

THE RELATION BETWEEN ACADEMIC SELF-CONCEPT AND ACADEMIC MOTIVATION AND ITS EFFECT ON ACADEMIC ACHIEVEMENT

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ABSTRACT

This study examined the relationships between academic self-concept, academic motivation and students' academic achievement among 300 first grade girls and boys high school students in Urmia, Iran.

Statistical analyses were performed to ascertain: (1) whether there is any significant relationship between academic self-concept and academic motivation for students, (2) whether both academic self-concept and academic motivation are significantly related to students' academic achievement, (3) whether both academic self-concept and academic motivation are significant difference between gender, and (4) whether academic self-concept and academic motivation are significant predictor of students' academic achievement.

Results show that academic self-concept positively and significantly correlated with students' academic motivation and academic achievement, but no correlated between academic motivation and academic achievement has been shown. There is significant differences between girls and boys in academic self-concept, but not in academic motivation. In addition, results of multiple regression analysis reveal that academic self-concept serves as a significant and strong predictor of academic achievement.

Keywords: *Academic Self-Concept, Academic Motivation, Academic Achievement*

INTRODUCTION

Success or failure in schoolwork or life appears to depend as much on how a person feels about the qualities and attributes he or she possesses as on these qualities themselves (Gabriel *et al.*, 2009). It seems that achievement depends as much on the ability as on the self-concept of the ability of the student.

Self-concept research has attracted the interest of researchers in various disciplines because numerous research studies conducted over the past decades have suggested that academic self-concept and academic performance are interrelated. Some studies have shown that academic self-concept functions as a significant predictor of students' academic performance (Choi, 2005; Liu, 2008).

Cokley defines academic self-concept as "...the attitudes, feelings and perceptions relative to one's intellectual or academic skills" (Cokley, 2000). Byrne and Hattie explain academic self-concept as an evaluation of one's perceived academic abilities (McCoach and Siegle, 2003). They also state that academic self-concept encompasses the global beliefs of self-worth associated with one's perceived academic competence. Bracken defines academic self-concept as —how a person feels about himself or herself within a school or academic setting, or in relation to a student's academic progress (Bracken, 2009).

Dambudzo declares that it is important to investigate the relationship between self-concept and academic achievement in order to rescue those students who may be victims of their own negative beliefs about themselves (Dambudzo, 2009). This statement is emphasized by Hamachek when he states that academic achievement may not simply be an expression of the students' abilities but also of their perceptions of their abilities, which may help them to feel confident and able, but when negative cause them to feel hesitant and uncertain (Hamachek, 1995).

There has been much focus on the causal relationship between these two variables. The question is, does academic achievement influence academic self-concept or does academic self-concept influence academic achievement? Based on the available literature, it is plausible to suggest that there are *three perspectives* about the relationship between students' academic achievement and their academic self-concepts (Green,

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et al., 2006; Jen and Chien, 2008). These are the following, namely the skill development model, the self-enhancement model, and the reciprocal effects model.

The skill development model states that academic achievement exerts a positive effect on academic self-concepts of students (Jen and Chien, 2008). This model maintains that past achievement, whether successful or unsuccessful, influences the formation of self-concept but that self-concept does not influence achievement (Barker *et al.*, 2005). This model implies that academic self-concept emerges principally as a consequence of academic achievement.

The self-enhancement model, proposes that the improvement of students' academic self-concepts should be a prerequisite to enhance their academic performance. This model maintains that an improvement of self-concept will lead to improved academic performance, and that achievement does not influence self-concept (Barker *et al.*, 2005).

The reciprocal model emphasizes the mutual causality between academic self-concept and the academic achievement of a student. This model suggests that academic self-concept and academic achievement have a reciprocal effect on each other. The reciprocal effects model assumes that self-beliefs predict increases in academic achievement and conversely, higher levels of academic achievement predict improvements in self-beliefs (Barker *et al.*, 2005).

Students who are motivated are enthusiastic to learn, and they are willing to get involved in the activities required to learn. In contrast, students who are unmotivated to learn are not as systematic in their learning efforts, they may be inattentive during the lesson, and not monitor their level of understanding, or ask for help when they do not understand what is being taught (Sikhwari, 2004).

Self-determination theorists posit that academic motivation is multidimensional in nature, and is comprised of three global types of motivation: intrinsic motivation, extrinsic motivation, and a motivation (Deci and Ryan, 2002).

The literature supports the notion that high motivation leads to high academic achievement. However, there are some contrasting findings that suggest that motivation and high academic achievement are not related.

The existing theory and research (Deci and Ryan, 1985) have shown that motivation plays an important role in the academic performance of learners. This statement is supported by Sikhwari who states that motivation affects almost all student activities (Sikhwari, 2004). Sikhwari found a high correlation between academic achievement and motivation (Sikhwari, 2004). Similarly, in a study done by Ahmed and Bruinsma, they found that academic motivation was positively related to academic achievement. In their study students who reported higher self-determination or an intrinsic form of motivation also reported higher academic achievement (Ahmed and Bruinsma, 2006).

However, in a study by Areepattamannil and Freeman on 573 Grade 11 and 12 learners in the Greater Toronto area, they found weak correlations between academic achievement and academic motivation variables in both the non-immigrant and immigrant groups (Areepattamannil and Freeman, 2008).

A large body of research has examined the relations between academic achievement and academic self-concept. Less integral to research has been the investigation of the combined effects of academic motivation and self-concept on academic achievement. Although the literature suggests motivation and self-concept are related to one another, few studies have simultaneously examined the interrelationship between these factors. Thus, this paper seeks to address the issue of relations between academic self-concept, academic motivation and their combined effects on academic achievement. Specifically, we focused on the role of gender on academic self-concept and academic motivation among high school students. However, a more complicated question is the extent to which the relations among these constructs vary with gender.

MATERIALS AND METHODS

The Present Study

The purpose of the present study was to test the relation between academic self- concept and academic motivation and its effect on students' academic achievement. Based on the theoretical framework and

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previous research outlined above, we therefore hypothesized that with considering students' gender, academic self-concept and academic motivation would predict students' academic achievement

Research Questions

The study explores the following research questions:

- (1) Is there any significant correlation between academic self-concept and academic motivation?
- (2) Are both academic self-concept and academic motivation significantly related to students' academic achievement?
- (3) Both academic self-concept and academic motivation are significant difference between gender?
- (4) Are academic self-concept and academic motivation significant predictor of students' academic achievement?

Method

Participants

Participants were 300 students (150 girls, 150 boys) from grade one of 6 public high school from a variety of socioeconomic environments in Urmia City, Iran.

Measures

Demographic Questionnaire

The demographic questionnaire asked students to report their age, gender, and their grade point average.

Academic Motivation

Academic motivation was measured with the Academic Motivation Scale–high school version (AMS; Vallerand *et al.*,). Based on SDT, this 28-item instrument is divided into three of extrinsic motivation, intrinsic motivation, and a motivation (Vallerand *et al.*, 1992).

The items were rated on a scale ranging from 1 = *does not correspond at all* to 7 = *corresponds exactly*. Each subscale consisted of four items; thus subscale scores could range from 4 to 28. A high score on a subscale indicates high endorsement of that particular motivation.

The questionnaire adapted from Vallerand *et al.*, Academic Motivation Scale–high school version (AMS), was used to measure students' academic motivation by Bohrani in Iran among 2462 high school students in Shiraz, Iran (Bohrani, 2005). He found the Cronbach's alpha coefficient of this instrument around 0/88 respectably.

Academic Self- Concept

A questionnaire adapted from (Chen) academic self-concept scale was used to measure students' academic self-concept (Chen and Thompson, 2004).

Afsharizadeh and others investigated psychometric properties of this questionnaire among 252 students in Tehran, Iran (Afsharizadeh *et al.*, 2013). The Cronbach's alpha coefficient of this instrument was found 0/78. Based on their finding, they concluded that school self-concept Questionnaire has a good constructs validity that useful assessing students' self-concept research in Iran.

Academic Achievement

Academic achievement in terms of the actual mark or score obtained in students' annual examination. To be more specific, academic achievement in this study refers to performance, in the form of a numerical score as obtained students in final examination.

The reasons led us to use numerical score as a school achievement instead of standardized test scores is that in our educational system there are no standardized test scores until grade 4 high school, when students finishing high school and prepare themselves for going university.

RESULTS AND DISCUSSION

Results

For first research question, a Pearson correlation matrix was obtained and analyzed for the two variables. The results presented in Table 1 showed that the academic self-concept and the academic motivation were positively and moderately significantly correlated ($p < 0/001$).

Table 1: Pearson Correlation between students' academic self-concept and academic motivation

variable	Academic Motivation	
	0/28**	r
Academic Self-Concept	0/001	Sig
	270	n

** Correlation is significant at the 0.01 level (2-tailed)

For testing the second research question, Pearson correlation were conducted. Results of Table 2 indicated no significant relation between academic motivation and academic achievement, whereas significant relations were observed for academic self-concept and academic achievement

Table 2: Correlations between academic self-concept, academic motivation, and academic achievement

Variable	Academic self-concept	Academic Motivation	
Academic	0.28**	-0.05	r
Achievement	0.001	0.47	Sig

Descriptive statistics and independent samples *t*-tests were conducted to examine whether or not the gender differed statistically significantly with respect to academic self- concept and academic motivation. Results of these analyses are presented in Table 3. The results of independent samples *t*-tests indicated that the girl students had statistically significantly higher academic self- concept than did boys students, ($p < .001$). However, no statistically significant differences were found between students boys and girls with respect to their academic motivation ($p < .48$).

Table 3: T- Test analysis between girls and boys in academic self-concept and academic motivation

Variable	Gender	M	Std. Dev	t	df	Sig
Academic self-concept	Boy	43.33	5.86	-4.32	268	0.001
	Girl	46.40	5.73			
	Boy	95.63	15.06			
Academic Motivation	Boy	95.63	15.06	0.71	268	0.48
	Girl	94.31	15.37			

To address the forth question of the study, hierarchical multiple regression analyses were conducted for the samples. Academic achievement was the dependent variable. The predictor variables, academic motivation and academic self-concept were entered into the equation. When these two variables included in the equation, academic self-concept explained a statistically significant amount of the variance in academic achievement, Adjusted $R^2 = .07$, $F (16.23)$, $p = .001$.

The regression analyses, after accounting for academic achievement, revealed that academic motivation was not statistically significant predictor of academic achievement for the high school students, whereas academic self-concept was a positive predictor of academic achievement for the students (Table 4).

Table 4: Brief Regression for Predicting variables with Academic achievement

Model	Predictor Variable	R	R ²	R ² _{adj}	Std.E of the Estimate
1	Academic self-concept	0.28	0.08	0.07	2.05

Criteria variable: academic achievement

Thus, considering this result from multiple regression analyses, we concluded that academic self-concept as a predictor variable had a important role in students' academic achievement.

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Conclusion and Discussion

The purpose of the present study was to examine the relationship between academic self-concept, academic motivation and academic achievement among boys and girls high school students in Urmia city. Our results provide clear evidence that academic self-concept does predict students' academic achievement. Whereas the contribution of academic self-concept was stronger for academic motivation, the effects were also highly significant for examination test scores. The findings of the study also indicated that academic motivation was not related to academic achievement among high school students. There were gender differences in the academic self-concept benefit for girls students. Even though girls had higher academic self-concepts than did boys, there was not any difference between girls and boys regarding academic motivation.

Marsh and others with using reciprocal effects models of longitudinal data from 2 nationally representative samples of German 7th-grade students showed that academic self-concept had a causal effect on students' achievement (Marsh *et al.*, 2005).

Results of hierarchical multiple regression analyses of Areepattamannil, showed that intrinsic motivation, extrinsic motivation, and a motivation were not statistically significantly related to mathematics achievement among Indian adolescents in India (Areepattamannil, 2014). He argued that no association between academic motivation and mathematics achievement reiterates the need for teachers and parents to support students' autonomy. As Reeve contends, "When students learn out of curiosity and the desire for optimal challenge, they are more engaged in and satisfied with their learning. They further better understand the material they are trying to learn and are more likely to stay in school (Reeve, 2009).

The literature review and the empirical investigation indicated that in some cases motivation plays a role in the academic achievement of students and in other cases it does not. Coetzee also found that there was no significant relationship between motivation and academic achievement in the first, second, third and fourth year university students (Coetzee, 2011).

In general, this results support numerous research findings that academic self-concept is an important determinant of students' academic performance (Choi, 2005; Marsh *et al.*, 2002; Muijs, 1997). Since academic self-concept is formed through a person's experiences and interaction with the environment, the lack link between academic self-concept and academic motivation suggests that motivation is also subject to change. A wide range of factors may contribute to the formation of the students' motivation. Motivation to learn may involve not only learners' self-perceptions but also learners' reciprocal relations with teacher, school, and classroom environmental factors. Thus, there is always hope for more effort to enhance students' learning motivation. In addition, motivation may also be a function of various components at learning situation level, including course-specific, teacher-specific, and group-specific variables (Dörnyei, 1994). It would be helpful to include different domains or other aspects of motivational variables in future research.

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