The Relationship between Goal Orientation Dimensions, Critical Thinking and Achievement Motivation with Students’ Academic Performance

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Abstract
This study tries to examine the relationship between goal orientation dimensions, critical thinking and achievement motivation with academic performance of the female students of Islamic Azad University of Ahvaz in the academic year 2015. The research statistical population is comprised of 265 students who were selected using multistage random sampling, and the inventories namely Midgley’s Goal Orientation Dimensions (1998), the California Critical Thinking Skills Test (1997), Gizli Achievement Motivation (1971) were distributed among them. The data analysis results obtained using Pearson’s correlation coefficient and multiple regression showed that there is a significant relationship between academic performance with mastery-oriented goal orientation, critical thinking, and achievement motivation. There is a significant inverse relationship between academic performance with performance-approach oriented goal orientation dimensions and performance-avoidance oriented dimensions. In addition, the results obtained from regression analysis using multiple entry, multi-variable correlation coefficient for linear combination of goal orientation dimensions (mastery, performance-approach, avoidance-performance), critical thinking and achievement motivation with academic performance of female students was obtained to be MR= .494 ad RS=.244, which are significant at the level p< 0.000. Furthermore, part B Table 7-4 shows that among the goal orientation dimensions (mastery-, performance-approach, performance-avoidance), critical thinking and achievement motivation as predictor variables, only the goal orientation dimensions (mastery), critical thinking and achievement motivation are the predictors of academic performance.

Keywords: Goal Orientation Dimensions; Critical Thinking; Achievement Motivation; Academic Performance.
Introduction
Higher education has always been encountered with some problems in the field of education and research, and accomplishment of pre-determined goals largely depends on the success rate of students. For some reasons, students do not take advantage of research and educational facilities equally, so that in most universities, there are students that will encounter problems every year due to educational failure (Sharifian, 2012). On the other hand, learning and growth and thus academic performance are influenced by hereditary and environmental factors such as individual, sexual, familial, linguistic, economic, social, and personality differences (Parsa, 2013). Among the factors that affect the growth and development of children, the family plays a more effective role, while culture and sub-cultures in a society (such as socio-economic class) usually do not have a direct impact on children, but they generally impact child development and academic performance (Ramezani, 2012). The practitioners in the area of education have underlined an examination of the factors affecting academic performance during the past three decades more than ever before (Hattie and Timperley, 2007).
Throughout the world, issue of student academic performance has been considered at the core of educational development programs (Lindeman and Duek, 2001). Academic performance at the university is an issue that has occupied the mind of community’s leaders and managers, hence researchers. The issue that what factors can influence students’ academic progress and success, or what would be the contribution of each factor, has always been of interest to researchers practicing in the area of education and even educational psychology. Several factors can affect student academic performance or contribute to its promotion or impairment. Promote educational status, on the one hand, requires knowledge of students' talents and capabilities, and on the other hand, is dependent upon the removal or reduction of some barriers placed in the way of the performance of this group of people (Shokrkon, Hashemi Sheikh Shabani, and Najarian, 2005).
Critical thinking as one of the broadest concepts is of particular significance in the field of education. Critical thinking has an intricate mental process and structure, thus, there is no single definition on it, and every specialist can have a specific definition of the term. In defining argumentative thinking, it is stated that this type of thinking that underlines the decision to do something or to believe in something is built upon a careful evaluation of events and evidence, and achieves concrete results by taking into account all relevant factors. Furthermore, it is a type of critical, logical and thoughtful thinking regarding the problems that have more than a single solution (Athari Esfahani, 2007). Apparently, the people who have high achievement motivation goal orientation benefit from critical thinking to improve and enhance their academic success. The consequences of goal orientation dimensions, creative thinking and success motivation include achieve academic, career, family and social success. The current article seeks to explore the relationship between goal orientation, critical thinking and achievement motivation with academic performance of students in Islamic Azad University of Ahvaz in the academic year 2015.

Method
The statistical population in the current research is composed of 876 female students of psychology in Islamic Azad University of Ahvaz in the academic year 2015, which 265 of them were selected based on Morgan table. Sampling method in this research include multi-stage
random sampling. Accordingly, to perform data collection, out of associate, undergraduate and graduate degrees, undergraduate students were selected. Then, out of the fields in Islamic Azad University, the ones relevant to humanity sciences were selected, and then psychology was randomly selected. Afterwards, out of the fresh female students, the students entering the college in 2014 were randomly selected, and out of these students, 265 students were randomly selected.

Measurement Tools
Academic goal orientation questionnaire
In this study, academic goal orientation questionnaire proposed by Midgley et al. (1998) was used which has 18 items and 3 subscales including mastery-oriented, performance-approach oriented, performance-avoidance oriented goal orientation dimensions. Answering the items is based on seven-point Likert scales namely quite right (with a score of 7) and quite wrong (score 1). The tool’s validity was confirmed based on confirmatory factor analysis and Cronbach's alpha. In the research performed by Atarodi and Kareshki (2013), reliability coefficient of the tool based on Cronbach’s alpha was 0.82. In addition, alpha coefficient for performance-approach factor was 0.83, mastery factor 0.72, and performance-avoidance factor 0.71.

California Critical Thinking Skills Questionnaire (CCTST-B)- Form B
The questionnaire used in the current research includes California Critical Thinking Skills Test (form B). The test contains 34 4- or 5-item questions. The questionnaire was developed in 1997 by Fasion and is now one of the most practical and critical assessment tools of critical thinking skills that has been translated into Persian, and some changes have been made on it to be able to assimilate it with cultural conditions (Fasion, 1997). Khalili (1996) examined the test’s validity and reliability, such that, based on Kuder-Richardson, the reliability of the test was obtained to be 0.62.

Achievement Motivation Questionnaire
On the basis of experimental and theoretical knowledge about the need to progress and with a review of previous research relevant to the topic, Hermans (1970) designed the Achievement Motivation Questionnaire. Firstly, he provided 92 items for the questionnaire, and finally to determine the questionnaire’s coefficient correlation, he designed a 29-item achievement motivation questionnaire. Ability to achieve high score from this set of items indicates the high level of individual achievement motivation, and low scores indicate low achievement motivation. To calculate the questionnaire’s validity, two methods namely Cronbach test and test-retest were used.
Findings

Table 1: Mean, standard deviation, the subjects’ min/max scores in the variables relevant to goal orientation dimensions (mastery, performance-approach, and performance-avoidance), meta-cognitive beliefs, family emotional atmosphere with avoidance of the female students’ academic help seeking.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Variance</th>
<th>Min.</th>
<th>Max.</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery-oriented Goal Orientation</td>
<td>20.4</td>
<td>10.8</td>
<td>4</td>
<td>42</td>
<td>265</td>
</tr>
<tr>
<td>Orientation Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance-Approach oriented</td>
<td>24.3</td>
<td>12.4</td>
<td>5</td>
<td>42</td>
<td>265</td>
</tr>
<tr>
<td>Goal Orientation Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance-Avoidance oriented</td>
<td>31.2</td>
<td>7.1</td>
<td>14</td>
<td>42</td>
<td>265</td>
</tr>
<tr>
<td>Goal Orientation Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>34.5</td>
<td>12.5</td>
<td>20</td>
<td>77</td>
<td>265</td>
</tr>
<tr>
<td>Achievement Motivation</td>
<td>50.1</td>
<td>15.06</td>
<td>20</td>
<td>77</td>
<td>265</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>36.2</td>
<td>15.8</td>
<td>11.2</td>
<td>18.7</td>
<td>265</td>
</tr>
</tbody>
</table>

Based on the above table, mean, SD, the female students’ minimum and maximum score in terms of the goal orientation variables is 10.8 and 20.4; performance-approach is 24.3 ad 6.5, performance-avoidance 7.1 and 21.2, critical thinking 12.5 and 34.5, achievement motivation 15.06 and 50.1, academic achievement 15.8 and 36.2.

The findings related to research hypotheses

The current research includes the following hypotheses, which each hypothesis along with the results obtained from its analysis are presented in this part.

**Hypothesis 1:** there is a relationship between mastery-oriented goal orientation and female students’ academic performance.

**Hypothesis 2:** there is a relationship between performance-approach oriented goal orientation and female students’ academic performance.

**Hypothesis 3:** there is a relationship between performance-avoidance oriented goal orientation and female students’ academic performance.

**Hypothesis 4:** there is a relationship between critical thinking and female students’ academic performance.

**Hypothesis 5:** there is a relationship between achievement motivation and female students’ academic performance.
Table 2: Pearson correlation coefficient between the dimensions namely goal orientation (mastery, mastery-performance, and performance-avoidance) with female students’ academic performance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>P</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery-Oriented Goal Orientation Dimensions</td>
<td>.401</td>
<td>.0001</td>
<td>265</td>
</tr>
<tr>
<td>Performance-Approach Goal Orientation Dimensions</td>
<td>-.299</td>
<td>.0001</td>
<td>265</td>
</tr>
<tr>
<td>Performance-Avoidance Goal Orientation Dimensions</td>
<td>-.209</td>
<td>.0001</td>
<td>265</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>.378</td>
<td>.0001</td>
<td>265</td>
</tr>
<tr>
<td>Achievement Motivation</td>
<td>.357</td>
<td>.0001</td>
<td>265</td>
</tr>
</tbody>
</table>

The results from Table 2 show that there is a significant inverse relationship between the academic performance and the dimensions namely mastery-oriented goal orientation (P=0.0001 & R=378), achievement motivation (P<0.0001 and r=357). There is a significant inverse relationship between academic performance and performance-avoidance dimensions (P<0.0001, r=-299), avoidance-performance dimensions (P<0.0001 & r=0.209).

Hypothesis 6: there is a relationship between goal orientation dimensions (mastery, performance-approach, and performance-avoidance), critical thinking and achievement motivation with female students’ academic performance.

Table 3: The multiple regression correlation coefficients between goal orientation dimensions (mastery, performance-approach, and performance-avoidance), critical thinking and achievement motivation with female students’ academic performance

<table>
<thead>
<tr>
<th>Academic Performance</th>
<th>Statistical Indicators</th>
<th>MR Multiple Correlation</th>
<th>RS Coefficient of Determination</th>
<th>F ratio P probability</th>
<th>Regression Coefficients (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Performance</td>
<td>Mastery-Oriented Goal Orientation</td>
<td>.401</td>
<td>.177</td>
<td>401</td>
<td>β=7.5</td>
</tr>
</tbody>
</table>

http://www.ijhcs.com/index.php/ijhcs/index
<table>
<thead>
<tr>
<th>Critical Thinking</th>
<th>.450</th>
<th>.203</th>
<th>=33.3</th>
<th>0.348</th>
<th>$\beta$=t=-5.5</th>
<th>0.178</th>
<th>$\beta$=t=2.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Motivation</td>
<td>.459</td>
<td>.211</td>
<td>=23.2</td>
<td>0.324</td>
<td>$\beta$=t=5.2</td>
<td>0.149</td>
<td>$\beta$=t=2.3</td>
</tr>
<tr>
<td>Performance-Avoidance Oriented Goal Orientation</td>
<td>.446</td>
<td>.217</td>
<td>=18.2</td>
<td>0.302</td>
<td>$\beta$=t=4.7</td>
<td>0.140</td>
<td>$\beta$=t=.30</td>
</tr>
<tr>
<td>Performance-Approach Goal Orientation</td>
<td>.494</td>
<td>.244</td>
<td>=16.7</td>
<td>0.256</td>
<td>$\beta$=t=3.9</td>
<td>0.141</td>
<td>$\beta$=t=2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B Statistical Indicators</th>
<th>MR Multiple Correlation</th>
<th>RS Coefficient of Determination</th>
<th>F ratio P probability</th>
<th>Regression Coefficients( $\beta$ )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Variables</td>
<td>Predictor Variables</td>
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<td>1</td>
</tr>
<tr>
<td>Academic Performance</td>
<td>Mastery-Oriented Goal Orientation</td>
<td>.401</td>
<td>.177</td>
<td>=56.7</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>.405</td>
<td>.203</td>
<td>=33.3</td>
<td>0.348</td>
</tr>
</tbody>
</table>

http://www.ijhcs.com/index.php/ijhcs/index Page 1773
The results relevant to the part “A” in Table 3 show that regression analysis (Table 3) with multiple entry, multi-variable correlation coefficient for the linear combination between the dimensions of goal orientation (mastery, approach-performance, performance-avoidance), critical thinking and achievement motivation with academic performance of students were obtained to be MR=0.494, RS=0.244, which are significant at p<0.000. In addition, part “B” Table 3-4 showed that among the dimensions of goal orientation (mastery, performance-approach, and performance-avoidance), critical thinking and achievement motivation as the predictor variables, the only predictors of academic performance are mastery-oriented goal orientation, critical thinking and achievement motivation.

Discussion and conclusion
The current research seeks to explore the relationship between goal orientation dimensions, critical thinking and achievement motivation with the avoidance of academic help seeking among the female students of Islamic Azad University of Ahvaz in the academic year 2015. According to the results obtained from the statistical data analysis, the hypotheses are discussed and examined. To further analyze the findings, first, each of the hypotheses are discussed, and then examined.

Hypotheses 1-3:
Hypothesis 1: there is a relationship between goal orientation and female students’ academic performance.
Hypothesis 1-1: there is a relationship between mastery-oriented goal orientation and female students’ academic performance.
Hypothesis 1-2: there is a relationship between performance-approach goal orientation and female students’ academic performance.
Hypothesis 1-3: there is a relationship between performance-avoidance goal orientation and female students’ academic performance.

The results obtained from Table 2 show that there is a significant inverse relationship between the academic performance and the dimensions namely performance-approach goal orientation (P=.0001 & R=-.299), performance-avoidance goal orientation (P>.0001 and r=.209. The findings obtained from the current research are consistent with those of the research performed by other researchers including Lowe, Paris, Hogan and Lowe (2011), Cobb (2010), Potoin and Daniels (2010), Von Stink, Matos, Lens and Sowanens (2007), Lai, Chan & Wang (2006), Walters (2004), Duprat and Marin (2005), Kahdemi and Noshadi (2007).

In explaining the findings it can be said that the goal orientation is based on the assumption that human behavior is purposeful and is driven by individual goals. Goal orientation refers to the collection of behavioral intentions that explains a person’s attitude to participate in learning activities. In other words, goal-orientation is a consistent pattern of personal beliefs that drives a
person to be inclined to different positions using different methods, take action in that particular situation and ultimately provide an answer. For a person to achieve necessary impetus for implementing a task, its goals should be consistent, and this issue requires a mutual communication. Sometimes, goals provide man with the impetus for the effort and get access to the object. Psychologists use goal orientation to describe personality characteristics. Ultimately, goal orientation can be closely interlinked with academic achievement, and give students the opportunity to succeed in academic affairs using constructive goal setting.

**Hypothesis 2:** There is a relationship between critical thinking and academic performance of female students.

The results in Table 2 show that there is a significant relationship the academic performance and critical thinking \((r=0.378\) and \(P<0.001\)). The findings of the current research are consistent with those of other researchers including Zimmerman (2007), Yalkin, Karahan, Karadenizly and Sahin (2006), Kano Garsa and Hughes (2000), Kadivar, Javadi and Sajedian (2009). Critical thinking is one of the broadest concepts that is of particular significance in the field of education. Critical thinking has a complex mental process and structure, thus there is no single definition of it, and it may be concluded that the number of definitions of critical thinking is same as the number of specialists in this field. Argumentative thinking is a type of thinking that underlines the decision to do something or to believe in something is built upon a careful evaluation of events and evidence, and achieves concrete results by taking into account all relevant factors. Furthermore, it is a type of critical, logical and thoughtful thinking regarding the problems that have more than a single solution.

**Hypothesis 3:** There is a relationship between achievement motivation and academic performance of female students.

The results in Table 2 show that there is a significant relationship the academic performance and achievement motivation \((r=0.357\) and \(P<0.001\)). The findings of the current research are consistent with those of other researchers including Masen (2005), Bakhtiyar Karami et al. (2007), Ghourchian, Direh and Bani Jamal (2009), Kadivar, Javadi, and Sajedian (2006), Abolghasemi (2000), Kajbaf, Molavi, and Shirazi (2009) and Zare’ei (2002). In explaining the findings, it could be said that achievement motivation is individual desire and passion to fulfill tasks assigned more effectively, overcome the problems, have sense of competition to do a better choice and take more effort to surpass others. In other words, achievement motivation is increased desire to do works with more efficiency and effort compared to what was done in the past. Achievement motivation encompasses a set of social, cognitive and developmental processes.

There are some evidence that people with high achievement motivation are more concerned with the future compared to the people with low achievement motivation. The research show that the people with high achievement motivation usually consider themselves as responsible for the result of their performance, because it is under the light of the same matter that they feel satisfaction with their performance.

**Hypothesis 4:** There is a multiple correlation between goal-orientation, critical thinking and achievement motivation with academic performance of female students.

The results of the part “A” in Table 3 show that regression analysis with multiple entry, multi-variable correlation coefficient for the linear combination between the dimensions of goal
orientation (mastery-performance, approach-functional, performance-avoidance), critical thinking and achievement motivation with academic performance of students were obtained to be $MR=.494$, $RS=0.244$, which are significant at $p<0.000$. In addition, part “B” in Table 3-4 showed that among the goal orientation dimensions (mastery, performance-approach, and performance-avoidance), critical thinking and achievement motivation, the only predictor variables of academic performance are mastery-oriented goal orientation, critical thinking, and achievement motivation.


College students in a community as the intelligent and efficient future makers of every country are a group which account for the major part of the planning and budget of each country. They are the smartest and most talented people in society, thus endeavor to address their psychological aspects to improve the academic performance is of particular significance. Educational performance is an issue that is at the core of many educational and psychology research and educational development programs throughout the world. The issue of academic performance in universities is an issue that has preoccupied the mind of managers and leaders and also researchers. The fact that what factors affect students’ academic progress and success, or what is the contribution of each factor has always been of interest to researchers from the fields of education and educational psychology. Several factors can affect the student academic performance and subsequent promotion or impairment. The academic achievement, on the one hand, requires understanding of students’ potentials and talents, and on the other hand, leads to a reduction in the barriers placed in the way of their performance.

The research findings showed that the dimensions including goal orientation, critical thinking and student achievement motivation can significantly impact student academic performance, and students can be successful in their academic work when they set mastery objectives for themselves, and achieve success with an emphasis on critical thinking and achievement motivation. Students with a lot of effort and motivation for proper use of their capacities can provide necessary political conditions to their future educational and career goals.
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