MEASURING STUDENT LEARNING MOTIVATION:
A CONCEPTUAL FRAMEWORK BASED ON SELF-DETERMINANT THEORY

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Abstract

Motivation has been studied to find ways to increase students' involvement in a learning situation. Within an education context, previous studies have shown the importance of motivation as a determining factor in students' learning processes (Ames, 1992; Eggen & Kauchak, 2007; Pintrich, 2003; Reid, 2007; Theobald, 2006; Yarahmadi, 2012). There are different styles of behavior regulation relating to student academic motivation which reflect differences in their relative levels of autonomy. Self-Determination Theory (SDT) focuses on the degree to which an individual behavior is self-motivated and self-determined (Deci & Ryan, 1985). This theory posits that a person can be extrinsically or intrinsically motivated (Ryan & Deci, 2000). Intrinsic motivation is the most self-determined form of behavior and involves engaging in learning opportunities. Intrinsic motivation is associated with a high level of effort and task performance. Intrinsic motivation refers to doing an activity for the inherent pleasure, satisfaction, and interest. Students with greater levels of intrinsic motivation demonstrate a strong learning desire, high academic achievement, and strong persistence. Thus, intrinsic motivation is a powerful factor in learning and leading to high productivity. In contrast, extrinsic motivation refers to doing something due to separable outcomes derived from the activity (Ryan & Deci, 2000). Extrinsic motivation explains that people behave in a certain way in order to attain a desired outcome. In this study, three types of regulation are examined: external regulation, introjected regulation, and identified regulation. External regulation behaviors are performed to satisfy an external demand or obtain an externally imposed reward contingency (Deci & Ryan, 1985). Introjected regulation behaviors are controlled by internal reward/punishment contingencies, such as ego enhancement, guilt, or anxiety (Deci & Ryan 2000). Identified regulation involves the person attributing personal importance to the behavior.

Unlike intrinsic motivation, it is instrumental rather than pursued for pleasure or personal satisfaction (Desi &Ryan, 2000). To understand the underlying motivational process, Deci and Ryan (1985) proposed three psychological needs which motivate the self to initiate behavior: competence, relatedness, and autonomy. In this study, competence will be used to examine the relationships with extrinsic motivation and intrinsic motivation as well as goal orientation. The following hypotheses were developed based on previous research findings.

H1: Competency has a positive effect on extrinsic motivations (identified regulation, eternal regulation, and introjected regulation).
H2: Extrinsic motivations (identified regulation, eternal regulation, and introjected regulation) will influence intrinsic motivation.
H3: Competency will influence intrinsic motivation.
H4: Intrinsic motivation has a positive effect on goal orientation.

Methodology

A sample of 146 responses were collected from a college in the Northeast using a web-survey to measure student learning motivation. Question items measuring competence as one of psychological needs were adopted from William and Deci's study (1996) and extrinsic motivation (identified regulation, external regulation, and introjected regulation) scales were adopted from the Academic Self-Regulation Questionnaire (SRQ-A) which were provided by Ryan and Connell (1989). Intrinsic motivation scales were adopted from Ratelle et al.'s study (2007) and modified for the study. Goal orientation items were adopted from Elliot and McGregor's study (2001). First, the overall validity of the measurement model was tested using Confirmatory Factor Analysis (CFA). Results indicate an acceptable fit for the data with

χ2 = 311.10, df =169, *p*-value =.000, CFI= .94, RMSEA = .076, and TLI= .93. Further, construct validity and discriminant validity were evaluated based on the factor loading estimates, construct reliabilities, variance extracted percentages and inter-construct correlations (Hair et al., 2006).

From the results, good reliability is established. The next step was to examine the overall theoretical model specification and the hypotheses by using the structural equation modeling (SEM). The SEM results indicate a satisfactory fit of data with χ2 =329.49, df = 173, *p*-value = .000, CFI = .94, RMSEA = .079, and TLI = .92. The SEM structural path results reveal that the relationships among the constructs are significant except the relationship between competence and intrinsic motivation. Thus, H1, 2, and 4 are supported, but not H3.

Discussion

The results find that competence affects extrinsic motivations which include identified regulation, external regulation and introjected regulation. The extrinsic motivations are strongly related to intrinsic motivation. Intrinsic motivation impacts on goal orientation. However, competence is not related directly to intrinsic motivation. The findings suggest that competence affects extrinsic motivation and high student motivation for goal achievement comes from intrinsic motivation which is strongly related to extrinsic motivation.

References Available upon Request