Environmental perceptions, motivational beliefs and self-regulating learning by Iranian high school students

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Abstract

To examine the correlations among environmental perceptions, motivational beliefs, and self-regulating learning of Tehran high school third-year boys, a causal model was used and 685 students were selected by multistage cluster-sampling method. The motivated Strategies for Learning Questionnaire (Pintrich & De Groot, 1990), Students’ Achievement Goal Orientations (Midgley, Kaplan, Middleton, Maehr, Urdan, Anderman, et al., 1998), Students’ Perceptions of Classroom Activities (Gentry, Gable, & Rizza, 2002), and Perceptions of Parents Scales (Grolnick, Deci, & Ryan, 1997) were administered. Analysis showed relations among components of self-regulating learning, family environmental perceptions, perceptions of classroom activities, and motivational beliefs. Structural equating modelling indicated the proposed model was acceptable and the fit index was not significant statistically ($\chi^2 = 123.98$, GFI = .97, RSMEA = .044). All paths or structural coefficients of proposed model were significant statistically (P< .01).

Keywords: self-regulating learning, environmental perceptions, and motivational beliefs.

1-Introduction

Self-regulating learning has important consequences for education, therapy and organizational management. Self-regulating include strategies for regulating cognitive processes with which students may control and monitor their learning, including goal-setting, planning, executing, managing, monitoring, self-evaluating and modifying their fallacies (Pintrich, 1999).

The key question in studying self-regulating learning is: what factors are effective on, or related to it. Previous research indicates that those factors may be self-efficacy (Bandura, 1986; Schunk, 1989, Pintrich & De Groot, 1990; Pintrich & Garcia, 1991; Zimmerman, 1999), achievement goals or goal orientations (Pintrich, 1999; Pintrich & Garcia, 1991; Pintrich, 1999; Nichols, 1984; Dweck, 1986; Pintrich & De Groote, 1990; Ames, 1992; Pintrich, 1999), task values (Pintrich, 1999; Eccles & Wigfield, 2002), Students’ perceptions of classroom activities.

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(Anderman & Midgley, 1997; Church, Elliot & gable, 2001), and Parents’ perceptions (Grolnick, et al., 1997, Grolnick & Ryan, 1989).

However, relations among variables reported in previous research are not direct and it has been also argued that goal orientations and self-efficacy, as two mediators, affect the relations between environmental perceptions and self-regulating learning (Schunk & Zimmerman, 1997). Therefore, relations among self-regulating learning, goal orientations and self-efficacy with respect to parents’ and classroom perceptions are not a simple one, but involve direct and non-direct relations and effects. However, we have chosen structural equation modelling to study the involved casual relations. Based on the model proposed (Fig. 1), the relations among environmental perceptions and self-regulating learning, with an emphasis on mediating roles of goal orientations and self-efficacy were examined.

2-Methodology

2-1. Participants

Participants were 685 boys between 14 to 18 years old, from Tehran high schools, selected from a population of 36723, using a multistage cluster-sampling method. In terms of the participants’ socioeconomic status (SES), they were selected from three different districts with high, low and middle incomes. 146 boys were registered in public schools and 539 boys in private ones, with higher SES, compared to those of public schools.

2-2. Measurement

To measure the variables, the following paper-pencil inventories were introduced to the participants in groups of 20 to 25: Motivated Strategies for Learning Questionnaire (Pintrich & De Groot, 1990), Students Achievement Goal Orientation (Midgley, et al., 1998), Students Perceptions of Classroom Activities (Gentry, et al., 2002), and Perceptions of Parents Scales (Grolnick, et al., 1997). These scales had been used by some other Iranian researchers and their validities have been confirmed (Hosayni Nasab & Ramshe, 2000; Khademi & Nowshadi, 2006; Sobhani Nejad & Abedi, 2006). To verify the reliability of the scales, their Cronbach coefficient alpha (α) were calculated, using the data collected from the final administration of the inventories. The alpha was .95 for MSLQ, .93 for SPCA scale, .93 for POPS, and .88 for SAGO scale. Confirmatory factor analysis index, was (RSMA = .055, GFI = .97, \( \chi^2 = 767.71 \)) for MSLQ, (RSMA = .048, GFI = .98, \( \chi^2 = 85.93 \)) for SPCA scale, (RSMA = .048, GFI = .97, \( \chi^2 = 139.91 \)) for POPS, and (RSMA = .05, GFI = .94, \( \chi^2 = 366.83 \)) for SAGO scale. After testing all participants, they were scored based on their marks in each subscale.
3- Results

Pearson correlations among all variables (autonomy support, involvement and warmth, interest, choice, challenge and joy, self-efficacy, mastery, approach performance and avoidance performance, cognitive, metacognitive and resource management strategies), except parents involvement, were statistically significant pairwise (p<.05).

To examine the structural relations based on the proposed model, structural equation modelling test was run, using LISREL package. The indexes of proposed model were acceptable and the obtained $\chi^2$ was not statistically significant. (GFI = .97, AGFI = .95, RMSEA = .044, $\chi^2 = 123.98$, $\chi^2$/DF = 2.10). If GFI and AGFI were above .90, $\chi^2$/df<3, RSMEA< .05, fit indexes of the model would be acceptable and the model would fit. Therefore, the model and the hypotheses are acceptable.

4- Discussion

The analysis of data showed that relations among environmental perceptions with self-regulating learning are affected by motivational beliefs and variables in the model are related to each other. The correlations found in this research (self-efficacy with self-regulating learning and mastery goals, and mastery goals with self-regulating) are consistent with the findings of Pintrich, De Groot (1990); Greene, Miller (1996); Pintrich (1999); Elliot, McGregor, Gable (1999). However, while Pintrich (1999) found a negative correlation among performance goals and self-regulating learning components, the present research, indicated that this correlation was weak, but positive for avoidance performance goals. In fact, Pintrich's findings (1999) fit with theory of goal orientation, while the
findings of the present study fit with multiple goals theory, being recently developed (Elliot, 2006; Elliot & Church, 1997). According to that study different achievement goals lead to different results.

However, inconsistent with the findings of Pulknin (Hill, 2001); parents' involvement was not correlated with parents' and classroom perceptions. This finding should be analyzed in different contexts. In regards to other findings, approach performance goals were related to self-regulating strategies (Elliot, 1997; Elliot & church, 1997) and mastery goals were related to self-regulating strategies (Pintrich, 1999). Therefore, the finding of the present study confirmed the multiple goals theory (Greene & Miller 1996; Elliot & Church, 1997; Harackiewicz, Barron, Pintrich, Elliot & Trash, 2002).

Comparison of different groups of boys and girls, males and females, young and adolescence, high school and university students, cultural groups, SES groups, gender groups, professional groups and IQ groups against this model would be beneficial in generalization of the findings of the current study and refinement of its methodological and theoretical foundations. Besides, it may be necessary to develop different models in order to study different motivations or motivational goals. Future research should include more variables in order to develop a more comprehensive model.

References
