Abstract

The study explored the relationship between academic motivation, test anxiety, study habit and academic achievement of Preparatory school students’ in Burayu Preparatory School and GeresuDuki Preparatory School Oromia Region, Ethiopia. The study involved 351 sampled students through proportional stratified and random sampling techniques. Questionnaires and document analysis were used to collect data. Three types of questionnaire were applied to gather data about academic motivation, study habit, and test anxiety variables. Correlation and regression analysis were applied, and the result of the study revealed that academic motivation, test anxiety and study habits variables are related with preparatory school students’ academic achievement. It was concluded that motivation, test anxiety and study habit variables are related with preparatory school students’ academic achievement. Therefore, teachers, principals, and counselors recommended that proper orientation has to be given to the students about the purpose of the exam/test, what expected from students before, during and after test/exam and the importance of optimum level of test anxiety.
1. INTRODUCTION

The objective of education in general and at preparatory level in particular is to enable students become agents of national development. The National Education Policy has been adopted as the Government's way of achieving its national objectives. As demonstrated in the education and training policy of Ethiopia (1994), one of the specific objectives is satisfying the country's need for skilled manpower by providing training in various skills at different levels. To achieve this and other aims and objectives of the policy, it is better to strengthen the struggle started from primary schools in general and Preparatory Schools education in particular. Since this level of education is the base for college and higher education which is expected to play a great role by engaging in a continuous process of maximizing the quality of graduates so as to enhance their readiness for the job market and further education. In the process of achieving such objectives the Schools encounter many difficulties which may be associated primarily with a student and those factors which may not be related to the individual cognitive factors but to some other non cognitive factors. Since the issue of academic achievement is complex, it's not simple to determine factors related to it (Mehrens& Lehman, 1984). These factors affecting students’ success should be researched and handled effectively. If not, it will certainly affect the core educational vision of the country which is to build the human capital.

Therefore, the prediction and explanation of factors related to students’ academic success in general and Preparatory School in particular is an important area of research in education. This is because of students’ poor academic achievement, failure or drop out of students from the School often incur considerable attention by the educational experts, Psychologists, Psychometrician and other concerned body in general and higher institutions in particular to assist the students to improve their achievement progress. Although academic achievement is often associated with factors such as Teachers, Parents and School environments, aspects of intellectual and non-intellectual conditions of the students may also affect academic achievement (Okafor, 2007). Among these, motivation and test anxiety and study skills may facilitate or delay learner’s academic achievement. Different scholar suggests that, motivation force peoples to successfully complete an assignment achieve better academic performance or degree of qualification in their professional area(Mohamadi, 2006). For this reason motivations explain the reason behind people’s behavior and determine why they behave in a particular way. Motivated behaviors are active, leaning, and permanent (Kourosh, Shahrzad, &Hadi 2011). Investigating the relationship between non-cognitive factor that is study habit, test anxiety and academic achievement is beneficial to provide better chance for Preparatory School students. Research has reported a positive relationship between study habit and academic achievement of the students. According to McDonald (2001), most students at high school level emerge to experience uncomfortable of test anxiety. According to different studies high school exams and any other assessment instruments used by the teachers in the classroom and at the end of the classroom are the most anxiety provoking situation in their programs of study and negatively related to students academic success. As mentioned by
different scholars in different time and context, anxiety over test performance has also been related to low self-esteem, dependency, and passivity, all of which have a negative influence on students’ academic achievement (Parks, Collwitzer, & Oettingen, 2010; Yildirim, & Ergene, 2003; Yildirim, Genctanirim, Yalcin, & Baydan, 2008).

There is a general acknowledgement that within School education differences exist among learners with respect to academic achievement. But when the difference became wide and resulted in high students’ academic failure, it receives attention to identify factors accounted for the increment of students’ academic failure and dropout rate. Similarly, in our country, Ethiopia, the aforementioned problems is manifested and resulted in poor quality education (MoE, 1994, 2000 E.C). In line with this, formal discussions among the school principal, teachers, students, stakeholders, and other concerned bodies were directed toward identifying factors contributed to students academic variation, failure and dropouts of learners in the schools. Thus, better understanding of those factors that influence student success in the school in general and preparatory school in particular is more vital. A number of factors could be attributed to students’ academic achievement failure and dropout rate. These problems may be tied with different variables that could be classified as inside and outside school. These factors further may be related to motivation (Mohamadi, 2006, Coetzee, 2011, Covington & Omelich, 1979); test anxiety (Cassady, & Johnson, 2002; Parks, Collwitzer, & Oettingen, 2010); and study skills (McDonald, 2001). Many previous studies conducted in our country have focused on parenting style inequalities and economic disadvantage as predictors of academic achievement (Birhanu, 1996; Abesha, 1997). However, previous studies fail to address adequately academic motivation, test anxiety, and study skill effects on educational achievement of Preparatory School in Ethiopia in general, and South West Showa Zone and West Showa Zone in particular. So in this study the relationship between components of academic motivation, test anxiety and study habits variables in relation to adolescent academic achievement were assessed with the following specific objectives.

- To identify the relationship between components of academic motivation and preparatory students’ academic achievement,
- To explain the extent to which test anxiety and study habit could relate to the preparatory school students academic achievement, and
- To investigate a statistically significant predictor variable(s) of preparatory school students’ academic achievement among components of academic motivation, test anxiety and study habits.

2. METHODS AND MATERIALS

Quantitative research approach was applied in the study because the nature of the research objectives demands numerical and statistical data analysis techniques. To this end, the study was mainly Co relational in nature.
Questionnaires were used to gather data about the influence of components of academic motivation, test anxiety, and study habit variables on students’ academic achievement.

3. POPULATION, SAMPLE AND SAMPLING TECHNIQUE

Three hundred fifty one (351) participants, including both genders from two government preparatory schools (i.e., Burayu and GeresuDuki) were taken. The sample size of the study was determined in line with Krejcie and Morgan (1970) sampling technique which indicated in the table, as they suggest that different number of population could be represented by different number of participants. Therefore, the method of sample selection that was suggested by Krejcie and Morgan was applied to draw the sample participant of the study. The population was found to have strata based on sex in relation to each school total number of students. Thus, before selecting samples to be included in the study, the population was stratified in sex. After such stratification, proportional numbers of representatives are selected by using random selection techniques. Generally, stratified and random sampling techniques were applied in order to select appropriate representatives from the population of the study.

3.1 Instruments

In this study, questionnaires and document analysis were used to collect data. Three different questionnaires were used. The first part of the questionnaire taps data on academic motivation, the second part of the questionnaire taps data on study habit, and finally the third part of the questionnaire taps data on student test anxiety. After the items of academic motivation, study habits and test anxiety inventories were adapted; questionnaires were judged for relevance, face, and content validity by expert. In addition, students’ record was taken from the school Registrar office and document analysis was conducted on students’ total average achievement score during the first semester of 2016/17 the academic year.

3.2 Pilot Testing

After instruments were translated from English language in to Afan Oromo-working language in the study area; and since some word modifications were made, it was preferred to pilot study. The translated instruments were piloted on 80 randomly selected students of Holota Preparatory School. The purpose of piloting was to examine the reliability and the appropriateness of the instruments. Therefore, the clarity of the items to the respondents, the adequacy of time to respond the items, and the reliability of the instruments were evaluated.

3.3 Scoring Procedure

For academic motivation scale, the score was obtained by summing the scores for individual items, and score on each items ranging from lowest to highest. Highest score on the academic motivation scale show high orientation towards learning tasks whether intrinsic or extrinsic; and orientation towards learning tasks lacks intention. Score on each subscale ranges from lowest to highest. High score show high study habit in specific scale of study habit measures. For test anxiety inventory, the score were obtained
by summing the scores for individual items. Score on each scale ranging from lowest to highest. High score shows high test anxiety in specific scale of test anxiety measures. The respondents’ total score in each sub scale of academic motivation scale, study habits scale and test anxiety scale were used in the analysis. Concerning students’ academic achievement, the first semester cumulative average result was used in the analysis.

4. METHOD OF DATA ANALYSIS

Pearson product moment correlation was applied to identify the relationship among study variables; and regression analysis to identify the significant predictor variables of academic achievement in the analysis of the study. Stepwise multiple regressions were applied to evaluate the relative contributions of each of the independent variable. Mean and standard deviation were used to describe the data by sample distribution.

5. ETHICAL CONSIDERATION

To make the participants confidential the researchers’ aware them the purposes of the study that their response was used only for the research purpose and kept confidential. And finally the researchers’ aware the participants as any of the data obtained was not personalized in any part of the research. Finally, the researchers had legal letters from Ambo University to all the concerned bodies including the district educational office, Burayu and GeresuDuki Preparatory Schools.

6. RESULTS AND DISCUSSION

6.1 The Relationship between components Academic Motivation and Preparatory School Students Academic Achievement

Pearson Product Moment correlation coefficient was employed to determine the correlation coefficients between the components of academic motivation and preparatory school students’ Academic Achievement (AA). The results were stated below in tables 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AA</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Intrinsic Motivation</td>
<td>.50*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Extrinsic Motivation</td>
<td>-.18*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Amotivation</td>
<td>.41*</td>
<td>.21</td>
<td>-.207</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Mean: 66.3   SD: 8.38

Note: All reported correlations are significant* p < 0.01(2-tailed), N=351, AA= academic achievement

In the correlation matrices presented above, there was a statistically significant relationship between intrinsic motivation and academic achievements (r=.50, p < 0.01), extrinsic
motivation and AA (r = 0.60, p < 0.01) and also there was a statistically significant relationship between A motivation and AA (r=−0.41, p < 0.01). It means there was strong high to moderate positive correlation coefficient between components of academic motivation and preparatory school students AA.

This finding is consistent with earlier studies of (Bakar, Tarmizi, Mahyuddin, Luan, & Ayub, 2010; Mahyuddin, Elias & Noordin, 2009) which have reported that intrinsic motivation, extrinsic motivation and a motivation has positive relationship with academic achievement respectively.

So according to this result, one can infer that when the students extrinsic and intrinsic motivation is high, the probability of the students to engage in complex learning process, completing complex task is high and indirectly the probability of scoring high mark in the specific subject is also high. In contrast to this, from this result one can infer that when the students’ orientation towards learning lacks intention or goal the students’ probability of developing the feeling of I can't succeed in the activity, I can't compete with each other and other feeling that led to failure is high. So in this situation students’ probability to score low academic achievement in specific subject and dropout from the school is high.

6.2 The Relationship among Study Habit, Test Anxiety and AA of preparatory school students

Table 2: Correlation Matrices of Study habit, Test Anxiety and Academic Achievement

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AA</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Test Anxiety</td>
<td>-0.72*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Study Habit</td>
<td>-0.59*</td>
<td>0.10*</td>
<td>1.00</td>
</tr>
<tr>
<td>Mean</td>
<td>66.89</td>
<td>2.95</td>
<td>2.08</td>
</tr>
<tr>
<td>SD</td>
<td>8.38</td>
<td>1.08</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Note: All Correlation is significant at ,P ≤ 0.01 level(2-tailed), ** shows only significant variables. SD= standard deviation, N=351, AA= academic achievement

As indicated in table 2 above, the relationship of the entire predictor variables with preparatory school students’ AA was found to be statistically significant. Students test anxiety and study habit had strong and negative significant relationship with students AA (r = −.72, p < 0.01 & r = −.59, p< 0.01) respectively. It means there was strong high negative correlation coefficient between test anxiety, study habit and preparatory school students AA.

This finding supports the finding of Kulandai (2007) and contradicts with the finding of Doss (2012). So as this result, one can infer that when the students study habit is low the probability of the students to manage their time effectively, effective note taking skill, reading compression, test preparation and taking skills are become poor, which in turn, decreases students AA.
One of the most important findings of this study is that there is a strong negative relationship between students' test anxiety and students' AA scores. The finding of this study is consistent with the previous study by (Salend, 2011; Nadeem, Akhtar, Saira, & Syeda, 2012). Moreover, this study agreed with the previous findings of (Afolayan, Donald, Onasoga, Babafemi & Juan, 2013) which stated that there is a strong negative relationship between students' test anxiety score and science academic achievement.

It can be said that test anxiety have lion’s share in determining Preparatory School students’ AA when we compare with other components of academic motivation and study habits. This means, when test anxiety increase on the side of the students during the exam, students developed fear of the test/exam before coming to the test/exam room, during the exam and cramming themselves the day before the test/exam are increase, these resulted in low concentration of students during reading and memorizing what they read before, which in turn, resulted in low students AA.

6.3 The Relative Contribution of Components Academic Motivation, Study Habit and Test Anxiety variables to Preparatory School Students’ AA

Finally, the stepwise regression analysis was made in order to identify the relative contribution of each significant independent variable to the dependent variable. The stepwise multiple regression model (R) shows a significant relationship between students' academic achievement and a combination of the test anxiety, study habit, and academic motivation components \( F(4,346) = 114.43, R^2 = 57, p < .05 \). Nearly 57% of the variance in students’ academic achievements was explained for by the linear combination of the variances in test anxiety, extrinsic motivation, intrinsic motivation and study habit score. The table 3 below show as model is significantly predicted students AA.

### Table 3: ANOVA Summary model of Stepwise Multiple Regression of Academic Motivation component and Study habits as Predictor of Academic Achievement.

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>14023.95</td>
<td>4</td>
<td>3505.98</td>
<td>114.43</td>
</tr>
<tr>
<td>Residual</td>
<td>10601.45</td>
<td>346</td>
<td>30.64</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24625.41</td>
<td>350</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\*p<.05 The predictor variables are test anxiety, extrinsic motivation, intrinsic motivation and study habits.

The model below shows the majority of the variance in AA is due test anxiety, extrinsic motivation, intrinsic motivation followed by study habits. Table 4 below shows the results of the stepwise multiple regression analysis on the basis of the order of importance of test anxiety, academic motivation components, and study habits in explaining variance in AA of preparatory school students.
Table 4: Summary of Stepwise Regression of the test anxiety, study habit and academic motivation Scale as a Predictor of Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Anxiety</td>
<td>-3.95</td>
<td>.38</td>
<td>-.51</td>
<td>-10.3</td>
<td>.000</td>
</tr>
<tr>
<td>Extrinsic Motivation</td>
<td>2.14</td>
<td>.93</td>
<td>.22</td>
<td>4.</td>
<td>.000</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td>.86</td>
<td>.33</td>
<td>.12</td>
<td>2.31</td>
<td>.010</td>
</tr>
<tr>
<td>Study habits</td>
<td>-1.64</td>
<td>.33</td>
<td>-.09</td>
<td>-2.6</td>
<td>.013</td>
</tr>
</tbody>
</table>

*P<.05,

In terms of the unique contribution of the predictor within the model, test anxiety, extrinsic motivation, intrinsic motivation and study habit was significantly predicted Preparatory School students’ AA [(β = -.51, t= -10.3 p < .05), (β =.22, t =4.6, p < .05), (β = .12, t = 2.31, p < .05) and (β = -.09, t = -2.6, p < .05)] respectively. The remaining variable students' motivation fails to enter in the regression model. This does not mean that motivation did not contribute to the prediction of academic achievement rather statistically such contribution adds virtually no relevant and unique information to the prediction.

In general, the result of stepwise regression analysis revealed that from academic motivation components, extrinsic motivation and intrinsic motivation was a significant predictor of students AA, while motivation was not a significant predictor of preparatory school students’ AA. The result of stepwise regression analysis revealed that students test anxiety and students study habit was a significant predictor of preparatory school students’ AA. The result of this study was supported by previous studies of Kulandai (2007) which had reported study habit was significant predictors of students’ academic achievement. Regarding the students test anxiety the result of the study was also supported by the finding of Nadeem, Akhtar, Saira, &Syeda, (2012); and Afolayan, Donald, Onasoga, Babafemi & Juan (2013) which had reported that students test anxiety was the significant predictor of students’ academic success.

7. CONCLUSION

The following conclusions are made based on the present finding of the study. Academic motivation is found to be one of the non-cognitive variables related with AA of Preparatory School students. It appears that students’ high score in intrinsic and extrinsic motivation scale were related with better AA, and students high score in motivation scales were related with low students AA. Generally, it can be concluded that academic motivation had its own contribution in students learning and determines Preparatory School students’ academic success. The students study habit and students test anxiety were significantly related to the AA of Preparatory School students indicating the existence of academic achievement difference among students due to the contribution of students test anxiety followed by students study habit. Those who were experienced both high and low anxiety during exam/test, were tend to achieve lower in their AA than those who were experience medium anxiety. Students test anxiety, study habit and components of academic motivation
variables taken together, do significantly predict academic achievement of Preparatory School students. That is, they are jointly responsible for the variation among preparatory school students in terms of AA. Regarding the relative contribution of these variables to the prediction of academic achievement, students test anxiety is the strongest significant predictor of Preparatory School students AA, while extrinsic motivation, intrinsic motivation, and students study habit are the next positive significant predictor of the dependent variable respectively.

8. REFERENCES

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