Self-Determination Theory and Education: an Overview

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Abstract

This paper surveys the theory of motivation known as Self-Determination Theory (SDT) and its application to education. The first half of the paper gives a general overview of the theory itself, starting with its basic assumptions about human development, and then proceeding to explain the four sub-theories which together comprise it. The remainder of the paper then describes how the theory has been applied to education. First it presents some general implications of SDT for learning and education. This is followed by an overview of the main methods and results of SDT research and how this research has supported and further elaborated the theory. In this regard, some educational strategies to foster student motivation that have been proposed by SDT proponents are also described. The paper concludes with a few implications of SDT for the educational goals and practices of the Konan University Institute for Languages and Culture.

Introduction

Student motivation and how to enhance it is not a new issue in education. However, in recent years, teachers have noticed a steady increase in the number of students manifesting an apparent lack of motivation or an inability to remain motivated over time. This trend has made the issue of motivation even more central in education, as is evidenced by the profusion of motivation research in recent years. *Self-Determination Theory* (hereafter referred to as SDT) is one relatively recent theory about human motivation. While many of its ideas are not new, it was first formulated as a theory by Deci and Ryan in the 1970s and has been gaining prominence ever since. It has been applied to various fields ranging from clinical psychology to occupational psychology, but it continues to have its strongest presence in education.

Surprisingly, SDT has so far made only limited inroads into second language education, despite the recent surge of motivation research in that field. Brown, in his classic works on language instruction (2000 and 2001), refers to SDT and has

done much to popularize one aspect of it, namely the concept of *intrinsic motivation*. Yet he does not deal with other important aspects of the theory. Dornyei briefly describes SDT in his overviews of motivation research (2001) and language learning psychology (2005), but does not go much beyond mentioning its main tenets. Kim Noels, whose work has also received some attention from Dornyei (E.g. 2001: 56-60; 2005:76-79), has been a pioneer in applying more aspects of SDT to second language learning and integrating it with existing motivation theories in the field (E.g., Noels, 2003 and Noels et al 2003), but it appears that such research has yet to really catch on among second language acquisition researchers.

This paper will not remedy this deficiency, but will attempt to provide a basis for doing so by offering to language teachers a survey of SDT and its application to general education. First, it will explain the basic assumptions about human nature and development that underlie SDT. Then it will describe four mini-theories that are based on these assumptions and which together comprise SDT. Having thus described the theory itself, it will proceed to give an overview of the main types of empirical studies conducted by SDT researchers and how the results of this research have both supported and further elaborated the theory and its application to education. Finally it will conclude with some very brief implications of SDT for the Institute for Language and Culture's educational goals and practices.

I. Basic Assumptions Regarding Human Nature: The Organismic Dialectic, the Integrative Tendency, and the Three Basic Human Needs

SDT is based on an *organismic* view of human nature which assumes that human beings, as organisms, naturally possess an innate propensity toward action and development. This moves them to actively seek and engage in challenges and to make new discoveries in order to become more effective in interacting with their environments.

This natural impetus is complemented by another innate propensity called the *integrative tendency*, which has two aspects. The first is *intra-personal* in nature —to internally organize and unify (i.e. integrate) the various aspects of one's experience, knowledge and personality into an increasingly elaborate and coherent sense of self. The second is *inter-personal* in nature—to integrate one's own self with other human beings or groups of human beings. Successful integration, both intra-personal and inter-personal, leads to psychological wholeness or wellbeing

(Rigby, et al., 1992: 169).

However, this natural process towards growth and integrated development is vulnerable to external environmental factors (often referred to as contextual or social events) which can either nurture or hinder it. To the degree that these factors nurture the process, successful integration and wellbeing will result. However, to the extent that the process is hindered, the result will be a fragmented or alienated self, as is often the actual case in real life (Deci and Ryan, 2002: 6).

This *organismic dialectic* echoes similar notions about an inherent *self-actualizing tendency* propounded earlier by humanistic and educational psychologists such as Piaget, Montessori, Maslow and Rogers, which they saw as a fundamental developmental process of all organisms (Deci and Ryan 1985: 36, 113). However, SDT delineates this concept in greater detail. Specifically, it elaborates the interaction between this natural process and the external factors that influence it by positing three fundamental psychological needs of all humans—*autonomy, competence* and *relatedness*—the satisfaction of which is necessary in order for integrated psychological growth to occur. Social environmental factors that satisfy these needs will nurture and support the human organism's active inner tendency toward healthy development and integration, whereas those that thwart them will hinder this tendency. These three needs are explained as follows:

The need for *autonomy* (used interchangeably with *self-determination*) refers to perceiving one's self as the origin and regulator of one's own behavior. This does not mean complete independence of external influences, but rather that, even when influenced by external factors or the values of others, a person is still acting volitionally because he or she genuinely endorses those factors or values (that is, has coherently *integrated* them into the self). In this way, externally influenced behavior can still be a genuinely autonomous expression of the integrated self and, as such, be self-determined (Deci and Ryan, 2002: 8).

The need for *competence* does not necessarily imply actual ability but rather "a felt sense of competence," in other words, feeling effective or successful in interacting with one's environment. This need causes people to seek challenges, specifically optimal challenges (those that are neither too high nor too low for one's present level of ability). When met and acted on, such optimal challenges will maintain and increase one's ability levels, further increasing one's sense of competence (Deci and Ryan 2002: 7).

The need for *relatedness* stems from the natural tendency of humans to integrate their selves with other individuals and groups around them. It refers to feeling connected to others, or, more specifically, feeling accepted by, cared for and integral to others, in other words, to "having a sense of belongingness both

with other individuals and with one's community" (Deci and Ryan, 2002: 7).

II. The Four Sub-Theories of SDT

Over time, SDT has come to consist of four sub-theories, all of which are based on the above-described organismic dialectic, integrative tendency, and three psychological needs. These sub-theories are described as follows:

1. Cognitive Evaluation Theory (CET)

CET deals with intrinsic motivation and the effects of environmental factors on it. It shares the common definition of intrinsic motivation, namely, that intrinsically motivated behaviors are those that are willingly engaged in because they are inherently rewarding in themselves. In other words, the reward for the activities is the pleasure or satisfaction derived from the activities themselves (Deci and Ryan, 2000: 10).

This concept of intrinsic motivation is rooted in the mid-twentieth century reaction against the various *drive theories* of motivation that were prevalent in both the empirical and psychoanalytical traditions at that time (Deci and Moller, 2005: 579-80). Specifically, it grew out of observations of experimental animals spontaneously engaging in exploratory, playful and curiosity-driven behaviors apart from any reinforcements or rewards (Ryan and Deci, 2000: 56). For example, Harlow, who is believed to have been the first person to use the term *intrinsic motivation*, demonstrated in the 1950s that monkeys persistently worked at solving puzzles merely for the enjoyment of doing so, and that they solved them more successfully when they were not externally rewarded (Deci and Ryan, 1985: 13). Harlow also argued that the experience of love and interpersonal contact is essential for optimal development, thus connecting intrinsic motivation to *relatedness* or *affiliation* (Deci et al., 1996: 172, 177-8). White, in his famous refutation of the behaviorist model of motivation (1959), related intrinsically motivated behaviors to *effectance*—the inherent need to feel effective or competent in dealing with one's environment. This need leads people to take interest in and approach novel stimuli and challenging tasks. Later, deCharms (1968) emphasized the importance of feeling internal causation for intrinsic motivation to occur. Specifically, people need to feel an *internal locus of causality*, in other words, that they are the cause of their own actions. If they perceive an *external locus of causality* for their behavior, they will instead feel like "pawns" controlled from without. DeCharms also elaborated the concepts of intrinsic and extrinsic motivation as antithetical to each other. These various

historical developments in the notion of intrinsic motivation are behind the incorporation of the basic needs of relatedness, competence and autonomy into SDT.

The concept of intrinsic motivation receives varying degrees of attention in most modern theories of motivation. However, its most exalted and central status occurs in SDT, which views it as the "life force or energy" behind the organismic process (Deci and Ryan, 1985: 8) and as pervading all aspects and phases of human development.

> From birth onward, humans, in their healthiest states, are active, inquisitive, curious, and playful creatures, displaying a ubiquitous readiness to learn and explore, and they do not require extraneous incentives to do so. This natural motivational tendency is a critical element in cognitive, social, and physical development because it is through acting on one's inherent interests that one grows in knowledge and skills. The inclination to take interest in novelty, to actively assimilate, and to creatively apply our skills is not limited to childhood but is a significant feature of human nature that affects performance, persistence, and well-being across life's epochs (Ryan and Deci, 2000: 56).

Vallerand, a prominent SDT proponent in Canada, has developed a more differentiated taxonomy of intrinsic motivation, subdividing it into the following three types:

1. *IM to know*: engaging in activities due to the pleasure and satisfaction of exploring and learning new things.
2. I*M to accomplish*: engaging in activities due to the pleasure and satisfaction that results when one surpasses oneself, creates or otherwise accomplishes something.
3. *IM to experience stimulation*: engaging in activities in order to feel the "stimulating sensations" (i.e. the natural "high") that those activities produce (Vallerand, 2002: 42).

The relation of intrinsic motivation to the basic needs

According to CET, the basic needs for autonomy and competence (and the events that satisfy or thwart these needs) are directly connected to intrinsic motivation. In regard to autonomy, when people perceive that the initiation and regulation of their behavior comes from outside of themselves, they will feel controlled and hence their sense of autonomy and intrinsic motivation will be decreased. On the other hand, when they perceive that it comes from within themselves, they will feel more autonomous (i.e. self-determined), and hence their intrinsic motivation will increase. In the case of competence, intrinsic motivation

will increase to the degree that people perceive themselves as effectively dealing with their environment, whereas it will decrease to the extent that they feel that they lack such effectiveness (Deci and Ryan 2002:11-12). In short, if an event enhances one's perceptions of autonomy and of competence, it will enhance intrinsic motivation, while an event that decreases these perceptions will have the opposite effect.

CET also sees relatedness as connected to intrinsic motivation, but less clearly and directly so than autonomy and competence. In a sense, most of the events that affect one's perception of autonomy and competence are, in fact, social events, and in this way relatedness plays an important yet indirect role in increasing or decreasing intrinsic motivation. Deci and Ryan do cite evidence suggesting a connection between relatedness and intrinsic motivation; namely, that children's secure attachment to a primary care-giver appears to increase their exploratory behavior (i.e. their intrinsically motivated curiosity to understand their environment), and also that children tend to display more intrinsic motivation in activities overseen by a familiar adult than by a stranger. However, as there are some intrinsically motivating activities that do not necessarily involve other people, they conclude that relatedness appears to be more distantly connected to intrinsic motivation than are autonomy and competence (Deci and Ryan 2002:14).

2. Organismic Integration Theory (OIT)

Whereas CET deals with intrinsic motivation and the factors that enhance it, OIT seeks to account for *extrinsic motivation*, which, in contrast to intrinsic motivation, refers to engaging in behaviors for reasons that are not inherent in the behaviors themselves but are instrumental to some other goals that are separate from the behaviors. DeCharms (1968) had described extrinsic motivation as a single unitary concept and as the antithesis of intrinsic motivation. However, OIT takes a more differentiated view of extrinsic motivation, seeing it as a continuum of four motivational categories, whose positions on the continuum are based on the degree to which they are more or less self-determined and hence approach intrinsic motivation. In addition, OIT seeks to understand how these four categories of extrinsic motivation can explain the natural process of the human organism becoming increasingly integrated and self-determining, as well as the factors that enhance them (Deci and Ryan, 2002: 14-16).

OIT arises from observations that people in fact do perform many activities that are not intrinsically motivated but are externally prompted, encouraged and regulated in some way by another person or a group in one's social environment. Furthermore, such activities also seem to become more self-regulated over time.

Based on these observations and the organismic dialectic, OIT postulates that people have a natural tendency to take in and integrate to their selves the values, behaviors and skills of important others in order to be able to relate more effectively in their social environments (Rigby et al., 1992: 169). To the degree that this integration occurs, people become more self-determined or autonomous in their performance of the behaviors (Deci and Ryan, 2002: 15).

OIT elaborates this process by positing a continuum of four categories of extrinsic motivation, ranging from completely non-self-determined to very self-determined. While these categories do not include intrinsic motivation (the prototype of self-determination), they approach intrinsic motivation to the degree that they are self-determined. They are respectively called *external regulation*, *introjected regulation, identified regulation* and *integrated regulation*. There is also a further category called *amotivation which,* like intrinsic motivation, is not part of the extrinsic continuum. The taxonomy is as follows:

Extrinsic Motivation Self-Determination Continuum

Intrinsic Motivation	Integrated Regulation	Identified Regulation	Introjected Regulation	External Regulation	Amotivation

Prototype of SD   High SD --Low SD   No SD

(Adapted from Ryan and Deci, 2000: 16)
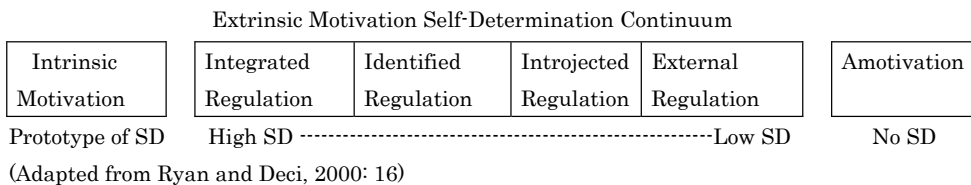
Amotivation

Amotivation is the complete absence of motivation. It results in no action or in a completely passive "going through the motions" of an action while lacking any intent. It results from the perception that there will be no contingency (reward or punishment), from a felt lack of competence, or from a lack of valuing the activity itself and any outcomes associated with it (Deci and Ryan, 2002: 17).

External Regulation

This is the least self-determined form of extrinsic motivation and basically fits deCharms'traditional definition of extrinsic motivation as the opposite of intrinsic motivation. It involves performing an action to "satisfy an external demand or socially constructed contingency," that is, to obtain a reward or avoid punishment, and as such its cause is perceived as completely external to the person (Deci and Ryan, 2002: 17).

Introjected Regulation

This involves a degree of internalization of the regulation, but not integration of the regulation into the self, and therefore it is still very controlling, even though the control is largely from within. It is related to increased *ego involvement*— "the state where one's self-esteem is on the line." Hence it includes acting in order to avoid feelings of guilt and shame, or to enhance one's ego or one's sense of acceptance and valuation by others (Rigby et al., 1992: 175).

Identified Regulation

This involves consciously valuing a goal or regulation, accepting it as personally important, and as a consequence, personally and consciously endorsing it. Such behavior has a relatively internal causality, and thus a relatively high degree of perceived autonomy or self-determination. Therefore, it "represents an important aspect of the process of transforming external regulation into true self-regulation" (Deci and Ryan, 2002: 17). However, such "identifications" have not yet been completely integrated into the self's core values, and so cannot be considered completely self-determined.

Integrated Regulation

This is the most self-determined kind of extrinsic motivation and hence the closest to intrinsic motivation. It involves regulations that have been integrated with values and goals that are already part of the integrated self. However, it is not quite the same as intrinsic motivation because actions involving this kind of regulation are still done instrumentally to achieve outcomes which are separate from the interest or enjoyment inherent in the actions themselves, even though these outcomes have values that are integrated with the self (Deci et al., 1996: 169).

The role of the basic needs in the process of integrating external regulation

As extrinsically motivated actions are not inherently interesting, at first people are only moved to perform them *instrumentally,* that is, in order to achieve desired outcomes that are external to the activities themselves. Such desired outcomes are most often based on the need for relatedness. For example, for the sake of good relations with others, a person will be moved to perform an initially uninteresting action in response to another valued person's request, offer of reward, or inspiring example. Thus, the need for relatedness plays an essential role in initiating the process of the internalization and integration of behaviors that are initially not self-determined. (Deci and Ryan, 2002: 19). A feeling of competence is also

essential for this process. For example, even if people feel moved to perform certain actions for the sake of relatedness, they will not perform them if they feel that they will not be able to do so successfully. However, while both relatedness and competence are essential to the integration process, they are not sufficient to bring about full integration. For real integration to occur, one must feel a genuine sense of autonomy; in other words, freedom to endorse and choose an action apart from any sense of being controlled or pressured to do so by others. Without this sense of autonomy, the internalization process will halt at the stage of introjection (Deci and Ryan, 2002: 20).

3. Causality Orientations Theory (COT)

COT is the sub-theory of SDT that deals with individual differences in people's orientations toward being autonomously motivated (self-determined) versus being non-autonomously motivated. These causality orientations develop gradually over time through persons' interactions with their environments, and hence are relatively stable individual characteristics (Deci and Ryan, 1985: 175). They are categorized into the following three main orientations, all of which everyone shares in varying degrees.

Autonomous orientation

Persons with a primarily autonomous orientation generally tend toward intrinsic motivation and integrated extrinsic motivation; that is, such persons tend to regulate their behaviors on the basis of interests and values that have been well integrated into their sense of self and are therefore self-endorsed (Deci and Ryan, 2000: 21). Although their behavior may be somewhat influenced by external factors, it still tends to be highly self-determined as it is mainly initiated by their own internal needs, interests, and personally valued goals. It is produced by environments characterized by informational feedback and the experience of choice. Such autonomy-oriented people "use available information to make choices and regulate themselves in pursuit of self-selected goals" (Deci and Ryan 1985: 154, 162).

Controlled orientation

People of this orientation tend to be controlled by the demands of others (external pressures) or *by introjects* (internally controlling imperatives such as 'should', have to', ought to', and 'must') (Dec and Ryan, 1985: 157). They also tend to be strongly influenced by notions of status and material success and to seek approval from others. Success leads to self-aggrandizement and failure

to guilt. This orientation grows out of repeated experiences of controlling environments (Deci and Ryan, 1985: 162).

Impersonal orientation:

This orientation describes a tendency towards *amotivation* or a complete lack of intention. It is based on feelings of incompetence and helplessness at dealing with one's environment, and is generally accompanied by a high level of anxiety (Deci and Ryan, 1985: 159-60).

Vallerand's further delineation of motivational orientation

To better account for the complexity of motivation and motivational orientations, as well as changes in motivational orientation, Vallerand divides motivations into 3 levels of generality: *global, contextual, and situational.*
The *global level* corresponds to COT as described above. Motivation is seen as an individual difference that is quite stable and global in that it covers all of life's domains. Through their experiences with their environment over time, individuals develop a global (or general) motivation orientation that is primarily intrinsic, extrinsic or amotivated (Vallerand, 2002: 44).

The *contextual level* refers to distinct spheres of human activity, the most common for young people being education, leisure and interpersonal relationships. Motivational orientations at the contextual level are somewhat stable, but less so than at the global level. In other words, experiences over time lead people to develop motivational orientations toward each life context that are "moderately stable, although they are influenced to an extent by social factors that are specific to each context" (Vallerand, 2002: 44-5).

Finally, the *situational level* deals with why individuals are motivated to act in a particular way at a particular time in a particular situation; for example, how they feel toward a specific task at a specific time. It is strongly influenced by immediate environmental factors and is therefore unstable (easily changeable) (Vallerand, 2002: 45).

To account for changes in motivation and in motivational orientation, Vallerand also posits a *top down effect* and a *bottom up effect* that occur between these levels. Specifically, there is a top-down effect from a level on the level just below it. That is, a person's global motivation orientation influences their motivation at the contextual level, which in turn influences situational motivation. For example, people who have a strong global orientation towards intrinsic motivation will also tend to be intrinsically motivated at the contextual level, which will, in turn, incline them to be intrinsically motivated at the situational level. Likewise there is

also a recursive or bottom-up effect between motivation at one level and the level above it. For example, if, through repeated positive experiences, someone becomes more intrinsically motivated at the situational level, this will increase their orientation towards intrinsic motivation at the contextual level, which in turn can influence their global motivational orientation. This helps to explain how motivational changes occur and further suggests that, depending on the environment, even general motivational orientations can be changed over time (Vallerand, 2002: 47-52).

4. Basic Needs Theory (BNT)

Basic Needs Theory deals with the relation of the three basic needs to mental health and well-being. Specifically it focuses on establishing how the satisfaction of the needs leads to improved wellbeing and how their frustration leads to a lack of wellbeing (Deci and Ryan, 2002: 9-10).

Much of the research under this sub-theory has explored the relation between what are called *aspiration or life-goal contents* and wellbeing. *Intrinsic aspirations* are those that are based on the satisfaction of the three basic psychological needs and include, for example, the aspirations for personal growth or self-actualization, affiliation, and community contribution. Their attainment leads to wellbeing (self-esteem, general health and vitality, and freedom from anxiety). *Extrinsic aspirations,* on the other hand, are not based on satisfaction of basic needs but rather on obtaining external signs of worth such as wealth, fame, and public image. As these attainments tend not to satisfy the basic needs, they are often associated with anxiety, depression and even physical ailments.

As in the case of motivation and motivational orientations, research results also suggest that the nature of one's aspirations are influenced by and can be changed by social factors. For example, basic-need-supportive environments lead people to place greater value on intrinsic aspirations, whereas controlling environments lead them to place greater value on extrinsic aspirations as substitutes for basic need satisfaction (Deci and Ryan, 2002: 22-25).

This completes the overview of the basic assumptions and theoretical components of SDT. The remainder of this paper will describe how this theory has been applied to the field of education.

III. Some Theoretical Implications of SDT for Motivation in Education

Although SDT has been applied to various fields, most of the empirical research

continues to be done in educational settings. This section will briefly describe what each sub-theory implies for learning and education.

CET strongly implies that the process of learning is naturally motivated from within by students' innate curiosity to explore their environment, their desire to effectively interact with it, and the pleasure in doing so. This is either nourished or diminished by events in their environment. Therefore, teachers do not, strictly speaking, motivate students, but rather nurture or catalyze this inherent tendency (Ryan and Powelson, 1991: 51). This is done by creating an educational environment that nurtures the three basic psychological needs and, by extension, intrinsic motivation. Such an environment will lead to the most natural and optimal learning (Rygby et al., 1992: 166).

OIT implies that students naturally tend to internalize and integrate to their selves the rules and practices of others in their social environment under the right conditions. Thus, educational environments and practices that nurture the basic needs will foster the natural process of integrating the educational rules and behaviors that are not initially self-determined. Since the process of integrating non-intrinsically motivated behaviors is usually initiated and encouraged by a valued person or group, the roles of important others such teachers, parents and classmates in education will also be extremely important (Ryan and Deci, 2000: 64). As the integration process advances, students will gradually become more self-regulating.

COT implies that, based on their individual histories of interacting with their environments, students will have individual differences in motivational orientation, with some being primarily oriented towards autonomous behavior and others more towards controlled behavior. While these motivational orientations are relatively stable, they can be changed over time by educational environments that support the three basic needs.

From **BNT** we can infer that, since the basic needs are also closely intertwined with psychological and physical wellbeing, educational contexts that nourish these needs will also promote students' general psychological health. Therefore education should not focus exclusively on cognition and knowledge, but rather on the whole person, including the emotions and other affective factors (Deci and Ryan, 1985: 246).

The following section will look at SDT research and how it has been used to support and elaborate these theoretical implications.

IV. Basic Methods of SDT Research in Education

SDT research began in the field of education. Most of the early studies were laboratory experiments which explored intrinsic motivation and how it is affected by environmental factors such as rewards, threats and choice. It used subjects who ranged in age from nursery to college students (Deci et al., 1996: 173). After getting participants to complete a task under various conditions, such as getting a reward or not, the experimenter would leave them alone in the room with the choice of returning to the task or turning instead to various distracter tasks. The assumption was that the more they freely chose to return to the target task, the more they were intrinsically motivated to perform it (Ryan and Deci, 2000: 57).

As the focus of SDT research expanded to include the various types of extrinsic motivation and the integration process, field research was increasingly done in actual educational settings. It focused on the effects that *autonomy-supportive* versus *controlling* classroom climates have on students' intrinsic motivation and on their integration of external regulation (Deci et al., 1996: 175). Most of these field studies have utilized self-report questionnaires which get students to report their interest and enjoyment in relation to various activities and broader domains of activities (Ryan and Deci, 2000: 57-8).

Two standard questionnaires have been widely used in the field studies. The *Self-Regulation Questionnaire-Academic* (*SRQ-A*) was developed by Ryan and Connell (1989) and assesses three of the types of extrinsic motivation (external, introjected, and identified) and intrinsic motivation. The *Academic Motivation Scale* (*AMS*) was developed by Vallerand (1989) and his colleagues. It measures the three types of intrinsic motivation (IM for knowledge, IM for accomplishment, and IM for stimulation), three of the four types of extrinsic motivation (identified, introjected, and external), and amotivation (Guay et al., 2008: 234).

As of 2008, there were over 200 published SDT studies on education (Guay et al., 2008: 233), and with the increasing interest in SDT, the amount of research is expected to increase further. The next section will describe some common practices of modern education that, according to the research, seems to hinder intrinsic motivation and self-determination.

V. Results and Implications of the Research for Education

Common Educational Practices That Thwart the Basic Needs

Early SDT research indicated that many common educational practices that are intended to increase motivation in fact thwart the basic psychological needs and

therefore hinder intrinsic motivation, integration and consequently, learning. This is because students tend to experience them as controlling instead of autonomy-supportive (Deci et al., 1996: 173-4).

For example, it was noticed that, although the common practice of using *rewards* to motivate students seems to initially succeed, especially for test preparation and rote learning, it results in the students losing interest in the task once the reward has been removed. This is apparently because the reward shifts attention away from the task itself and onto getting the reward. In addition, this focus on the reward hinders conceptual learning and increases the time required for task completion (Deci and Ryan 1985: 257). In some studies it even seems to have negatively influenced students' self esteem (Deci and Ryan 1985: 248). An emphasis on studying for *exams* and *grades* seems to have similar results in that, in the short term, it motivates students to memorize facts in order to do well on the tests, but it also tends to decrease their conceptual learning and is often accompanied by anxiety and loss of self-confidence. (Deci and Ryan, 1985: 250-51: Deci et al, 1996: 174-6). Research in Japan showed that students in contexts that emphasized exams and grades felt less interested in the material itself, less competent and more anxious than those in contexts where exams and grading were not so strongly emphasized (Kage, 1991). Another commonly used motivation strategy, *individual competition,* seems to facilitate routine learning tasks but hinders conceptual learning and problem solving (Deci and Ryan, 1985: 258). Other commonly used motivational prompts such as *threats, deadlines, orders, imposed rules, imposed goals,* and *negative feedback* likewise tend to have similar results (For more detailed discussions on these prompts, see Ryan and Deci, 2000: 59; Vansteenkiste et al., 2006 22; Deci, 1996: 71f; Deci et al., 1991: 335-6). In addition, such externally motivated students tend to blame their teachers and others for their failures (Deci et al., 1991: 331-2), and are more likely to give up under adversity and drop out of school.

Students characterized by introjected regulation seem somewhat better off than those who are completely externally motivated by the above prompts as they tend to show stronger effort and more persistence, and hence are less likely to drop out of school (Guay, et al., 2008: 234-5). However, like externally regulated students, they also are more likely to suffer from "affective costs" such as increased anxiety and a lower ability to cope with failures (Reeve, 2005: 331-2).

Mitigating the negative effects of these practices

If these motivational methods are indeed so counterproductive and harmful, their prevalence in education, along with the numerous uninteresting activities

required of students, could be very discouraging for the teacher who wishes to foster intrinsic motivation and the integration process. However, later SDT research has somewhat moderated its negative view of these external controls, suggesting that, while they tend to be harmful, their effects can be mitigated by the interpersonal style with which they are administered; that is, whether they are administered in a controlling way or in an autonomy-supportive way (Deci et al., 1996: 174). For example, SDT theorists have recently acknowledged that testing itself is not harmful if it provides non-controlling informational feedback, that is, if its purpose is provide students with diagnostic information that will help them understand their weak points and how to become more effective. It does becomes controlling and harmful when it is connected to grading and other "high stakes" (Ryan and Weinsteen, 2009). Thus, even in those environments characterized by negative external controls, teachers who are autonomy-supportive can still help students move beyond mere external regulation and toward becoming increasingly characterized by intrinsic motivation and integrated regulation (Rygby et al., 1992: 175). The next section will explain how this might be done, first in regard to promoting intrinsic motivation and then in regard to facilitating the integrative process.

Ways to Promote Intrinsic Motivation

As noted above, CET implies that the most natural and optimal learning is based on intrinsic motivation. This further implies that the central priority of the teacher is to create a classroom environment and activities that "facilitate and channel the intrinsic motivation of children toward the promotion of learning, discovery, and achievement" (Deci and Ryan, 1985: 24). This involves appealing to their natural urge to explore, learn, and interact effectively with their environment, and the inherent pleasure they experience in doing so. Intrinsic motivation is additionally enhanced by classroom environments that include novelty and aesthetic appeal, and that also support the needs for autonomy and competence (Ryan and Deci, 2000: 59-60). This support includes providing *optimal challenges,* that is, challenges just slightly above students' present competency level, since a challenge that is too easy is boring, while too much difficulty causes frustration and anxiety. Optimal challenge gives the experience of successfully conquering the challenge and thereby enhances the sense of competence (Deci et al., 1996: 177). Likewise, appropriate positive feedback can also enhance feelings of competence and therefore intrinsic motivation (Deci et al., 1996: 177). Incorporating relation-enhancing activities should also promote intrinsic motivation as research suggests that secure human relationships also

foster the natural urge to explore (Deci et al., 1996: 177).

Unfortunately, these measures to support intrinsic motivation work only when students already have an inherent interest in a particular activity. In reality, education includes many rules and activities which students initially do not find inherently interesting or enjoyable. Thus, teachers must additionally focus on fostering the integration of extrinsically motivated behaviors (Ryan and Deci, 2000: 59-60). The following section describes how this can be accomplished.

Ways to Promote the Integrative Process
Fostering relatedness

As noted earlier, the desire for relatedness plays a crucial role in prompting and fostering the process of internalizing and integrating initially uninteresting behaviors, since people are first moved to perform such behaviors out of their desire to be accepted and valued by important people or social groups (Vansteenkiste et al., 2006: 21). Thus, providing a secure and trusting sense of relatedness, in which students feel cared for and respected by the teacher, is a basic condition for fostering their willingness to take in and integrate classroom regulations and values (Ryan and Deci, 2000: 64). Numerous studies indicate that teachers who are rated by students as autonomy-supportive also show a willingness to enter into relationships with their students, dedicate time and energy to them, express affection and show that they enjoy being with them. They are also able to take their students' perspective, acknowledging and showing empathy for their conflicting feelings and showing interest in their wishes (Reeve, 2005: 186-195).

Nurturing the need for relatedness also involves promoting students' relationships with each other. This includes avoiding individualistic competitions that focus on winning and instead promoting cooperative learning. As noted earlier, although individual competition can facilitate routine learning tasks and rote memorization, it also tends to raise anxiety and hurt self-esteem as well as hinder creativity, problem-solving and conceptual learning. Cooperative learning, in contrast, shifts the focus from beating others to helping others and leads to lower anxiety and higher self-esteem, and so enhances the integration process (Deci and Ryan 1985: 258).

Fostering a sense competence and autonomy

It is difficult to separately describe the various strategies for fostering feelings of competence and autonomy as they are so intertwined. The following main strategies for promoting both are often given in SDT literature:

One basic strategy is to give feedback in an informational, non-controlling way. Since a sense of competence entails feeling effective in dealing with one's environment, it will be enhanced by feedback that gives students information about their present effectiveness and what they can do to increase it. However, such feedback must also be given in a non-controlling manner in order for it to promote their sense of autonomy and hence full integration (Deci, et al., 1991: 333-7). Concretely, this means refraining from giving orders or from using controlling language that pressures students to behave in certain ways (e.g. words such as "you should" or "you have to") (Deci et al., 1996: 173).

A related strategy is acknowledging and empathizing with students' feelings and giving them a clear rationale for participating in uninteresting tasks. Empathizing includes allowing them to express their negative feelings about the uninteresting tasks and acknowledging the legitimacy of those feelings. This seems to enhance their feeling of self-determination and to promote the integration process (Deci et al., 1991: 336). Furthermore, explaining how a seemingly boring activity is relevant to students' interests or how it will help them increase their competence will likewise encourage them to choose to do the activity in an autonomous manner, and in turn, will promote integration (Deci et al. 1991: 338; Ryan and Deci, 2000: 64).

Another autonomy-supportive strategy is to set limits (rules) in a ways that avoid permissiveness while still enhancing autonomy. Deci and Ryan emphasize that limit-setting need not be antithetical to autonomy support and can even complement it. Limits of various types are, in fact, an essential aspect of one's environment, and therefore learning to function successfully within limits is an important part of competently interacting with that environment. Being an effective and autonomous human organism involves "accommodating to unyielding elements of the environment and functioning harmoniously within certain structures" (Deci and Ryan 1985: 251). The important point is whether the limits are set controllingly or informationally (Guay et al., 2008: 237). The goal of truly informational limits is not to externally pressure people to behave in desired ways, but rather to provide "informational structures around which people tend to experience greater choice" (Deci and Ryan, 1985: 251). Specifically, giving a clear rationale for the limits will make students feel less resistance since they understand the reasons for the limits. This knowledge will enable them to better self-regulate their academic behaviors. Deci (1996: 150) suggests having students discuss among themselves the rationales for certain limits, or even letting them set their own limits and the consequences for breaking those limits, since students who do so are more likely to choose to stay within

those limits without outside pressure. Another important aspect of informational limit-setting is the clear communication of the consequences of transgression, and consistent follow-up of any transgressions.

> One of the main purposes of setting limits…is to communicate that life is full of choices and every choice has consequences. They can choose what they want, but they need to be ready for the consequences. Those are simply the facts of life (Deci, 1996: 151).

Autonomy-supportive limit setting can be further enhanced by making the limits as wide as possible and allowing as much choice as possible within the limits (Deci and Ryan, 1985: 252), thereby encouraging students to become increasingly self-directed in their learning. This could include, for example, sharing classroom authority and curricular decision-making by giving students greater choice (both individually and in groups) about what tasks to do and how to do them (Deci, 1996: 144-5).

Deci acknowledges that students who are not used to being given choice often resist it and rather act as if they wish to be controlled. In this case the teacher's role is to patiently and gradually increase student choice, working with them "to reawaken what is basic to their nature…we need to help them get back to the place where they are vital, interested and eager to take on challenges and responsibilities" (Deci, 1996: 149).

Outcomes of Autonomy-Supportive Educational Environments

SDT research seems to support the hypothesis that autonomy-supportive educational environments lead to significantly better outcomes than controlling ones, at least in the longer term. Like the strategies that foster them, these outcomes are hard to treat separately, but can be generally classified into *affective, behavioral, cognitive* and *educational* outcomes.

Positive affective outcomes include lowered anxiety levels, a more positive general emotional tone in the classroom, more enjoyment and satisfaction with studying, higher self-esteem, social responsibility, a stronger preference for challenges, greater curiosity, more intrinsic interest, increased feelings of competence, increased independence, positive coping ability, and improved social adjustment. In addition, such students are more likely to internalize and integrate the values that the educators are trying to instill (For more detailed discussions, see Reeve, 2005: 331-2, 337, 342; Rygby et al., 1992: 177-8; Guay et al., 2008: 234-5; Ryan and Deci, 2000: 63; Deci and Ryan 1985: 258; Deci et al., 1996: 172).

These positive affective outcomes are complemented by positive cognitive

outcomes such as increased creativity, flexibility, better conceptual understanding, deeper learning, longer learning retention rates and ability to generalize learning (see Deci and Ryan, 1985: 24, 258; Deci et al., 1991: 331-2; Guay et al., 2008: 234-5).

Such affective and cognitive outcomes also seem to lead to positive learning behavioral outcomes such as more active task engagement, more self-initiation, more independent mastery attempts, and more persistence in the face of failure and adversity. In addition such students tend to stay in school longer (Deci and Ryan, 1985: 258-9).

Finally, the research findings show that more self-determined types of regulation lead to improved educational outcomes such as higher academic achievement (Deci et al., 1991: 331-2).

VI. Discussion
A Brief Evaluation of SDT

While an in-depth critique of SDT is beyond the scope of this overview, I will briefly mention a few possible points from which I think a critique might proceed. First, on a theoretical level, it is arguable that SDT, in it its attempt to be comprehensive, is in fact too *reductionist*. Specifically, the concepts of the organismic dialectic and the three basic needs, while providing a window on human nature and motivation, cannot adequately account for their true complexity. This criticism could be further strengthened by empirical data demonstrating that there are important universal psychological needs that are not accounted for by SDT's concept of the three basic needs.

A second type of objection could question the reliability of the research. For example, to what extent can research based largely on self-report questionnaires for students give an adequate picture of the educational contexts that are supposedly being investigated? Is there important data that falls outside of what can be learned through such questionnaires? Does the design of the questionnaires tend elicit responses that support the tenets of SDT? Finally, another type of criticism might question the practicability of attempting to apply SDT principles to actual classrooms. This might be supported by, for example, action research data collected from practicing teachers that seems to contradict some claims of SDT.

However, even if these various types of objections could be sustained and SDT shown to have significant shortcomings as a theory or to have less practical value in the classroom than is claimed, I believe it remains an important advance in

motivation theory and education. For instance, in contrast to the traditional unitary concept of extrinsic motivation, SDT's description of extrinsic motivation as a continuum based on degrees of self-determination gives a more coherent and comprehensive account of the wide range of motivations that students experience and how these motivations can change over time. The related concept of the integrative process also provides a better basis for informing teachers how they can positively influence student motivation. Furthermore, SDT claims a large and coherent body of empirical research conducted over almost 40 years, indicating that, although the methodology of this research might have flaws and its scope might be inadequate, SDT has been shown to be a useful model for adding to our knowledge about learning and motivation.

Therefore, I believe SDT can also be applied to second language acquisition and the results fruitfully compared with those of existing motivation research in that field. In particular, it would be interesting to see whether attempts to use SDT as a framework for action research in second language classrooms produce data that support the theoretical principles of SDT and its claims of improved affective, cognitive, behavioral and academic outcomes. It could then be investigated whether and to what degree SDT research corroborates traditional second language learning motivation theories, a task that has already been pioneered by Kim Noels (e.g., Noels, 2003 and Noels et al., 2003).

Implications for the Educational Goals and Practices of the Institute for Language and Culture

Finally, I will briefly mention a few implications of SDT for some of our educational goals and strategies in the Institute for Language and Culture. First, it seems clear that several of our education policies and strategies would find support in SDT. Specifically, our stated goals of fostering student autonomy and a spirit of life-long learning that will continue beyond the university classroom, as well as our emphasis on whole-person education, strongly echo SDT principles. The small class sizes and emphasis on individual student guidance are likely to foster the sense of relatedness that is so important in initiating and continuing the integration process. Likewise, SDT would acknowledge the importance of the institute's goal of improving academic outcomes. In addition, the efforts of individual English teachers to implement aspects of process-based language education and evaluation in their classrooms is very much in line with SDT's emphasis on providing informational feedback as a way that increases students' sense of competence and autonomy, and thereby fostering both intrinsic motivation and the integrative process.

On the other hand, it seems that SDT would take issue with the institute's recent trend away from process-based education and evaluation towards an emphasis on "results", as exemplified by the recent imposition of mandatory final exams in all basic language courses. As noted earlier, according to SDT, an emphasis on exams for determining grades tends to have the superficial result of externally motivating students to study for the examss and thereby increases their rote learning and short-term knowledge; yet, these apparent gains tend to be outweighed by longer-term affective costs such as decreased intrinsic motivation, increased anxiety, and even lowered self-esteem, as well as by cognitive costs such as reduced cognitive processing and creativity. It could be added that final exams entail less opportunity than process-based forms of evaluation for teachers to give students the informational feedback that SDT stresses is crucial for increasing their sense of competence and autonomy, and for facilitating the integrative process. It is also predictable that some teachers will feel pressured by mandatory final testing to move away from a process-based educational approach and to adopt more *controlling* strategies in the classroom in order to quickly improve test results and meet short term numerical objectives, thus exacerbating the negative effects on students of the testing itself. Ultimately, if the results of SDT research are to be believed, all of this may ultimately result in poorer rather than better academic outcomes.

Teachers who wish to continue applying process-based approaches to language education and evaluation will need to find ways to mitigate these negative results and the *wash-back effect* that final exams tend to have on the language classroom. One obvious counter-measure would be to 'lower the stakes' of the final exams by giving them minimal weight in final grade calculations and emphasizing to students that the 'final exam' is to be thought of as just another 'regular quiz' or 'routine speaking check' that just happens to be conducted in the final exam period. Also, writing and sending 'feedback notes' to individual students about the results of their exams could provide at least a small amount of informational feedback. Such limited feedback would be better than none, although the question still remains as to how logistically practicable it would be to expect yet another time consuming labor from part-time teachers who are already feeling overburdened by high teaching loads and have numerous final exams to grade.

The matter of mandating part time teachers to conduct final exams, particularly when final exams run contrary to their theoretical beliefs about the importance of a process approach to second language acquisition and evaluation, also touches on an issue that was not directly treated in this paper but is nevertheless deeply

related—the issue of teacher autonomy and motivation. Considering the crucial role that SDT and other motivation theories assign to teachers in fostering student motivation, we have a responsibility to find ways to better enhance the motivation of our teachers as one important strategy for improving our students' motivation and educational outcomes. Consequently, the issue of fostering a work environment that promotes rather than hinders teacher motivation could also be profitably investigated from the perspective of SDT.

Conclusion

This paper surveyed Self-Determination Theory and related research within the field of general education. It was noticed that, while SDT takes many ideas from previous motivation theories, it uniquely elaborates and combines them into a coherent theory based on the organismic dialectic and the three basic needs. It was also seen how SDT takes issue with many common motivational strategies which it views as controlling and therefore counter-productive, and instead proposes informational feedback and autonomy-supportive alternatives that, according to SDT research, have better long-term affective, cognitive, behavioral, and academic outcomes. The paper mentioned some possible lines of criticism that could be leveled at SDT on theoretical and practical grounds, but concluded that SDT, especially with its concepts of the extrinsic motivation continuum and the integrative process, provides an important contribution to motivation research and general education, and therefore warrants more attempts at application to second language education. Finally, it was suggested that SDT would strongly endorse several of our main educational goals and practices in the Institute for Language and Culture but would take issue with our increasing emphasis on "results" and would call us to seek ways to raise teacher motivation as one means of enhancing student motivation. In future research, it would be profitable to specifically investigate these issues in more detail from the perspective of Self-Determination Theory.

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