
  - Autonomy – Providing choice
  - Competency – Optimal challenge

- Students working in small groups towards a common goal
  - Relatedness – Cooperative learning

- Students being on a secret mission and creating a secret code
  - Task Relevance – Situational interest (fantasy)

- Students demonstrating their learning through creating and decoding messages using algebraic equations
  - Competency – Performance feedback (Performance-based assessment)

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Portfolios – English Example

Demonstration of students writing skill: This activity is designed to highlight students' best work and their levels of improvement over time.

- Students will accumulate samples they choose as their best written work in a portfolio throughout the year.
- Students will include all draft copies associated with the work.
- Students will write a reflection indicating why they chose the piece and why they feel it represents some of their best work. Included in the reflection will be personal learning evaluations such as how they felt and what they did during the draft phase of the writing and how they feel the piece improves over previous work.
- After each unit, students will review each other's portfolios. They will write a summary of what they learned from reading other people's work and keep it in their portfolio. Included in this review will be what they liked about the other student's work, changes they saw in the other student's work over time, and differences from their own work.

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Supports Included in the Writing Example

- Students choosing what work to include in the portfolio
    - Autonomy – Providing choice
    - Task Relevance – Personal meaning

- Students preparing and including draft versions
    - Autonomy – Effort promoting feedback
    - Competency – Performance feedback

- Students writing reflections about their chosen pieces
    - Autonomy – Giving students responsibility and input
    - Relatedness – Environment of mutual respect (teachers getting to know their students)
    - Task Relevance – Personal meaning

- Students creating a portfolio
    - Competency – Performance feedback

- Students reviewing each other's work
    - Relatedness – Environment of mutual respect (valuing each other's differences)

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Portfolios – Physical Education Example

Demonstration of fitness achievement: This activity is designed to help students set and reach their fitness level goals.

- Students will research information on achieving healthy fitness levels.
- Students will meet with their teacher to set obtainable goals for their fitness. At this time, they will also work with the teacher to devise a plan, based on their fitness research, to meet those goals.
- Students will choose the exercises and the difficulty levels that will be incorporated in their fitness plan. They will turn this in, along with the reasons for and benefits of their exercise choices, for teacher feedback.
- Students will choose a small group that will serve as workout and support partners.
- Students will document and track their fitness performance in a portfolio. This will help them monitor their improvement over time.
- Every week, students will write a reflection on their progress including what they have been doing that is and is not working.
- Based on their progress, students will meet with their teachers to re-assess their goals as needed

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Supports Included in the Physical Education Example

- Students setting goals
  - Autonomy – Giving students responsibility and input
  - Task Relevance – Personal meaning

- Students preparing a plan including their choices of exercises
  - Autonomy – Providing choice
  - Autonomy – Giving students responsibility and input
  - Competency – Providing optimal challenge
  - Task Relevance – Personal meaning

- Students writing reflections about their progress
  - Autonomy – Giving students responsibility and input
  - Relatedness – Environment of mutual respect (teachers getting to know their students)
  - Task Relevance – Personal meaning and real life issue

- Students tracking their progress, meeting with the teacher, and re-assessing their goals
  - Autonomy – Giving students responsibility and input
  - Autonomy – Effort promoting feedback
  - Competency – Performance feedback

- Students creating a portfolio
  - Competency – Performance feedback

- Students choosing a workout group
  - Relatedness – Cooperative learning
  - Relatedness – Environment of mutual respect (valuing each other's contributions)

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Class Tournament Example

Study and practice of unit concepts: This activity is designed to promote students helping each other learn.

- Students will work in small groups. Students will choose their groups, but they will change to a completely new group after each unit.
- Students will be given time periodically throughout each unit to study with their groups. Generally, they will be given frequent short periods of time. Students will choose what they want to study within their groups (areas they feel weakest). They will work together as a study group, quiz each other on the concepts, and provide each other with support and assistance in learning the concepts.
- Students will study within small groups, but the class as a whole will compete against the other class sections. As such, the class as a whole will vote on a team name.
- For the first competition of each quarter, point awards will be based on individual total score. After that, points will be awarded to the class based on individual student improvement over their previous average score. Bonus points will be awarded for approaching and achieving perfect scores.
- Team points will accumulate throughout a quarter and then reset.

Supports Included in the Tournament Example

- Students choosing their groups
    - Autonomy – Providing choice

- Students choosing what to study within their group
    - Autonomy – Providing choice
    - Competency – Optimal challenge

- Students working in groups and as a class team to learn the concepts for the tournament
    - Competency – Performance feedback
    - Relatedness – Cooperative learning (modified STAD)

- Students helping each other learn
    - Relatedness – Environment of mutual respect

- Points being awarded based on improvement
    - Autonomy – Effort promoting feedback
    - Competency – Performance feedback

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In Summary:

- Teachers face the difficult challenge of motivating their students to learn.

- The characteristics associated with intrinsic motivation, such as self-determination, result in increased student engagement and higher-level learning.

- Increased engagement and higher-level learning are possible to achieve even if students are extrinsically motivated.

- Teachers promote higher-level learning by providing supports to help students meet their needs for autonomy, competency, and relatedness. Additionally, students must identify with the relevance or value associated with the task.

- The optimal learning environment is one in which supports for autonomy, competency, relatedness, and task relevance are all provided. These supports not only increase students' extrinsic motivation to self-determined levels, they also help to maintain intrinsic motivation

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Providing supports for autonomy, competency, relatedness, and task relevance increases student motivation

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Additional Reading

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Appendix A: Sample Surveys

Sample Interest Survey:

Name_____

1) What are your favorite movies? Why?

2) What are your favorite books? Why?

3) What are your favorite TV shows? Why?

4) What are your favorite songs? favorite groups?

5) What are your favorite games? Why?

6) What do you like to do for fun?

7) What do you think you want to do when you are older?

8) Where all have you lived?

9) What are your favorite subjects in school?

10) What about those subjects do you like?

11) What sports do you play or groups do you belong to?

12) Do you have pets? If so, what kind?

13) What do you think you'll learn in this class?

14) Why do think that is important?

15) What do you want to learn in this class?

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Sample Self-Reflection Survey:

Name _____

1) What goals did you set for this unit?

2) What plan did you develop to meet these goals?

3) In what ways did you follow the plan?

4) Which goals did you meet and why?

5) Which goals didn't you meet and why?

6) What did you do that helped you the most?

7) What will you do differently for the next unit?

8) How did you study the material?

9) How often did you study the material?

10) In what ways did you improve over the last unit?

Other notes?

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Sample Student Input Survey:

Name_____

1) What did you like the most about this unit? Why?

2) What did you like the least? Why?

3) What learning tools did you like the best? Why?

4) What learning tools were least helpful? Why?

5) What activity/activities helped you learn the most? Why?

6) What activity/activities were least helpful? Why?

7) What activity/activities did you enjoy the most? Why?

8) What activity/activities were least enjoyable? Why?

9) What would you add to the unit to increase the learning?

10) What would you add to the unit to make it more enjoyable?

Any other suggestions?

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Chapter Summary

       The handbook presented in this chapter was designed as a resource for teachers to use to understand the Self-Determination Theory of motivation and as a tool to promote high levels of motivation and self-determined behavior in their students. The examples used in the handbook were based on information obtained from a review of literature as well as best practices this researcher observed in classrooms. The examples can be modified to fit the different subjects taught in middle school. The different examples contained in the handbook are not inclusive of all the possible ways to incorporate supports for autonomy, competency, relatedness, and task relevance into instruction. The examples were designed to give teachers ideas of ways they can incorporate the support strategies into their classrooms and instruction. The conclusions resulting from this project and the feedback from the peer evaluations of the handbook are included in Chapter 5.

Chapter 5

DISCUSSION

The purpose of this project was to develop a handbook for middle school teachers. The handbook provides teachers with a foundation of knowledge on the Self-Determination Theory of motivation. Included in the handbook are strategies and examples teachers can use to incorporate the environmental supports needed for increasing student motivation.

Contribution of the Project

The academic motivation of students declines when they enter middle school. Researchers have determined that adolescence is a time when students seek more autonomy and independent decision-making opportunities. In addition, adolescents are preoccupied with social relationships and strive for peer acceptance. Researchers have found that despite these developmental needs, adolescents had fewer opportunities to make independent decisions and felt less connection with teachers and peers once they entered middle school. The Self-Determination Theory of motivation is based on the premise that the psychological needs for autonomy, competency, and relatedness must be met in order for students to reach levels of motivation that are conducive to high academic performance and higher-level learning. The psychological needs researched under this theory are significant to increasing middle school students' motivation because they directly correspond to the needs developing in students during adolescence. Furthermore, providing classroom supports for students to meet these psychological

needs promotes behavioral characteristics such as self-determination, self-regulation, self-initiation, and willingness to engage, even when students are extrinsically motivated. These characteristics, normally associated with intrinsic motivation, have been found to result in higher-level learning.

This project provided a review of literature concerning the Self-Determination Theory of motivation. The review contained information about supports that provide a foundation for students to meet their needs for autonomy, competency, and relatedness. In addition, the importance of students' identifying with the relevance or value associated with tasks was highlighted in the research. The information obtained from the research examined during the review of literature was translated into a handbook for teachers. The handbook serves as a resource for teachers to use to understand the Self-Determination Theory of motivation and as a tool to promote high levels of motivation and as such, higher-level learning in their students.

<center>Limitations of the Project</center>

Motivation is a complex dynamic. There are several different theories that address motivation. One limitation of this project is that only one theory of motivation, the Self-Determination Theory of motivation, was researched as the theoretical basis for the project. Another limitation is that the project only took into account aspects of motivation that teachers could affect. This was necessary because the purpose of the project was to provide teachers with strategies to increase student motivation; however, it is important to note that there could be factors outside of the classroom, that teachers cannot affect, which could have an impact on student motivation inside the classroom.

Recommendations for Future Study

This study focused on the Self-Determination Theory of motivation as the theoretical background for the project. One of the premises of the theory is that supports for autonomy, competency, relatedness, and task relevance are imperative for increasing the motivation in students. Research showed that out of the environmental supports that promote increased motivation, the supports for autonomy had to be present in order for students to become self-determined in their learning. Researchers further distinguished between controlling and autonomy supportive teachers. They found that controlling teachers stifled students' sense of autonomy, which in turn reduced the likelihood of students' achieving higher-level learning. This area needs to be explored further. Future studies should examine whether controlling teachers could be taught to be autonomy supportive. The results of this research could be beneficial in determining whether a person would be suited to the teaching profession.

Additional studies into the different theories of motivation would also be beneficial. The various theories should be evaluated in order to understand the overlaps and differences between them. This insight could provide teachers with a more complete view of the motivation dynamic.

Peer Assessment Feedback and Changes

Four public middle school teachers evaluated the handbook. The first teacher to evaluate the handbook was a math teacher who has been teaching for four years. The second teacher was a science teacher (science teacher A) who has been teaching for 12 years. The third teacher has been teaching special education for six years. The fourth teacher (science teacher B) has been teaching science for 15 years. Each of the four

teachers completed an evaluation survey after reviewing the handbook that was presented in Chapter 4. Overall, the feedback was very positive.

The teachers liked the information, the classroom strategies, and the examples contained in the handbook. Both the math teacher and science teacher A considered the information contained in the handbook to be useful, but considered the examples to be very useful. The special education teacher and science teacher B considered both the information and examples to be very useful. The special education teacher considered the classroom support strategies to be applicable for use with special education students. Both the math teacher and science teachers A and B considered the classroom support strategies to be very applicable for use in their classrooms.

Overall, the teachers felt that the information was presented in a clear and understandable manner, and that the design of the handbook was easy to read. The math teacher, however, found page 15 of the handbook to be somewhat confusing and would have liked to have examples of what constituted an external contingency. Based on this feedback, further explanation and external contingency examples were added to page 15. The special education teacher wondered if the handbook would be a quicker resource if it was less wordy, but did not feel that this could be done without taking away the elements that made the handbook most useful.

The special education teacher, science teacher A, and the math teacher foresaw issues around implementing some of the classroom strategies. The special education teacher expressed concern over implementing the 'Providing Optimal Challenge' strategy with special education students. Because the higher level challenges may not appear to be reachable to them, special education students may need self-esteem assurances. The

challenge set for the special education students must be achievable for their abilities and provided in a manner such that class attention is not drawn to their lower proficiency levels. Science teacher A indicated that administrators do not always accept including improvement within grading criteria, and that giving feedback on effort can be tricky. Finally, the math teacher felt that although the strategies were wonderful, the struggle with motivating students was due to the lack of responsibility taken by the students and their parents rather than due to the effort of the teachers.

Each teacher indicated a preference towards a specific aspect of the handbook. The math teacher really liked the self-reflection survey and the examples; science teacher A liked the classroom support strategies; the special education teacher liked the activity examples; and science teacher B liked the research and activity examples. The special education teacher especially liked the potential for multiple subject participation within the different activity examples, as well as the fact that the strategies used in each example were spelled out. Science teacher B also liked that the activities covered interdisciplinary content areas. The math teacher felt that the handbook would be valuable to new teachers. Science teacher B felt that the handbook would be useful to both new and seasoned teachers, and that the activity examples would be motivating to both teachers and students.

Project Summary

Motivation is instrumental to the academic success of students. Because the academic motivation of students declines when they enter middle school, middle school teachers face an especially difficult challenge of motivating their students to learn. The characteristics associated with intrinsic motivation, such as self-determination, have a

positive correlation with both student engagement and higher-level conceptual learning. Conversely, research shows that extrinsic motivation has a negative correlation with student engagement and higher-level conceptual learning.

Based on the Self-Determination Theory of motivation, increased engagement and higher-level learning are possible even when students are extrinsically motivated. The process through which this occurs is called internalization. Through internalization, students transform a behavior's regulation into an internal value or organization. Based on the degree of internalization, there are four levels of extrinsic motivation. The more the students internalize the behavior's regulation, the higher their level of motivation and the more self-determined they become. This in turn results in higher-level learning.

Teachers can promote the internalization process by providing supports to assist students in meeting their needs for autonomy, competency, and relatedness. Additionally, in order for students to internalize the regulation of their behaviors, they must identify with the relevance or value associated with the task. These supports not only increase students' extrinsic motivation to self-determined levels, they also assist in maintaining existing intrinsic motivation.

Based on the research obtained in the review of literature, a handbook was designed as a resource for teachers to use in order to understand the Self-Determination Theory of motivation and as a tool to promote high levels of motivation and as such, higher-level learning in their students. The optimal learning environment is one in which supports for autonomy, competency, relatedness, and task relevance are all provided.

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Appendix A

PEER EVALUATION SURVEY

Evaluation Survey for:

Self-Determination Theory: Increasing Motivation in Middle School Students
A handbook for teachers
by Mary I Morrow

Name:_____

Subject area: _____

Number of years as a teacher_____

On a scale of 1-5, with 5 being the highest and 1 being the lowest, please rank the following:

1) How useful was the information included in the handbook? _____
   1   2   3   4   5

2) How useful were the activity examples at providing ideas for incorporating the motivational supports? _____
   1   2   3   4   5

3) Would the classroom support strategies be applicable for use in your classroom? ____
   1   2   3   4   5

4) Was the information presented in a clear and understandable manner? _____
   1   2   3   4   5

5) Was the design of the handbook easy to read? _____
   1   2   3   4   5

Please answer the following:

1) What did you think was the most useful information contained in the handbook?

2) What would you change about the handbook to make it more useful?

3) Do you foresee any issues around incorporating any of the support strategies? If so, which ones and why?

4) Any other comments or suggestions?

Thank you for your time and support!