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Survey on relationship between goal orientation and learning strategies with academic stress in university students

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Abstract

This study examine the relationship between goal orientation and learning strategies with academic stress in university students(150 male and 150 female) which were selected among 4 college by cluster sampling method. Goal orientation questionnaire (Button, Mathieu and Zajac, 1996) and learning strategies questionnaire (Pintrich and Degroot, 1990) and academic stress questionnaire (Gadzella, 1991) were used as the research instrument. Finding show that there was a positive meaningful relationship between learning goal orientation with learning strategies (cognitive and met cognitive) and academic stress. Also there was negative meaningful correlation between performance goal orientation and learning strategies (cognitive and Meta cognitive). These finding also reveals that learning strategies (cognitive and Meta cognitive) have negative meaningful correlation with academic stress. Finally findings displays that academic stress is predictable through linear regression of goal orientation component and learning strategies. So totally these variables were explained 9/6 percent of the variance of academic stress.
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1. Introduction

The concept of goal orientation was first proposed in 1980s in the studies that Dweck and his colleagues performed on the primary school children. They show that students follow two main goals in their activities: 1) development of abilities, 2) displaying the abilities. Goal orientation indicates a coherent pattern of individual's beliefs which causes the individual to have tendency for learning situations in different ways, to have activity in that field and finally to show a response (Ames, 1992, Elliott and Dweck, 1988). Dweck distinguishes between two kinds of goal orientation which are learning-focused goal orientation and performance-focused goal orientation. Learning-focused goal orientation involves prioritizing goals which contain new skills and learning skills for unfamiliar situations. Learning-focused goal orientation leads to an adaptive behavioral pattern in which the individual looks for challenges in the tasks. In order to gain the skill, they would show more consistency and less stress when they face any obstacle in doing the task. In contrast, performance-focused goal orientation involves prioritizing goals which help the individual to express his/her competency and qualification and to look for the desirable judgments and evaluations of others towards him/her. These individuals avoid engaging with challenges and prevent the challenging tasks due to the possibility of failure and they experience more stress (Brown and Gerhardt, 2006). The individual who apply the approaches of performance-focused goal orientation either look for the admiration and approval from others or refuse to accept the admiration. Therefore, performance-focused goal orientation can be divided into avoidance and acceptance goal orientations. The individual who take acceptance goal orientation express their tendency toward progress through evaluation of their own competencies and qualifications; while individual who take avoidance goal orientation do not express their competencies with the aim of escaping critiques. The learners with learning-focused goal orientation mainly use learning and study strategies or in technical terms

cognitive strategies (Button et al., 1996). According to the ideas by Pintrich and Degroot (1990) the learners who have high academic stress would apply effective learning strategies more frequently in relation to the learners with lower stress. Various studies reveal that the learners who use deeper strategic approaches would reach better learning results and experience less academic stress in comparison to the learners who use superficial strategic approaches (Weinstein et al, 1987, adapted from Dahl, 2005). The studies led in the field of cognitive psychology indicate that the learning and study strategies and goal setting could improve the students' academic performance through reducing the level of academic stress. Identifying these strategies could be a significant step for appropriate academic interventions and could improve students' achievements through determining the strengths and weaknesses in their study and providing them with adequate interventions (Pros et al., 1995 adapted from Dahl, 2005). One of the potential problems of each academic system could be the issue regarding failure in education achievements and the academic stress. The studies which have been done on this topic have shown a positive relationship between academic success and some of the learning and study strategies applied by the students (Mayo et al., 1993 adapted from kardum and Krapic, 2001). King and his colleagues (1987; adapted from kardum and Krapic, 2001) define stress as negative emotion which is related to the doubt about confrontation. It seems that this definition is closely related to the stress in field of education because in such condition the students are increasingly expected to confront higher amounts of tasks and this can cause the ground for doubting about "self". Smith (1998 ,adapted from Misra et al., 2000) considers academic stress as an affective state which includes test anxiety, lack of academic achievement, and experience of discordant emotions, inattention and lack of goal setting. Academic stress indicates to the increasing need for knowledge and at the same time individual's perception about lack of enough time for gaining that knowledge. Mores (1990, adapted from Gadzella and Baloglu, 2001) emphasizes the five elements of stress (frustration, conflict, pressures, changes, and self-imposition) as well as the four reactions to these elements (physiological, behavioral, cognitive, and emotional). The results of various studies show that individual's reaction to experiencing the academic stress, or in other words experiencing the academic emotions in physiological, emotional, behavioral, cognitive, and motivational dimensions are worth investigating. For example, Allis and Shborg (1988, adapted from Pekrun et al., 2002) find out that experiencing negative emotions like stress and anxiety would arise thoughts unrelated to the task and would lead to the thinking pattern based on details and superficial processing of information, so that experiencing the mentioned emotions seem to be among the reasons for using and reducing significant cognitive resources. According to what stated before, it can be concluded that the external elements which affect academic stress include: high expectations for achievement, performance-based goal orientation, class competition, lack of effective use of learning strategies and etc.

On this basis, the present study investigates the relationship between the components of goal orientation and learning strategies (cognitive and meta-cognitive) on the one side and the academic stress on the other side in order to probe the question that whether there is any relationship between these variables and academic stress and to what degree these variables are able to predict and explain the academic stress of university students. Beside this main goal, this study also investigates the relationship between components of goal orientation and learning strategies.

Study method

The population for the present study included all of the BA students who studied in Tarbiat Moallem University. The subjects for this study include 300 students from Tarbiat Moallem University (150 males and 150 females) who were selected from four faculties by the cluster sampling method.

Study instrument

Goal orientation Questionnaire

The Goal Orientation Questionnaire which includes 16 items was devised by Button, Mathieu and Zajac (1996). In 2003 this questionnaire was translated to Persian by Gholami and it was also normalized and the reliability coefficient which was equal to .82 was calculated through cronbach alpha. In order to determine its construct, the factor results indicated that the correlation coefficient between questions was suitable and the instrument included two factors. The value assigned to factors was acceptable and this instrument is able to explain .82 of variance for goal orientation. In a study by Arabzadeh (2007) the reliability coefficient this questionnaire was reported as equal to .78 based on cronbach alpha. The reliability coefficient of this questionnaire was equal to .76 which was also calculated through cronbach alpha.

Learning Strategies Questionnaire
This questionnaire includes 21 items and it was devised by Pintrich and Degroot (1990) for evaluating cognitive and meta-cognitive learning strategies. The items for this questionnaire are devised on a likert scale (from completely agreed to completely disagree). These items are based on instruments which are used for evaluating the cognitive and meta-cognitive learning strategies. This questionnaire was used in several studies in Shiraz University. Reliability coefficient of .71 has been reported for this questionnaire by Noshadi (2001). For the present study, the reliability coefficient of this questionnaire was calculated based on cronbach alpha which was equal to .79.

Student –Life Stress Inventory (SLSI):
 Gadzella (1991, adapted from Gadzella and Baloglu, 2001) devised this instrument with the aim of investigating the factors which cause stress in students' life and their response to these factors. This is a self-report instrument which includes 51 questions in 9 levels. This instrument is based on the theoretical model offered by Moris (1990, adapted from Gadzella and Baloglu, 2005). This model evaluates 5 types (levels) of stress provoking factors (frustration, conflict, pressure, change, and self-imposition) and 4 classifications of responses to these factors (physical, emotional, behavioral, and cognitive evaluation). Matud (2004) report cronbach alpha for the sub-scales of frustration, conflict, pressure, change, and self-imposition stress as equal to .65, .63, .71, .75, and .63 respectively. The total reliability coefficient of this questionnaire which was equal to .72 was calculated for the present study through cronbach alpha.

Statistical Method

Table 1: mean and standard deviation of scores for variables under study

Variables	Mean	Standard deviation	No.
Learning-focused goal orientation	29.65	5.4	300
Performance-focused goal orientation	30.72	5.51	300
Cognitive strategies	34.27	4.15	300
Meta-cognitive strategies	37.48	4.87	300
Academic stress	59.45	5.61	300

Table 1 represents the mean scores of students for the variables of learning-focused goal orientation, performance-focused goal orientation, cognitive strategies, meta-cognitive strategies, and academic stress.

The results of correlation matrix show that there is positive and significant relationship between of learning-focused goal orientation on the one side and cognitive and meta-cognitive learning strategies on the other side. It also shows that there is positive and significant relationship between performance-focused goal orientation and academic stress. These results also indicate that there is negative and significant relationship between learning-focused goal orientation, cognitive and meta-cognitive learning strategies on the one side and performance-focused goal orientation and academic stress on the other side.

Table 2: matrix of correlations between variables under study

Variable	1	2	3	4	5
Learning-focused goal orientation	1				
Performance-focused goal orientation	.415**	1			
Cognitive strategies	.854**	.278*	1		
Meta-cognitive strategies	.827**	.312*	.765**	1	
Academic stress	.243**	.178*	.541**	.487**	1

$** P < .01$ $* P < .05$

Multiple regression analysis was used in order to identify the role of the components of goal orientation and study strategies in prediction of academic stress. As it can be seen from the regression analysis table, academic stress is predictable through linear combination of the variables learning-focused goal orientation, performance-based goal orientation, cognitive strategies, and meta-cognitive strategies. These variables explain 9.6 percent of the variance for academic stress.

Table 3: regression analysis for predicting academic stress through components of goal orientation and learning strategies

Source of change	SS	df	MS	F	R^2	Sig.

Regression	716.51	4	358.256	9.374	.096	…..
Remain	11349.87	295	38.215			
Total	12066.387	295				

Summary and Conclusion

The results for this study show that there is positive and significant relationship between components of learning-focused goal orientation and learning strategies which include cognitive strategies and meta-cognitive strategies. To explain these findings it could be said that students who consider learning to be important, engage in active learning process and have tendency to use deep cognitive processing for achieving it. For this reason, they take cognitive and meta-cognitive strategies into consideration; accordingly it is reasonable to say that there is positive relationship between cognitive and meta-cognitive strategies. In other words, students with learning-focused goal orientation tend to use cognitive and meta-cognitive strategies and findings of this study also confirm this facet. On the contrary, students with performance-focused goal orientation do not prioritize learning and its process, they mainly tend to have a better performance in comparison to others and consider score and other external motivations as important and valuable. As the results indicate, there is negative and significant relationship between learning-focused goal orientation and academic stress of students. The findings show that students who mainly focus on learning and its process experience less academic stress because they consider learning as a process in which they can express their competencies and qualification, and have consistency and tolerance in achieving their goals, therefore internal motivations explain their behaviors and attempts better than external motivations. On the other hand, the findings of the study show that there is positive and significant correlation between performance-focused goal orientation and academic stress of students. In order to explain these findings it could be said that learners who consider performance and external motivations such as score to be important, would evaluate any possible failure and frustration negatively. These findings are in agreement with results of other studies like Pintrich and Degroot (1990), Button et al. (1996), and Brown and Gerhardt (2006).

The findings of the present study also reveal a negative and high correlation between cognitive and meta-cognitive strategies on the one side and academic stress on the other side. This indicates to the important point that cognitive and meta-cognitive strategies effectively influence academic stress and is a significant predictor for academic stress of students. To explain this point it could be said that the learners who use cognitive and meta-cognitive strategies in their learning process are self-regulated learners who can effectively apply their cognitive abilities in different academic conditions. These learners believe that they have enough knowledge about the subjects and are able to change their learning strategies according to the type of task; therefore they experience less academic stress.

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