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Original Research

Perceived Leadership, Academic Self-Efficacy and Achievement Motivation as Predictors of Academic Achievement among Preparatory School Students of East Wollega Zone

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Abstract

The purpose of this study was to examine the relationship between perceived leadership, student self-efficacy, and achievement motivation with academic achievement among students of preparatory schools in the East Wollega Zone. The study employed a correlational research design. From the total of 2242 preparatory school students in Getema, Uke, Kiremu, Gida, and Hinde, a sample of 222 (118 male and 104 female) students was selected through systematic random sampling techniques. To collect data on students' perceived leadership, academic self-efficacy, and achievement motivation, a Likert-type scale questionnaire was used. The average academic achievements of students were obtained from the records of the sampled preparatory schools. Statistical Package for Social Sciences (SPSS) for Windows, version 21.0, was used to perform statistical analyses. Statistical tests, including descriptive statistics, Pearson correlation, and standard multiple linear regression, were used in the analysis. The result obtained from the analysed data revealed that students' academic achievement was positively and significantly correlated with academic self-efficacy, perceived leadership, and achievement motivation ($r = .57$, $p < .05$), ($r = .80$, $p < .05$), and ($r = .75$, $p < .05$, respectively). The result of the present study also revealed that more than 68% of the variation in academic achievement was explained by the combined effect of the predictor variables (academic self-efficacy, perceived leadership, and achievement motivation), $F = 158.80$, $p < .05$. The beta weights of each of the predictor variables were examined to determine which of the three independent variables contributed uniquely to the variance explained by academic achievement. Accordingly, all the predictor variables (academic self-efficacy, perceived leadership, and achievement motivation) contributed significantly to the variance in academic achievement in the positive direction ($t = 8.61$; $P < .05$, $t = 2.76$; $p < .05$, and $t = 3.73$; $p < .05$), respectively. The researchers suggest that school principals, supervisors, teachers, parents, and educational practitioners should realise the roles being played by non-cognitive factors, such as perceptions of leadership, academic self-efficacy, and achievement motivation, in improving the academic performance of students.

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INTRODUCTION

The secret to the standard of living and growth of developed countries lies in the provision of quality education. Quality education is often assessed based on academic performance, and achievement scores are considered its primary indicators. However, achievement scores alone neither provide sufficient understanding of the causes of students' success or failure

nor suggest ways for improving achievement. Thus, Nasir (2012) suggests the need to identify and analyse those factors that can affect academic achievement. Academic achievement is the result of various cognitive and non-cognitive factors, including intelligence, self-efficacy, self-concept, goal orientation, study habits, the attitude of students towards school leaders, socio-economic status, etc. However, the empirical findings reviewed here dealt with the major non-cognitive factors (such as self-efficacy, achievement motivation, and perceived leadership) thought to affect the academic achievement of students at all levels of education. These factors play an important role in promoting or declining academic achievement. Thus, an understanding of these factors can suggest some measures for improving the quality of education.

Bandura defined self-efficacy as beliefs in one's capabilities to organise and execute the courses of action required to produce given academic achievements. He argues that self-efficacy fosters students' engagements in learning activities that promote the development of educational competencies, which in turn affects the level of academic achievement as well as motivation. This theorist underlined that individuals with higher self-efficacy have confidence in their ability to overcome obstacles and perform well in their education. Supporting this view, many studies have shown that there is a positive relationship between self-efficacy and academic achievement regardless of age, gender, and discipline, and students with a higher sense of self-efficacy will achieve better academic performance (Bandura & Locke, 2003; Yazachewe, 2013).

Another important non-cognitive factor to understand academic achievement is achievement motivation. Motivation is the drive or desire of the student to engage in learning for its own sake. It is an orientation towards the goal. This orientation may be positive, negative, or ambivalent. Motivation provides a source of energy that is responsible for why learners decide to make an effort, how long they are willing to sustain an activity, how hard they are going to pursue it, and how concerned they feel about the activity (Middlton & Spanias, 1999). Research with secondary school students has documented that motivation plays a vital role in academic performance. For instance, Tella (2007) examined the effect of achievement motivation on academic achievement and learning outcomes in mathematics among secondary school students drawn from 10 schools in two local government areas in Ibadan, Nigeria. This scholar reported that students who had high achievement motivation scored significantly higher scores on mathematics achievement tests compared to their counterparts with lower achievement motivation. Similarly, studies conducted among high school students in Ethiopia revealed that academic motivation had a significant and positive direct effect on the academic performance of students (Amare, 2001; Yalew & Witruk, 2006; Zenawi, 1997).

A third key to understanding academic achievement is students' perceptions of school leadership. The effects of principals on students' academic achievements are attributed to the specific practices of the principals or the

particular leadership style of the principals as per the particular demands of the school situation (Hallinger & Heck, 1996; 1998). A meta-analysis of studies involving district leadership in the USA from 1970 until 2003, carried out by Waters, Marzano, and McNulty (2003), could be a leading work in this category. The meta-analysis examines the effects of principals' leadership on student achievement and comes up with 21 leadership responsibilities that are believed to be significantly associated with student achievement. Waters and Cameroon (2007) found a statistically significant correlation between school-level leadership and students' academic achievement. Likewise, Nyamongo et al. (2014) found that there was a significant relationship between school leaders' supervisory roles and students' academic performance.

In Ethiopia, most previous studies related to academic achievement were highly focused on college students. Thus, less attention was given to preparatory school students. Furthermore, most of these researchers have not studied perceived leadership and self-efficacy in combination with achievement motivation as predictors of academic achievements. Thus, the present study aimed to determine to what extent perceived leadership, self-efficacy, and achievement motivation predictors academic achievement of preparatory school students in East Wollega zone. To this effect, the study attempted to provide answers for the following research questions.

1. Is there relationship among students' perc eived leadership, self-efficacy, achievement motivation and academic achievement?
2. To what extent do perceived leadership, self-efficacy, and achievement motivation predict academic achievement?

MATERIALS AND METHODS

Research Approach

In this study, a quantitative research approach was employed. The quantitative research approach involves the gathering of numerical data, such as average scores from different respondents on some type of behaviour or activity, or the calculation of percentages of people who exhibit a given behaviour or perform a certain task. This data can be presented in the form of graphs and tables (Goodwin, 2010).

Research Design

The study employed a correlational research design to examine the relation between perceived leadership, self-efficacy, and achievement motivation with academic achievement and also to determine to what extent these variables predict the academic achievement of preparatory school students.

Population, Sample, and Sampling Technique

The target populations of the study were all students in public preparatory schools in East Wollega Zone. There were 20 public preparatory schools with a total population of 6425 (male 3464 and female 2961). Accordingly, five (29.41%) districts (Kiremu, Gidda-Ayana, Guto Gida, Leka Dulacha, and Ebantu) were selected from 17 districts. From

each Woreda, one preparatory school was selected through simple random sampling (Kiramu, Ayana, Uke, Getema, and Hinde). The total number of students in the sampled schools was 2242 (Getema: male-185 and female-190 total-375; Gida Ayana: male-334 and female-248 total-582; Hinde: male-262 and female-248 total-510; Kiremu: male-196 and female-161 total-357; and Uke: male-224 and female-194 total-418).

Based on the above data, in order to determine the sample size of the students, the researcher simultaneously used the following two formulas (Israel, 2003).

$$\boldsymbol{n_o = \frac{Z^2 pq}{e^2}} \textbf{2.n} = \frac{n_o}{1+\frac{(n_o-1)}{N}}$$

Where,

$\boldsymbol{n_o}$

is the sample size for proportion populatio

n;

Z is the abscissa of the normal curve which is 1.96; the confidence level is 95%;

p is the degree of variability in population (which is .2);

q is 1-p which is 0.8; e is the acceptable margin of error and is considered at 5% or 0.05 as well as n is the desired or actual sample size and

N is total number of students in five sampled schools.

Accordingly, the calculated sample size for the desired precision is 222. The sample size was taken proportionally based on the number of male and female students in each school as indicated below.

To get appropriate sample size of each school, the following proportional formula was used. $\boldsymbol{pi = \frac{n}{N}}$

Where**,**

pi is represents the proportion of population in each sampled school,

n represents the total sample size taken,

N is the total students taken in selected schools.

Then, $\boldsymbol{pi = \frac{222}{2242}}$=0.0986 ~ .099.

Therefore, to determine the proportion share of

male and female students of each sampled school, the following formula was employed.

ni = pi *Ni,

where**,**

ni represents the sample size of each school,

Ni represents the number of students taken from each school.

When apply this formula:

Getema: Male nG_1=.099 * 185 = 19; Female nG_1 =.099 *190 = 19,

Uke: Male nU=.099*224=22; Female; nU =.099 * 194 = 19,

Kiremu: Male nK=.099 * 196 = 20; Female nK =.099 * 161 = 16,

Gida: Male nG_2=.099 * 334 = 33; Female nG_2 =.099 * 248 = 23,

Hinde: Male nH=.099 * 262 = 26; Female nH =.099 * 248 = 25

Table 1

Preparatory School Students' Population and Samples in 2018/19

No	Name of sampled Schools	Number of students in Sampled schools			Number of sampled students		
		Male	Female	Total	Male	Female	Total
1	Getema	185	190	375	19	19	38
2	Uke	224	194	418	22	19	41
3	Kiremu	196	161	357	20	16	36
4	Gida	334	248	582	33	23	55
5	Hinde	262	248	510	26	25	51
Total		1201	1041	2242	120	102	222

Source: *Adapted from Report of East Wollega Educational Zone*

Data Gathering Instruments

The perceived leadership scale was adapted from Leadership Theory and Practice, Sixth Edition (Northouse, 2013). The scale is a 30-item instrument that was rated on a four-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

The academic self-efficacy scale was adapted from the self-efficacy questionnaire (Kirmizi, 2015) and the Morgan-Jinks Student Efficacy Scale (MJSES; Jinks and Morgan, 1999). The scale consisted of 30 statements, which were rated on a four-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

Achievement motivation was measured with the Academic Motivation Scale—High School Version (AMS; Vallerand et al., 1992). The scale is a 28-item instrument that was rated on a 5-point Likert scale: 1 doesn't correspond at all, 2 corresponds a little, 3 corresponds moderately, 4 corresponds a lot, and 5 corresponds exactly.

Academic Achievement: The first-semester mean score of students was used to measure academic achievement. Before administering the questionnaire to obtain the data for the main study, a pilot study was conducted at Anger Gute preparatory school, which was not included in the sample schools. The summary of the reliability coefficients of the three scales is presented in Table 2 below.

Table 2

The Computed Reliability Coefficients of the Pilot Study

No	Variables	No of items	Reliability Coefficient
1	Perceived leadership	30	.70
2	Self-efficacy	30	.89
3	Achievement Motivation	28	.85

Method of Data Analysis

After the necessary data were collected and coded, statistical tests were performed using the Statistical Package for Social Sciences (SPSS) for Window, version 21.0. Statistical tests including descriptive statistics, Pearson correlation, and standard multiple linear regressions were used in the analysis.

Descriptive statistics were done to summarize the data; Pearson correlation was computed to determine the association of perceived leadership, achievement motivation, and academic self-efficacy with the academic achievement; and standard multiple linear regression was used to examine whether the dependent variable (academic achievement) was regressed on the independent variables (perceived leadership, achievement motivation, and academic self-efficacy) or not.

RESULTS

This chapter dealt with the analysis of result of the data gathered through questionnaire and first semester academic achievement of students obtained from record offices of sampled schools. The main objective of this study was to examine the relationship between perceived leadership, self-efficacy and achievement motivation of students with academic achievement and to determine to what extent perceived leadership, self-efficacy and achievement motivation predict students' academic achievement.

Respondents' Background Characteristics

Table 3

Frequency and Percentage of the Participants in terms of Sex

Variable	Categories	Number of students	Percentage
sex	Male	118	53.2
	Female	104	46.8
	Total	222	100

As shown in Table 3 above, out of 222 preparatory school students who participated in the study, 118 (53.2%) were male and the remaining 104 (46.8%) were female students.

Table 4

Frequency and Percentage of the Participants in terms of Schools

Variable	Sampled School	Number of students	Percentage
School	Getema	38	17.1
	Uke	41	18.5
	Hinde	51	22.9
	Gida	55	24.8
	Kiremu	36	16.2
	Total	222	100

According to Table 4, the majority of the participants in the study—55 (24.8%)—were from the Gida preparatory school, followed by the Hinde, 51 (22.9%), Uke, 41 (18.5%), Getema, 38 (17.1%), and Kiremu preparatory schools. The total number of students from each school that participated in the survey was calculated using a proportionate technique, which has led to variations in the frequency and proportion of the pupils.

The Relationship between Predictor Variables and Criterion Variable

Table 5

Pearson Correlations between Predictor Variables and Criterion Variable (N=222)

Variables	Academic Achievement	Self-efficacy	Perceived Leadership	Achievement Motivation
AA	1	.80**	.57**	.75**
SE		1	.53**	.79**
PL			1	.62**
AM				1

**. Correlation is significant at the 0.05 level (2-tailed).

PL-perceived leadership, **SE**-Self-efficacy, **AM**-achievement motivation, and **AA-** Academic Achievement

The result in Table 5 shows Pearson correlations between predictor variables (perceived leadership, academic self-efficacy, and achievement motivation) and criterion variables (academic achievement). Accordingly, students' academic achievement was positively and significantly correlated with self-efficacy (r =.80), perceived leadership (r =.57), and achievement motivation (r =.75), respectively. This implies that when students' levels of self-efficacy, perceived leadership, and achievement motivation increase, their academic achievement also increases.

Results of Regression Analysis

Standard multiple linear regressions was conducted to determine to what extent each of the independent variables (perceived leadership, academic self-efficacy, and achievement motivation) predicted preparatory school students' academic achievement. Before standard multiple linear regression analysis, assumptions were checked. These assumptions include independence of observations, normality, and linearity. The independence assumption was met because all participating students answered the questionnaire used in this study independently in the classroom environment and under the supervision of their vice principal. The normality assumption was checked by drawing a histogram, which showed that the residuals were normally distributed around the students' scores. The linearity assumption was met as the graph showed no curvilinear relationship. In addition to these important assumptions in linear regression, all the predictor variables as well as the dependent variable were metric (measured at least at the interval level). This assumption was also met in this study.

Table 6

ANOVA Table Showing Collective Predictors of Academic Achievement

ANOVA	Sum of Squares	Df	Mean	F	R Square	Sig.
Regression	31973.827	3	10657.942	158.865	.686	.000[b]
Residual	4452.686	218	20.425			
Total	36426.514	221				

Standard multiple linear regressions was computed with perceived leadership, academic self-efficacy, and achievement motivation entered as predictors and academic achievement as the criterion variable. The analysis yielded a significant result: F (3,218) = 158.8, p <.05. This implied that the predictor variables jointly and significantly predicted the dependent variable (the academic achievement of students). A regression analysis further revealed that the predictor variables (perceived leadership, academic self-efficacy, and achievement motivation), when combined, accounted for more than 68% of the total variance observed in academic performance (R2 =.686).

Table 7

Relative Contributions of the Predictor Variables on Academic Achievement

Model	*B*	*SE B*	*B*	T	P
PL	.131	.047	.134	2.761	.000
SE	.498	.058	.531	8.606	.000
AM	.243	.065	.249	3.733	.000

Dependent Variable: academic achievement

PL-perceived leadership, **SE**-Self-efficacy, **AM**-achievement motivation

The beta weights of each of the predictor variables were examined to determine which of the three independent variables contributed uniquely to the variance explained by academic achievement (see Table 7). Self-efficacy contributed significantly to the variance in academic achievement in the positive direction (t =8.606; P<.05). Similarly, the contribution of both perceived leadership and achievement motivation was significant (t = 2.761; p<.05) and (t = 3.733; p<.05), respectively.

DISCUSSION

In this chapter, an attempt was made to discuss the results found with respect to the research questions described in the introduction in light of the existing body of literature. The result of the present study revealed that students' perceived leadership, academic self-efficacy, and achievement motivation were positively and significantly correlated with academic achievement (r =.57, *p* <.05), (r =.80, *p* <.05), and (*r* =.75, *p* <.05), respectively.

As shown in the result, the relationship between perceived leadership and academic achievement was significant and positive (r =.57, *p <.05).* This means students' positive attitude towards school leadership positively influences their academic achievement, and vice versa. The finding of this study is consistent with the study conducted by Hallinger and Heck (1998), who reported that the effects of principals on students' academic achievement are attributed to the specific practices of the principals or the particular

leadership style of the principals as per the particular demands of the school situations. This study is also congruent with Waters and Cameroon's (2007) finding, which found a statistically significant positive correlation between school-level leadership and students' academic achievement. Furthermore, similar to the present finding, Nyamongo et al. (2014) found that there was a significant relationship between school leaders' supervisory roles and students' academic performance.

As revealed in the result, the relationship between self-efficacy and academic achievement was significant and positive (r =.80, *p <.05).* This result showed that as students' self-efficacy increased, academic achievement also increased, and vice versa. The finding is similar to most previous studies conducted by Li (2012), Tenaw (2013), Zajacova, Lynch, and Espenshade (2005), and Adeyemo (2007), who reported that academic self-efficacy, was significantly correlated with student academic performance. The present finding is also in line with Bandura's (1986) claim, who stated that self-efficacy played a greater role in determining how an individual's feelings and thoughts motivated themselves, which then ultimately influenced their behaviour and the outcome. Similar findings were reported by Yalew (2003), who reported that students' self-efficacy had a significant and positive effect on their academic achievement, as measured by grade-point average (GPA), showing that students who perceived themselves as competent scored a higher GPA than those with a low level of self-efficacy. In addition, a study by Amare (2001) revealed that high school students verified that academic competence (i.e., equivalent to academic self-efficacy) had a significant and positive direct effect on their academic performance. Kifle's (2004) study also revealed that students with higher self-efficacy had significantly higher academic achievement as compared to their counterparts with lower self-efficacy.

Similarly, the result illustrated that the relationship between achievement motivation and academic achievement was significant and positive *(r =.75, p <.05).* This means that as students' achievement motivation increases, their academic achievement also increases, and vice versa. Research with high school students has documented consistent findings that achievement motivation plays a vital role in significantly and positively affecting academic achievement. For example, a study with a sample of 263 French-Canadian grade nine students from two Montreal high schools revealed that those students who were competent and self-determined in the school setting had self-directed motivational profiles; these students in turn had higher academic achievement than their counterparts who were incompetent and not self-determined (Fortier, Vallerand, & Guay, 1995). Similar findings have been reported by Ali (1988), who found a significant and positive relationship between achievement motivation and academic achievement, indicating that students who had high achievement motivation performed significantly better than their counterparts, as measured by the averages of the term examination grades. Abesha's (1997) study also documented a significant and positive relationship between achievement motivation and the academic performance of Teachers' Training Institutes (TTIs) students. The result of the current study contradicts the study conducted by Rosen (1991), who reported no significant relationship between achievement motivation and students' academic performance.

The result of the present study revealed that 68.6% of the variation in academic achievement was explained by the combined effect of perceived leadership, academic self-efficacy, and achievement motivation. This implies that

variables other than these that were not considered in this study accounted for 31.4% of the variability in academic achievement of preparatory school students in the East Wollega zone. This result indicated the presence of other important unmeasured variables affecting students' academic achievement. The overall contribution of the independent variables (68.5%) to academic achievement was significant (F =158.80, p <.05.

Consistent with the present finding, many scholars agree that perceived leadership, self-efficacy, and achievement motivations are significant contributors to academic achievement. For instance, Ryan and Patrick (2001) reported that a positive attitude towards learning makes a positive difference and improves the effectiveness of the learning process, which requires a positive attitude towards leadership, promoting self-efficacy in academic achievement, and increasing high motivation in education and the behaviour of students. Blank (1997) also found out that students' progress in academic motivation is more likely to have increased levels of academic achievement and lower dropout rates. He confirmed that highly motivated students perform better in school. This is something confirmed by the present study: students who had high achievement motivation performed better in school.

Regarding the effect of students' perceived school leadership on academic achievement Rebelo (2008) reported that students' school performance was influenced by their attitude towards school, learning, and commitment to school. He noted that students with lower attitudes towards school have low performance and a higher rate of school failure, while students who have positive attitudes towards learning feel more satisfied with learning and perform better. In addition, Konrad and Linnehan (1995) found that students' who have a positive attitude towards school and value education are better at academic achievement.

CONCLUSION AND RECOMMENDATIONS

It can be concluded from this study that students' perceived leadership, academic self-efficacy, and achievement motivation were positively and significantly correlated with their academic achievement. Moreover, these three predictor variables, in combination, significantly predicted academic achievement.

Based on the study findings, the following recommendations were made:

- School principals, supervisors, teachers, parents, and educational practitioners should realise the roles being played by non-cognitive factors, such as perception of leadership, academic self-efficacy, and achievement motivation, in improving the academic performance of preparatory school students.
- Preparatory schools should invite individuals who are successful and iconic in different disciplines to share their experiences with students, which may serve as a means to boost the level of their achievement, motivation, and morals in their respective arenas of social life.
- The school's stakeholders at different levels are recommended to come together and work side by side towards the development of the self-reliance of students through various activities, such as clubs.

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