



The Comparison of Goal Orientation, Academic Achievement and Self-regulation in Students with Related and Non-Related Bachelor's Degrees

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Abstract: This study was conducted to “compare goal orientation, academic achievement and self-regulation (motivational beliefs and self-regulated learning strategies) among MA students of psychology with related and unrelated bachelor’s degrees. In doing so, multi-stage random sampling was used to identify all the branches of Islamic Azad University in districts 8 and 12 offering an MA in psychology. Then, three universities were randomly selected through stratified disproportionate sampling (gender as a stratum) and using a formula based on confidence interval, 200 MA students of psychology (100 students with related BAs and 100 students with unrelated BAs) were selected as sample members. To collect the data, the Achievement Goals Questionnaire (AGQ) developed by Elliot and McGregor and Motivational Strategies for Learning Questionnaire (MSLQ) were used with the average scores of students in the previous semester. For data analysis, descriptive and inferential statistics (i.e. MANOVA and t-test) were employed. The results of the multivariate analysis of variance showed that there is a significant difference between the components of motivational beliefs in these two groups and a significant difference was found between their academic achievements. As such, the mean value of motivational beliefs and academic achievement is higher in students with irrelevant BAs. Moreover, no significant difference was found between the components of self-regulated learning strategies and goal orientation in any of these groups. Conclusion: The goal orientation of the MA students of psychology is mainly mastery-oriented and they use self-regulated learning strategies. What has contributed to this increase in the academic achievement of the group with irrelevant BAs includes motivational beliefs, emotional responses, intrinsic interest, and beliefs regarding work value. This can be attributed to the appeal of the academic field and the novelty of educational materials for these students.

Keywords: goal orientation, self-regulation, motivational belief, academic achievement, MA

INTRODUCTION

One of the most important goals of educational systems that has always been of interest to researchers is the education of motivated, purposeful, goal-oriented and competent learners. The science of psychology has played a major role in the area of motivation and learning by relying on the respective research findings. It has contributed significantly to the identification and understanding of human behavior and the promotion of human abilities (Rais-Sa’adi, 2007). The approach of goal orientation is one of the few approaches that try to explain the causes, reasons and purposes that learners pursue in their academic learning and other such behaviors. In any case, despite the existence of different approaches to motivation, goal orientation is the

most practical approach in understanding learning, the improvement of education, and dealing with students with educational assignments as it elaborates on what the learners and students believe with regard to the methods used for encountering and engaging in assignments (quoted by Babaei, 1998; Balavandi, 2001). This orientation in educational contexts determines the personal motivation in education. For the same reason, it influences the tendencies, actions, and reactions in learning contexts. Goal orientation should not be viewed as special goals considered in educational contexts of activities. These kinds of activities are simply one's incentives for learning a specific task. On the other hand, contrary to the educational goals based on individual similarities, goal orientation is based on individual differences in academic contexts while individual success can be predicted in these situations based on such differences (quoted by Sharifi Ardani et al., 2013; Barzegar et al., 2012). The latest evidence and hypotheses have focused on three goals including mastery-approach goals, approach-performance goals and avoidance-performance goals (by Barzegar et al., 2012), or they have even suggested four kinds of goal orientations, namely, mastery-approach, mastery-avoidance, performance-approach and performance-avoidance (quoted by Tajari et al., 2011).

Competency expectations predict mastery goals. The need for achievement predicts the performance-tendency goals and the fear of failure predicts performance-avoidance goals. Mastery and performance-tendency goals are generally related to achievement and positive results while this is not the case for performance-avoidance goals. This orientation in academic contexts determines one's motivation in education and thus influences his tendencies, actions and reactions in learning situations (Tajari et al., 2011). People with mastery orientations try to master the task, overcome challenges, or increase the level of competence while people with performance orientation try to achieve good grades or satisfy others (i.e. teachers, parents or others) (Samadiyeh, 2013). The avoidance-oriented feature of orientations also indicates a person's desire to approach or get away from the task in achieving the goal. According to this pattern in the mastery or learning goal orientation, the learners seek to strengthen their mastery of new subjects and focus on understanding the issues. They want to learn even when their performance is poor, therefore, they show perseverance in completing challenging tasks and tend to use self-regulated learning strategies. Moreover, they look for challenging tasks. The primary objective of such learners is to acquire knowledge and improve their skills and errors are considered as a natural part of the learning process. On the other hand, they are inclined towards topics that are inherently satisfying for them (Wolters et al., 1996; Bouffard et al., 1998; quoted by Jokar, 2005).

In the performance goal-orientation, the students try to compare their abilities to those of others and focus on how the others might judge them. They make an effort to appear clever and not incompetent and unworthy. Therefore, they avoid challenging tasks and show less persistence when they encounter such tasks. In this way, they avoid being judged as intellectually incompetent by avoiding these challenging tasks. Pleasing the others and succeeding with little effort are considered as their goals. Failures pose threats because they are perceived as evidence of incompetence and thus these subjects are less interested in self-regulated activities (Bouffard et al., 1998; quoted by Jokar, 2005). They rely on fewer learning strategies and look for external awards such as high scores (quoted by Kareshki, 2008). They focus on themselves, on others, and on failure and the personal aim is simply to avoid poor performance in education and courses (Harackiewicz et al., 1997; quoted by Aghdelavarpour, 2008).

On the other hand, researchers have studied other significant factors in educational progress such as self-regulation. Self-regulation is a construct that was introduced in 1967 by Bandura. The earliest studies in this area were based on self-regulation in the general sense that addressed the various personal, family and social qualities but this construct has been raised in the context of learning since the 1980s. Weinstein et al. (2010) argue that the learning strategies consist of activities and emotional, motivational, metacognitive, cognitive

and behavioral processes that facilitate one's understanding, learning and meaningful processing like the coherence and cohesion of new knowledge in one's memory. Learning strategies are the procedures that will assist people to learn how to learn and how to pursue their learning issues and make their learning more profound and effective. (quoted in Bembenutty et al., 2008) defines self-regulated learning as the learners' beliefs about their ability to engage in actions, thoughts, feelings and the pursuit of valuable educational goals. Pintrich believes that self-regulation is an active and organized process through which the learners regulate their own learning goals and try to monitor their cognition, motivation and behavior (Pintrich, 2004). In other words, with respect to self-regulation, we may point to two factors: the self-regulated learning strategies and motivational beliefs. Self-regulated learning strategies include the skills of self-instruction, self-questioning, self-monitoring and self-reinforcement that help learners to use cognitive processes and facilitate their learning. Accordingly, the self-regulated learning approach is the active, conscious and inclusive use of appropriate learning strategies that encompass a range of complex activities performed by learners to achieve learning objectives. These strategies range from trivial activities such as expert observation or rehearsals of an activity to broader process-like efforts like the detailed elaboration of information and linking new information to the previous knowledge (Montague, 2008). The other case is the motivational beliefs that include self-efficacy, intrinsic value, and test anxiety. Self-efficacy refers to a set of comprehensive beliefs about one's abilities in doing the assignments (Shank, 1998; quoted in Kajbaf et al., 2003). Intrinsic value refers to the importance that the learner attaches to a specific assignment or course or his attitude towards the assignment and the goal he or she pursues by studying it (quoted in Kajbaf et al., 2003). Test anxiety indicates the unpleasant feeling or emotional state followed by particular behavioral and psychological consequences as it is experienced before formal examinations or other official and evaluative contexts (Pintrich and de Groot, 1990; quoted in Kajbaf et al., 2003).

Various studies have been conducted on goal orientation, self-regulated learning and academic achievement. The results of the research performed by Pintrich and De Groot (1990) showed that there is a positive relationship between the acceptance of inner-mastery goals and the application of cognitive and metacognitive learning strategies. Other studies found that there is a positive relationship between the mastery goals adopted by students and cognitive and metacognitive learning strategies or their self-regulated learning (Elliott & McGregor, 2001; Pintrich, 2000; Kajbaf et al., 2003).

In their study, Shun and Yuyan (2008) concluded that there is a negative relationship between the performance-avoidance goals and cognitive-motivational engagement that is a component of self-regulation. However, the goal structures and mastery goals have a positive relationship with the components of self-regulation. In the study conducted by Pintrich & De Groot (1999), a negative or insignificant relationship was reported between the components of self-regulation and goal orientations.

Academic achievement is also of great importance as it is the behavioral outcome of achievement goals. The body of research focusing on the relationship between the purpose of mastery and academic achievement has reported conflicting data. In most cases, research findings have shown that the goal of mastery suggests no significant relationship with academic achievement (for example, Elliot & Church, 2001; Pintrich, 2000; Okun et al., 2006; Hejazi et al., 2003; Haqiqi et al., 2005). Nonetheless, there are also studies that have reported a significant and positive relationship between these two variables (for example, Wolters et al., 1996; Gutman, 2006). As regards the tendency-performance goal, multiple research findings lend support to a significant and positive relationship between this goal and academic achievement (Church et al., 2001; Elliot & Church, 1997; Elliott & McGregor, 2001; Harackiewicz et al., 1997).

Since psychologists are expected to have maximum knowledge, awareness and responsibility in carrying out their duties and gaining the required skills up to a standard level as expected from other careers and be

responsive to others and the society, they must have the necessary motivation and academic interest for educational progress and the fulfillment of duties in the future. In this way, one of the most basic ways of assessing their instruction is to investigate the interests and enthusiasm of this group for their academic field and its related variables. The main research question was whether there are any differences between goal orientation (i.e. mastery and performance components), academic achievement and self-regulation (i.e. the components of motivational beliefs and self-regulated learning strategies) among MA students of psychology with related or unrelated bachelor's degrees.

Method

The present research is a descriptive and causal-comparative study in which goal orientation, educational achievement and self-regulation of two groups have been compared (i.e. MA students of psychology with related and unrelated BAs). The statistical population of the present study consisted of all MA students of Psychology at Islamic Azad universities branches in 8 and 12 districts who were studying in 2013-14 educational years. The sample members were studying general and clinical psychology. In order to obtain an appropriate sample for data collection, the multi-stage, stratified, and disproportionate random sampling method was used (i.e. gender used as a category). To do this, the branches that offered an MA in psychology among the Islamic Azad University branches in district 8 and 12 were selected. Further, three faculties were selected randomly among these branches. As the population of MA students of Psychology is heterogeneous in terms of gender, the disproportionate stratified sampling was used to select the participants. To estimate the sample size, the formula based on confidence intervals was used and variance indices, the square of Z score, and the square of sampling accuracy (d) were calculated. Finally, 96 participants were selected as sample members and 100 subjects were allocated to each group for more accuracy. In this sample, there were 100 MA students of psychology with related BAs and 100 students with unrelated Bas. According to the approximate ratio of 80 to 20 percent and the number of female students studying psychology at these universities compared to male students (according to the education department of faculties) in each category (with related and unrelated bachelor's degrees), 80 female and 20 male students were allocated. In this study, to collect the data related to the subject, the Achievement Goals Questionnaire (AGQ) (Elliott & McGregor, 2001) and Motivational Strategies for Learning Questionnaire (MSLQ) were used (Pintrich & De Groot, 1990; Habibnezhad, 2008).

It is noteworthy that the mean scores of students in the previous semester were used to evaluate the variable of academic achievement. The goal orientation questionnaire is a self-report instrument that consists of 12 propositions. Goal orientation indicates the method used by individuals to define and assess their competence based on desirable criteria (Elliott, 1999). These goals do not demonstrate superiority over other goals; rather, they are different ways of approaching tasks. This questionnaire evaluates four scales (12 items) which include: 1 – Mastery goal, 2 – Mastery avoidance goal, 3 – Performance-oriented goal, and 4 – Performance-avoidance goal. Furthermore, the questionnaire of self-regulated learning strategies has been developed by Pintrich & De Groot. (1990) in the US National Research Center to improve teaching and learning in higher education. The measurement scale is the ordinal questionnaire. As for the inferential analysis of data and research hypotheses, the MANOVA statistical model and independent t-test were used with regard to the dependent variables and the comparison of two groups affected by multiple variables.

Results:

After examining the data through the data exploration relating to the both groups of participants, number 21 and 115 were excluded from the analysis for being outliers. The number of missing data was close to zero. In this section, the data derived from the measurement of various variables have been reported respectively in table 1 and 2 for both groups in terms of appropriate descriptive statistical methods such as the mean, standard deviation, and the parameters of distribution:

Table 1: The summary of statistical indicators related to the scores of the participants with relevant BAs for the variables of motivational beliefs (three components), self-motivated learning strategies (2 component), goal orientation (4 components), and academic achievement (n = 99)

Kurtosis	Skewness	SD	Mean	Components	Variables
0/656	-0/148	5/25	44/18	Self-efficacy	Motivational beliefs
-0/278	-0/377	5/45	42/12	Intrinsic value	
0/202	-0/474	4/78	33/87	Test anxiety	
0/304	-0/083	8/54	49/64	Cognitive strategies	Self-regulated learning strategies
0/408	-0/463	7/38	41/79	Self-regulation	
0/394	-0/858	2/64	17/74	Mastery-oriented goal	Goal orientation
-0/494	-0/228	4/32	12/81	Mastery avoidance goal	
0/299	-0/658	4/04	14/76	Performance-oriented goal	
-1/062	0/145	5/48	11/08	Performance-avoidance goal	
-0/912	-0/045	1/27	16/58	Academic achievement	Academic achievement

Table 2: Summary of statistical indicators related to the scores of the participants with irrelevant BAs for the variables of motivational beliefs (three components), self-motivated learning strategies (2 component), goal orientation (4 components), and academic achievement (n = 99)

Kurtosis	Skewness	SD	Mean	Components	Variables
-0/523	-0/072	4/81	44/31	Self-efficacy	Motivational beliefs
0/331	-0/531	4/82	43/76	Intrinsic value	

-0/097	-0/510	3/90	35/48	Test anxiety	
0/580	-0/347	7/95	51/18	Cognitive strategies	Self-regulated learning strategies
0/050	-0/647	6/19	43/20	Self-regulation	
-0/264	-0/800	2/69	18/05	Mastery-oriented goal	Goal orientation
-0/814	-0/369	4/96	13/12	Mastery avoidance goal	
0/270	-0/455	3/98	14/77	Performance-oriented goal	
-0/617	0/559	4/84	10/00	Performance-avoidance goal	
0/993	-0/783	1/03	17/62	Academic achievement	Academic achievement

Different descriptive indexes including the mean, standard deviation, skewness, and Kurtosis particularly show that the score distribution of the group with related degrees and unrelated degrees are inclined towards a normal distribution in the measured variables.

The multivariate analysis of variance was used to evaluate the hypothesis that there is a difference between goal orientation (four components including mastery-oriented goal, mastery avoidance, performance-oriented goal and performance avoidance goal) of MA students of psychology and their relevant or irrelevant bachelor's degrees. According to the obtained F value (0.990) and its significance probability (0.449), we may conclude that the data have not violated the homogeneity assumption of variance-covariance matrix. Moreover, according to the chi-square value which is (228.649) and its significance probability (0.001), it can be concluded that there are significant correlations between the dependent variables and, based on the results of Levene test, the assumption of the equality of error variances is confirmed for both variables.

Table 3: Summary of multivariate tests of goal orientation

P	Error degree of freedom	Degree of freedom	F	Values	Tests	Effect
0/472	192	4	0/889	0/018	Pillai's effect	Groups
0/472	192	4	0/889	0/982	Wilks's lambda	
0/472	192	4	0/889	0/019	Hotelling's effect	
0/472	192	4	0/889	0/019	Roy's largest	

root

Due to the results of multiple tests, especially Wilks’s lambda (0.982) and the calculated F (0.889) with 192 and 4 degrees of freedom, the null hypothesis cannot be rejected (Sig = 0.472). In other words, the difference of mean scores concerning the four mastery-oriented goals, performance-oriented and performance avoidance goals of MA students with a related and unrelated bachelor’s degree is not significant and it is not possible to distinguish between the MA students with related and unrelated BAs based on these four goal orientations.

As regards the comparison of motivational beliefs between these two groups, with respect to the obtained F value (1.961) and its significance probability (0.067), it can be concluded that the data have not violated the homogeneity assumption of variance-covariance matrix. Moreover, according to the chi-square value which is (11.962) and the its significance probability (0.001), it can be concluded that there is a significant correlation between the dependent variables and the assumption of the equality of error variances is confirmed for three variables based on the results of Levene test.

Table 4: Summary of multivariate tests of motivational beliefs

Eta square	P	Error degree of freedom	Degree of freedom	F Values		Tests	Effect	
0/059	0/008	194	3	4/055	0/059	Pillai’s effect	Groups	
0/059	0/008	194	3	4/055	0/941			
0/059	0/008	194	3	4/055	0/063			Hotelling’s effect
0/059	0/008	194	3	4/055	0/063			Roy’s largest root

With regard to the results of multiple tests and especially Wilks’s lambda (0.941) and the calculated F (4.055) with 194 and 3 degrees of freedom, the null hypothesis can be rejected ($p < 0.01$). In other words, the mean differences of the scores of the three components of self-efficacy, intrinsic value, and test anxiety among MA students with related or unrelated bachelor's degrees is significant. Based on the three factors of motivational beliefs, it is possible to distinguish between the MA students with related and unrelated bachelor's degrees. The effect size of difference is weak (0.059) according to the Chi-square value.

Table 5: Test summary of effects between participants

Eta square	F	MS	2 df	1 df	SS	Dependent variables sources
0/001	0/034	0/854	196	1	0/854	Self-efficacy Group

0/025	□5/052	134/187	196	1	134/187	Intrinsic value
0/033	□□5/052	127/682	196	1	127/682	Test anxiety

Significant at 0.05 level* Significant at 0.01 level; **

According to the results of tests concerning the subjects (F values and their significance levels), we can conclude that there is a significant difference between the mean scores of MA students with related and unrelated bachelor's degrees in the two components of intrinsic value and test anxiety.

As for self-regulated learning strategies, according to the obtained F value (1.034) and the probability of its significance (0.067), it can be concluded that the data have not violated the homogeneity assumption of variance-covariance matrix. Moreover, based on the chi-square value which is (145.406) and the significance probability which is (0.001), it can be concluded that there is a significant correlation between the dependent variables and the results of Levene test confirm the assumption of the equality of error variances for the two variables.

Table 6: The summary of multivariate tests

P	Error degree of freedom	Degree of freedom	F	Values	Tests	Effect
0/328	195	2	1/121	0/011	Pillai's effect	Groups
0/328	195	2	1/121	0/989	Wilks's lambda	
0/328	195	2	1/121	0/012	Hotelling's effect	
0/328	195	2	1/121	0/012	Roy's largest root	

With regard to the results of multiple tests and especially Wilks's lambda (0.989) and the calculated F (1.121) with 195 and 2 degrees of freedom, the null hypothesis cannot be rejected (Sig=0.328). In other words, the mean differences of the scores of the two components of cognitive strategies and self-regulation among MA students with related or unrelated bachelor's degrees is not significant. Based on the two components of self-regulated learning strategies, it is not possible to distinguish between the MA students with related and unrelated bachelor's degrees.

Finally, the t-test was used to assess the differences of academic achievement between the students from the two groups that were studied and the results are given in Table 7:

Table 7: Summarized results of the test of independent groups

p	t	Degree of freedom	F	SD	Mean Number	Groups	Variable
				1/27	16/58	99	
							Relevant
0/001	6/252	188/002	10/58 3				Academic achievement
				1/03	17/62	99	
							Irrelevant

Significant at 0.01 level **

According to the calculated t value (6.252) and significance level (0.001) with the degree of freedom calculated as 188.002, the null hypothesis can be rejected with at least 99% confidence (P > 0.05). In other words, the difference in the average of academic achievement (average) is significant among MA students with related and unrelated bachelor’s degrees.

Discussion:

The present study was conducted to compare “the goal orientation, academic achievement and self-regulation (self-regulated learning strategies and motivational beliefs) in MA students of psychology with relevant and irrelevant bachelor’s degrees”. According to the mean value of the component of goal orientation for students with relevant degrees, the mastery-oriented goal had the highest score compared to other components with a 17.74 average. Additionally, in the table dealing with students with unrelated university degrees, the mean score of the mastery-oriented goal was higher than the other components of goal orientation with an 18.05 mean. It can be concluded that goal orientation was largely based on mastery and competence among the MA students of psychology (with related or unrelated bachelor's degrees). To explain this particular finding, it can be asserted that the MA students of psychology attempt to become competent in concepts and learning materials and the expectations of competency and gaining skills have led them to make an effort to achieve their goals regardless of the fact that their bachelor’s degrees are related or unrelated. This corroborates the definitions provided for the mastery goals which are based on learning and perception, knowledge and new skills development, and the enhancement of competency and achievements according to the criteria determined by the individual (Akin, 2012). This is consistent with the findings of preceding studies conducted by Keys et al. (2012), Walters et al. (1996), and Gutman (2006) which showed that there is a significant and positive relationship between academic achievement among university and high school students with mastery-oriented goals. This finding does not corroborate the results of other studies concluding that the mastery goal has no significant relationship with academic achievement (Elliot & Church, 2001; Okun et al., 2006; Hijazi, Abdulvand & Vamamivard, 2013; Haqiqi et al., 2005). This can be due to personality traits, culture, social fabric, competitiveness, and the structure of learning environment that encourage people to adopt performance goals to demonstrate their ability and competence and seek social acceptance.

As shown above, it can be concluded that students with an irrelevant bachelor's degree have scores which are higher than those of the students with relevant BAs. Self-efficacy, intrinsic value, and emotional reactions

that are three components of motivation and motivational beliefs are essential to lead the students towards learning and achievement (Pintrich & De Groot, 1990). Kesisi and Erdogan (2009) stated that if students want to be successful, they should have motivational beliefs such as compatible trend patterns, higher levels of self-efficacy and intrinsic motivation and incentives (quoted in Jafar Tabatabaee et al., 2012). To explain these findings, it can be said that interest is the most important factor in selecting the academic field of study in the majority of students of psychology with irrelevant BAs and the cause of their higher motivational beliefs can be attributed to their interests. The course topics and the subject matter are more interesting for these students and therefore they give more value to their assignments which is followed by higher perceptions of self-efficacy and emotional reaction.

On the other hand, with regard to self-regulated learning strategies, the difference of the mean scores of two components, namely, the cognitive and self-regulated strategies of MA students of psychology with related and unrelated bachelor's degrees is not significant. Therefore, the MA students of psychology with related or unrelated BAs cannot be distinguished based on these two factors. Self-regulated learning strategies are procedures that assist people in learning how to learn and how to continue their learning issues and making their learning more profound and effective. Bouffard et al.(1998) and Elliott and Harackiewicz (1997) showed that as the orientation of learners is more concerned with avoiding failure, they have less self-regulation and academic achievement. Given that the goal orientation among the students (with related or unrelated BAs) was mastery-oriented and there was no significant difference between the groups in terms of self-regulated learning strategies, it can be concluded that students who have mastery-oriented goals take advantage of self-regulated learning strategies. This finding is consistent with the results of Shun and Yuyan (2008), Eliot and McGregor (2001), Pintrich (2000), Kajbaf et al. (2003), Tajari et al. (2011). To explain these findings, it can be said that mastery-oriented individuals adopt strategic thinking and take actions accordingly. Thus, mastery-oriented students often use the self-regulated strategies which are more practical in educational contexts.

In another section, the research results showed a significant difference between the mean scores of academic achievement among MA students with related and unrelated BAs. According to the mean scores of these two groups, the academic achievement was higher in MA students with unrelated BAs as compared to their counterparts that held a relevant BA. To explain this finding, it can be stated that as the second hypothesis has been confirmed indicating that the mean scores of motivational beliefs in students with irrelevant bachelor's degrees are higher than their counterparts with related university degrees, it can be concluded that motivational beliefs have a significant relationship with academic achievement. Therefore, as the students with irrelevant BAs have stronger motivational beliefs, their academic achievement is greater than students with related BAs. The results of the research performed by O'keef & Linnenbrink-Garcia . (2014) have also demonstrated that high levels of performance at an optimal level is associated with interests related to the creation of personal concepts.

The present study has a number of limitations which include the following cases. The study relied on questionnaires and self-reports to collect the data and interviews have not been used. Moreover, given the investigation of the questionnaires, it seems that the type of academic field in the BA program has affected the variables as the types of BA programs have not been considered in this study. On the other hand, this study has focused on scores to measure academic achievement and, accordingly, their average scores have been considered. This is the final performance of students and does not reflect the real process of learning as it might have mental or behavioral biases and enjoy less objectivity compared to standardized tests.

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