Scholastic Achievement Motive of Students in Terms of Their Study Styles as Behavior

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Abstract
The purpose of this study explained the motive for scholastic achievement of Esfahan University students in terms of their study styles viewed as behavior. To achieve the aims of the study, using randomized sampling technique, out of 13691 Esfahan University students in seven faculties, a statistical sample of 373 students was prepared. To collect the data for the study classified as one of correlation, questionnaires for

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study styles (with 30 question items and Chronbach α of 0.44-0.740) and motive for scholastic achievement (with 49 question items and Chronbach α of 0.75) were prepared. The data from the questionnaires were analyzed using Pearson Correlation and Regression coefficients. The results indicated that there was a positive significant relation between the study styles and the scholastic achievement motive. Further, the evidence from the regression also indicated that out of the study styles, meta-cognitive consciousness 19.80, scholastic self-confidence 19.30 and superficial technique 16.70 explain the scholastic achievement motive and the ability to make significant predictions: p<0.05 or p<0.01, whereas strategic and in-depth approaches predict the scholastic achievement motive.

**Keywords:** study styles, scholastic achievement motive, students, university

**Introduction**

Studying is a type of behavior preceded by a particular type of scholastic motive in the learner. In the opinion of psycho-sociologists, many attitudes can be explained in terms of behaviors, i.e., rather than identify the attitude causing the behavior, the behaviors caused by particular motives are identified and then followed up from the behaviors towards motives (Karimi, 2008). The behaviors caused by scholastic achievement meet three basic requirements: pursuit of a goal, perseverance and relatively long-term sustenance arising from an inner need (Mirkamali, 1999). Achievement motive is caused by textbooks, children’s literature and parental pedagogy (Oreizi & Abedi, 2003). Motive implies inner states of the organism directing the behavior towards a particular goal (Abedi, 2001, p. 17). In his essay “The Effects of Achievement Motive on Behavior”, Rabideau (2005) observes that motive can be defined as “drive” beyond all the individual’s behaviors. Ryan and Deci (2000) have referred to “achievement motive” as a most noted and most important inner
human need. Achievement motive can be seen in many areas of activity such as job, school, homemade art and championships (Rio, 2006, p. 17). Gage and Berliner (1992) have defined “achievement motive” as a tendency towards or interest in total achievement or achievement in a particular area (Kadivar, 2006). Studies conducted in this area have indicated that individuals differ widely in these needs (Seif, 2001, p. 354). Brunstein and Maier (2005) have introduced two motives: implicit and explicit which directly affect behavior prediction. Atkinson and Feather (1996) have observed that achievement-oriented behavior is based on three constituents: the first one is the individual’s preparation for achievement; the second one is the probability of success and the third is the individual’s perception of assignment value (Bartal, Frieze, & Greenberg, 1974 cited in Zenzen, 2002). Self-setting students set a goal to proceed and control their behaviors, motives and knowledge to reach it (Langley et al, 2004).

Education scientists and experts find four general requirements essential to formal learning, i.e., schooling:
1. Individual capacity and capability,
2. Motive and interest,
3. Educational resources and
4. Study techniques (Barati, 1384, p. 17)

Apart from motives and the above requirements, studies, too, imply other causes and forces. In his study, Fattahi (2000) indicated that girls enjoy a higher scholastic performance. The results of a study by Abedi (2001) unraveled that the family plays a decisive role in the individual’s future behavior. The family structure and the educational methods adopted by parents during childhood had a decisive role in the personality and motive of individuals. The results of a study conducted by Talebpour et al., (2002) revealed that compared to the control group, the cognitive training had no significant effect on the scholastic performance of the subjects. The peripheral findings of the study showed that:
A. The educational background, and the job of the supervisor had no significant effect on the control source, achievement motive and scholastic performance of the subjects and

B. None of the interactions of gender, major and group membership had a significant effect on the control source, achievement motive or scholastic performance. The findings of a study by Mokhtari (2002) demonstrated that there was a significant relation between the manager’s leadership style, class climate, the students’ social class as well as the dimensions of the students’ values (academic, familial, financial and professional) each taken separately and the motive for scholastic achievement. The results of a study by Naimi (2004) indicated that there was a significant relation between fear of achievement and self-esteem and achievement motive of students in various majors as well as between the achievement motive for Associate of Science and Bachelor’s degrees.

Consonant with the respective literature, Busato et al (2000) argued that achievement motive logical capability and achievement motive had a positive effect on scholastic achievement. However, there was no such relation between meaning-oriented, pluralistic and applied learning styles. In a study, Langley et al., (2004) found that scholastic achievement motive can be looked upon as a major contributor to the success of students preparing in college. The results of a study by Abouserie (2006) indicated that, the personality variables in general and self-esteem as well as the scholastic achievement motive in particular had an inherent effect on the students’ achievement for learning and improvement. The findings of a study by Tseng (2006) pointed to similar generation-caused differences between the students’ scholastic motives. A study titled “Approaches to Learning, Stylistics and Motive as predictors of Scholastic Achievement” argued that approaches to learning (in-depth, strategic and superficial) predict scholastic achievement. While stylistics and motive had indirect effect only on scholastic
achievement and the approaches to learning, the in-depth approach surprisingly did not predict scholastic achievement, the strategic and superficial approaches did, as expected, predict scholastic achievement. In view of the fact that study styles are considered as types of scholastic behavior and depending on the behaviors, being both objective and measurable, the motive for achievement can be predicted. Hence, in sum, it can be inferred that the study styles can be positively related to the students’ scholastic achievement. Accordingly, the following research hypothesis is formulated for this study.

**Research Hypothesis**
There is a positive relation between the students’ study styles (in-depth, superficial, strategic, scholastic self-confidence and meta-cognitive knowledge) and the scholastic achievement motive. However, given all the learning styles, since there is no conclusive evidence as to which learning style is the most powerful, in a study of the multiple relations between the learning styles and the scholastic achievement motive, the following question was raised.

**Research Question:**
Which study style(s) (in-depth, superficial, strategic, scholastic self-confidence and meta-cognitive knowledge) play(s) the most significant role in scholastic achievement?

**Method**
In this study, as the researchers are seeking to explain the scholastic achievement motive, in terms of the study styles viewed as a behavior, of Esfahan University students, correlation has been used. Kerlinger and Pedhauzure (1982) believe that, in correlation, apart from the simple relations between the variables (in the form of simple correlation), the unidirectional causal specific relation between the variables in the study can be predicted or explored by one-variable or multiple-variable regression-based analysis (Saraei, 1995). Since the
aim of conducting this research was to determine the relative contribution of each study technique to the scholastic achievement motive, it can be referred to as an applied research.

Participants
The statistical population for this study comprises Esfahan University students in the academic year 2006-2007. Based on the information obtained from the Information and Statistics Office, Education Vice President and Graduate Studies Section, in the second semester of 2006-2007, a total of 13691 students were doing degrees in a variety of majors and academic levels at Esfahan University and it was that number that had served the standard for an adequate sample. Based on the table presented by Cohen, Manion and Morrison (20000), 370 students (118 males and 225 females) of an average age range of 18-37 were selected by randomized sampling technique from Humanities, Technical & Engineering and Foreign Languages faculties. This sample size was selected based on the increase in the number of students for each variable in studies of regression-based analysis leading to a relative increase in the test ability to analyze regression (Kerlinger & Pedhauzure, 2005).

Instruments
To measure the study variables, the following instruments were employed:

1. Study Styles Questionnaire: To measure and evaluate the study styles, Entwistle and Tait’s (1995) questionnaire was used. This test (RASI) comprises 30 questions on a scale of five subdivisions (in-depth, superficial, strategic, scholastic self-confidence and metacognitive knowledge). The questionnaire was translated and modified in this study for the first time. With a slight change, the construct validity of this questionnaire supported the five subdivisions such that the factor analysis placed 30 question items on five factors: in-depth (0.50), superficial (0.74), strategic (0.64), scholastic self-confidence
(0.57) and meta-cognitive knowledge (0.44). One typical question of the questionnaire reads: I usually try to understand the concepts I learn.

2. Questionnaire for Scholastic Achievement Motive: In this study, to measure the scholastic achievement motive in students, the ISM test was used. This scale is based on Likert scale with 49 question items with the Likert divisions (strongly agree, agree, uncertain, disagree, strongly disagree). The validity and reliability of the questionnaire were analysed and confirmed by McInerni and Wincklier in Australia. The validity and reliability of the questionnaire were also verified and supported in Iran by Bohrani (1993), Yazdchi (2000), Shahsavani (2000, cited in Oreizi & Abedi, 2003). In this study, too, the reliability of the questionnaire was estimated at 0.75 using Chronbach $\alpha$.

Results

*Table 1: Correlation of Scholastic Achievement with Study Styles and Demographic Variables*

<table>
<thead>
<tr>
<th>Variable Predictors</th>
<th>Scholastic Achievement Motive</th>
<th>Mean Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R Statistic (p) R Statistic (p) R Statistic (p)</td>
<td>R Statistic (p)</td>
</tr>
<tr>
<td>Achievement Motive</td>
<td>1</td>
<td>0.239</td>
</tr>
<tr>
<td>In-depth Technique</td>
<td>0.337 (0.000)</td>
<td>0.157</td>
</tr>
<tr>
<td>Superficial Technique</td>
<td>0.119 (0.038)</td>
<td>-0.141</td>
</tr>
<tr>
<td>Strategic Technique</td>
<td>0.363 (0.000)</td>
<td>0.165</td>
</tr>
<tr>
<td>Scholastic Self-confidence</td>
<td>0.351 (0.000)</td>
<td>0.204</td>
</tr>
<tr>
<td>Meta-cognitive Knowledge</td>
<td>0.385 (0.000)</td>
<td>0.102</td>
</tr>
</tbody>
</table>
The findings in Table 1 indicate that the relation between scholastic achievement motive and in-depth, superficial and strategic techniques, scholastic self-confidence and meta-cognitive knowledge were significant at (p<0.01), though the strongest relations were those of meta-cognitive knowledge and strategic technique. There was also a significant correlation between age and study in-depth technique at the level of (p<0.001). The mean, too, bore a significant relation with the superficial technique (r=0.165), in-depth technique (r=0.157), scholastic self-confidence (r=0.204) and scholastic achievement motive (r=0.239).

Table 2: Multiple Correlation Coefficient, Correlation of determination, etc in Predicting Scholastic Achievement Motive

<table>
<thead>
<tr>
<th>Statistical Indices ▲</th>
<th>Multiple Correlation Coefficient</th>
<th>Multiple Correlation Coefficient of determination</th>
<th>Adjusted Multiple Correlation Coefficient of determination</th>
<th>Estimated Standard Deviation</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent Model▼</td>
<td>Study Styles</td>
<td>0.494</td>
<td>0.244</td>
<td>0.23</td>
<td>13.92105</td>
</tr>
</tbody>
</table>

As shown in Table 2, in concurrent regression analysis, in order to predict the scholastic achievement motive using study styles, the multiple correlation coefficient was (R=0.494) and the variance explained was 24%. The results of the Analysis of Variance indicate that at least one study style is capable of predicting the scholastic achievement motive and the validity of the regression analysis. The information in Table 3 indicates that among the study styles, the superficial style (with a $\beta$ standard of 0.167), meta-cognitive knowledge (with a $\beta$ standard of 0.198) and scholastic self-confidence (with a $\beta$ standard of 0.193) had a significant ability to predict the
Scholastic achievement motive. The equation extracted to predict the scholastic achievement motive is as follows:

\[ \text{Scholastic Achievement Motive} = 91.085 + 0.500 \times \text{Superficial Technique} + 1.134 \times \text{Meta-cognitive Knowledge} + 1.664 \times \text{Scholastic Self-confidence} \]

**Table 3: Standard and Non-Standard Regression Index for Prediction of Scholastic Achievement Index**

<table>
<thead>
<tr>
<th>Statistical Indices</th>
<th>Standardized Index</th>
<th>Standardized Coefficient</th>
<th>T-Value</th>
<th>Level of Significance (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study Styles</strong></td>
<td>▼</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>91.085</td>
<td>9.347</td>
<td>9.747</td>
<td>0.000</td>
</tr>
<tr>
<td>Superficial</td>
<td>0.500</td>
<td>0.168</td>
<td>0.167</td>
<td>2.970 0.003</td>
</tr>
<tr>
<td>Strategic</td>
<td>0.600</td>
<td>0.341</td>
<td>0.117</td>
<td>1.759 0.080</td>
</tr>
<tr>
<td>In-depth</td>
<td>0.629</td>
<td>0.367</td>
<td>0.113</td>
<td>1.714 0.088</td>
</tr>
<tr>
<td>Meta-cognitive</td>
<td>1.134</td>
<td>0.388</td>
<td>0.198</td>
<td>2.919 0.004</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholastic</td>
<td>1.664</td>
<td>0.582</td>
<td>0.193</td>
<td>2.858 0.005</td>
</tr>
<tr>
<td>Self-confidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* P<0.05

**Discussion and Conclusion**
This study was conducted with the aim of explaining the scholastic achievement motive in terms of the study styles employed by Esfahan University undergraduate students. It supported the theoretical basis of research on a move from attitudes towards behavior. The results of the research into the potential relations between the study styles and scholastic achievement motive indicated significant coefficients within the research hypothesis. On the level of the relations between
the in-depth technique and scholastic achievement motive, these findings were consistent with the study conducted by Minbashian (2004). Although in Minbashian’s study, the in-depth approach is related to scholastic performance; it does not determine higher scholastic performance and higher exam grades. In explaining this relation, too, the findings of this study supported the presence of a significant relation between the in-depth approach and scholastic achievement motive; however, the approach does not explain the scholastic achievement motive.

Further, the results indicated that there was a relation between the superficial study technique and the scholastic achievement motive. The results of a study by Gibbs (cited in Norton, 2001) indicate that the superficial approach in higher education courses have been very comprehensive always leading to poor learning outputs and that the Esfahan University students have not been an exception; however, drawing a cause-and-effect conclusion from the simple relation that students using a superficial learning technique are poor learners is out of the question.

This study, too, revealed that there was a significant relation between the strategic technique and scholastic achievement motive. However, the strategic technique was surprisingly not predictive of scholastic achievement. Abouerisse (2006), too, explored the effect of the strategic approach and self-esteem on the achievement motive and inferred that self-esteem and strategic technique determine the achievement motive. Hence, the findings of this study conflict with the findings of the study by Abouerisse that the strategic technique determines the achievement motive. Thus, one may admit that on this dimension, the research question continues unresolved. The results of the study by Andrew (2006) indicate that the strategic study technique engages the left brain hemisphere (which is organized and programmed) and that unlike men, women have exhibited one instance of non-follow-up on this technique, which indicates that men
and women adopt different study techniques, and that women do not prefer the data-processing technique which engages the left brain hemisphere. One may conclude that since a large portion of the present sample comprised women, the strategic technique failed to predict the scholastic achievement motive. Apart from the major orientations (in-depth, superficial and strategic), there were two other orientations in the present study: 1. Meta-cognitive knowledge and 2. Scholastic self-confidence.

On the level of simple relations, the relation between the scholastic achievement motive and the two mentioned variables was supported. The results thus obtained were consistent with those of the study conducted by Parice and Winogurd (1990, cited in Parice, 2004). The results also showed that students improve their learning by becoming aware of their thinking (meta-cognitive knowledge) while they are reading, writing and solving problems at school. Teachers are also able to boost students’ learning by directly informing them about effective problem-solving strategies and discussing the characteristics of cognition, motive and thinking. They believe that in order to elevate learning to the highest level students must be aware of themselves as self-adjusting organisms capable of consciously reaching their goals. The results of the study point to a considerable proportion of scholastic self-confidence and its impact on scholastic achievement motive. The limitation of the study is that it has been conducted on one student sample; however, the consistency of the results is noticeable. According to Ramsden and Entwistle (1981) quoting Andrew (2006), professors are highly contributive to the students’ scholastic self-confidence. In their opinion, students of Humanities find themselves powerful, clever and capable of meeting their intellectual and scholastic requirements in their studies. This perception is generally more frequent in periods relatively less heavily laden with work and yet governed by a friendly culture. In his study Andrew (2006), too, used a revised repertoire of study approaches to introduce the study approaches employed by Greek students. In the
results of his study, emphasizing the role of the faculty in scholastic self-confidence, consonant with Ramsden and Twistle, he observed that apart from their individual differences, all students meet such qualifications as:
1. Initiative in learning,
2. Avoiding over-reliance on lectures,
3. Admitting the fact that student-oriented techniques focus on active, not passive, learning and
4. Admitting the fact that their goal in learning ought not be to score high only on the exam; rather, it ought to focus on attainment and enjoying intellectual development.

This will create expectations of the faculty members and sources from organizations to evaluate not only the study techniques but also the quality of learning. Thus, Andrew concluded that scholastic self-confidence contributes to students learning and that learning itself is a predictor of scholastic achievement. Put it differently, the present study addressing the fact that scholastic self-confidence contributes to scholastic achievement motive is consistent with the study conducted by Andrew (2006).

Moreover, age and GPA (Grade Point Average) were correlated with study techniques and scholastic achievement motive. Richardson (1995) quoting Andrew (2006) held that age and gender contributed to the study style; however, when he compared the study techniques used by adult and non-adult students, he was able to find significant correlations between the age and grades obtained using the in-depth study technique. Sadler and Smith (1996), too, in an English sample, treating age as a categorical variable, argued that compared to non-adult students, adult students reported an in-depth technique and that compared to females, males adopted an in-depth approach more often. Sadler, Smith and Tseng (1998) quoting Smith (2001), too, using Two-Way ANOVA for a sample composed of Hong Kong students stated that compared to non-adult students, adult students more often used the in-depth technique. Hence, it can be concluded that with
increase in age students turn more often to the in-depth approach. The present study is consistent with the results of the studies conducted by Richardson (1995) quoted by Andrew, Sadler, Smith (1996) and Sadler, Smith and Tsung (1998) quoted by Smith. However, none of these studies addressed the scholastic achievement motive. In addition, it is proposed that in future studies, the variables of gender and age be studied in a hierarchical regression equation in order to learn about their intermediary role.

Clearly, the above grades result in a higher GPA and scholastic achievement and that the study results indicate that GPA is positively and significantly correlated with superficial and strategic techniques, scholastic self-confidence and scholastic achievement motive. The results of the present study are in line with with those of (2006). In a study titled “Self-esteem and Achievement Motive as Determiners of Students’ Study Approaches”, Abouserie observed that there is a positive correlation between self-esteem and achievement motive and that motive positively affects students’ grades in their orientations and strategic systematic study. Although the results of the present study provide researchers with new findings on predicting the scholastic motives based on their study behaviors, they cannot be generalized to students of other universities at the expense of cultural requirements and obligations. Besides, the statistical analyses of the results of this study have pursued an exploratory trend. Replicating this study with other samples and referring to plausible analyses, this study can open up new ways of implementing similar studies related to study styles.

References


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