Role of Leadership and Learning Environment in Influencing Learning Achievement Level of Students: A Study of Gamo Gofa Zone of Ethiopia

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Abstract: The purpose of this study was to examine the level of influence of leadership and learning environment on students' academic achievement. The study employed survey design, quantitative method and simple random sampling technique. The data were analyzed using frequency distribution and independent samples t-test. The findings indicated that while both leadership and learning environment had a positive influence on the level of the students' learning achievement, leadership tended to have a greater influence than learning environment in the study area. Thus, the primary school principals in Gamo Gofa Zone need to keep on applying appropriate leadership styles besides establishing conducive learning environment in their respective schools; moreover, rigorous research supported by causal comparative model has to be conducted on the research problem so that it might contribute to alleviating the problem.

Keywords: Achievement, Leadership, Learning environment.

INTRODUCTION

Education is universally considered as a master key for the process of personal, social and economic development, and hence for optimum human life (Phipps 2003). In cognizant of the benefit of education, the stakeholders exert unreserved efforts for the success of the educational system. Governments, as stakeholders, have been designing and redesigning the education policies, strategies and programs of their respective countries as they would fit into the countries' development plans (Agba, Ikoh, and Ashibi 2010). The communities are extensively involving themselves in supplying various facilities for education in cognizant of the benefit of education to improve their living conditions in particular and to determine national development in general. Educational institutions are entitled to bring about all round development of students as their primary objective (MoE[1] 1994). Unless the graduates could develop the desired level of behavior, the confidence that society and the government had on education to enhance development would be futile.

Despite the vital role education plays in enhancing personal, social and national development, its role in development has been hindered by the students' low academic achievement (Bloom, Channing, and Chan 2006). Unfortunately, the education system in the study area was suffering from the students' low academic performance as has been the case over the country at large. The portion of primary school students, who achieved the passing score (typically average raw score of 36% and above) in grade 8 regional examinations, of the Southern Nations' Nationalities' and Peoples' Regional State was 55.4%, 61.5%, and 54% in 2007/08, 2008/09 and 2009/10 respectively; whereas the three year average of Zada was 81% and that of Banda Primary School was 36.7% (SNNPREB[2] 2010). In this regard, Banda Primary School was the lowest and Zada was the highest performer in Gamo Gofa Zone.

Thus, the situation called for some research so that it might contribute to alleviate the problems based on the suggestions forwarded from the authentic findings. However, no study was attempted on the problem at hand in the study area. Studies revealed that leadership and learning environment had positive correlation with students' academic achievement level (Leithwood *et al*. 2004). Thus, this study was designed for the purpose of investigating the relative roles of leadership and learning environment in students' academic achievement level in Gamo Gofa Zone.

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Hence, the study is significant in that it would contribute to the enhancement of students' academic performance which in its turn would lead to meeting the desired standard of graduates; it would also serve as a springboard for further in-depth study related to the students' academic performance, school leadership and/or learning environment. As a result, all the stakeholders including the students, their parents, researchers, government, and the community may benefit from this study.

LITERATURE REVIEW

Learning Environment

For the purpose of this study, learning environment – level of conduciveness of social and physical conditions - included school conditions, classroom conditions, student-family background, and teacher's professional behavior; School-wide-sense of community, teachers' time allocation, teachers' working conditions, school size, and the co-curricular activities are among the school conditions; School-wide-sense of community - widely shared sense of community among the stakeholders - served as the emotive bonds, for example, between students and teachers which are crucial in motivating students and in succeeding academic achievement (Leithwood *et al*. 2004). In relation to teachers' time allocation, Hargreaves (1990) states that those teachers who are assigned more responsibilities as curriculum developers and mentors etc. used to experience reduced continuity of instruction with their students. In fact, teachers' working condition including feedback about teachers' efforts, lesser student misbehavior, higher perceived school administrators' support, teacher incentive structures, high levels of classroom autonomy, and opportunities for professional development contribute in enhancing teachers' working conditions and students' achievements. Lee, Ready, and Johnson (2001) indicated that schools of smaller size had increased chances of students to be monitored and to have close ongoing relationship with adults which enhanced their achievement. Leithwood *et al*. (2004) stated that extracurricular activities contributed to better academic grades, higher educational aspirations, greater feelings of control over one's life and reduced incidences of delinquency. This implies that school-wide-sense of community, teachers' time allocation, teachers' working conditions, school size, and co-curricular activities, as components of school condition, might have certain influence on the students' academic performance in our study area too.

Studies indicate that student learning is mostly influenced directly by classroom conditions such as class size, teaching loads, teacher's preparation, classroom-student grouping practices, and curriculum and instruction (Leithwood *et al.* 2004). Smaller class size is characterized by more time spent by teachers on individual instruction, and less time on classroom management. The reduction of class size significantly increases student achievement, and its effects on the primary grades appear to be maintained three to four years later (Finn cited in Leithwood *et al*. 2004). Effective instructions depend on a deep understanding of the cognitive resources brought to class by individual students, along with opportunities to assess and monitor their learning progress. But in practice this is affected by teaching overload which includes the number of periods taught and different preparations required. For better success, the number of students taught by senior teachers in a semester needs be reduced from a typical 125 to 200 to fewer than 90 (Leithwood *et al*. 2004). Assigning teachers to areas of the curriculum in which they have formal certification is essential. In this regard, Leithwood *et al*. (2004) stated that the proportion of a teacher's classes that he/she feels competent to teach determines the students' achievement. According to Yonezawa, Wells, and Serna (2002), students those who are disadvantaged by their socioeconomic backgrounds learn more when they work in heterogeneous rather than in homogeneous ability groups. Brophy in Leithwood (2004) stated that a "rich" curriculum, which is beneficial for most students, involves features such as the clearly aligned instructional strategies, learning activities and assessment practice. They are also aimed at accomplishing the full array of knowledge, skills, attitudes and dispositions valued by the society; and the content of such a curriculum is required to be organized in relation to a set of ideas which are internally coherent and well-connected to other meaningful education. Thus, it may be deduced that class size, teaching loads, teachers' preparation, classroom-student grouping practices, curriculum and instructions might have a significant influence on the students' academic achievement in the schools encompassed in our study area.

Studies also indicate that learning has a significant relation with student-family background. According to Dargie (2002), students' academic behavior has a direct influence while their social behavior has an indirect influence on their academic achievement. With respect to the students' social behavior, for example, it

has an impact on student achievement in that students' classroom. Social behavior used to influence teachers' preference of students which, in turn, has significant influence on students' academic achievement. In connection with the students' academic behavior, Asgedom (2000) emphasized on the role of students, stressing that learning was dependent on the learner's investment of mental effort and it was not the activities of their instructors that resulted in learning. Family socioeconomic status was related to the students' behavior and their learning. Families of impoverished socio-economic status suffered from malnutrition, health problems, and living in highly congested housing which gave rise to family risk factors such as erratic parenting skills, poor parental supervision, family violence, and isolation. With respect to parenting, Zeleke (2000) stated that child rearing practices played a significant role in shaping the behavior of children, and families of low socio-economic status were likely to have low expectations from their children's academic performance. Walberg (1984) contended that family educational culture included academic guidance, occupational aspirations, expectations from their children, the provision of adequate health, nutritional conditions and physical settings in the home conducive to academic work. As most of the studies discussed in this section are within the context of the country, the students' academic and social behaviors, and the parents' socio-economic status might also have certain influences on the students' academic performance in Ethiopia.

According to Louis and Kruse (1995), what teachers do together outside of the classroom - teachers' professional community - is as important as what they do inside in affecting student learning. Leithwood *et al*. (2004) indicated that one of the variables that were characterizing genuine professional communities included a focus on student learning. As to this evidence, teachers' professional community might have significant contribution to the issues of teaching and learning in the study area as well.

Leadership

Various studies indicate that an organization's effectiveness is positively associated with practicing leadership. Leadership is a real phenomenon that is important for the effectiveness of organizations. Organizations are created for specific objectives and leadership is in place to realize the achievement of these goals (Phipps 2003; Yukl 2006). The ultimate goal in the educational institutions is students' academic performance. Accordingly, studies indicate that leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school (Leithwood *et al*., 2004); and they quantitatively state that the total effects of leadership on student learning accounts for about a quarter of the total school effects. Another scholar states that the success or failure of a school depends upon the school principal (Aggarwal 2011:41); he emphasizes his belief saying "As is the headmaster, so is the school". Hence, it is pragmatic to investigate the relationship of leadership with the students' achievement in the study area in order to predict significance of its influence on the research problem.

The review conducted on the learning environment implied that students' learning achievements could be influenced by the level of conduciveness of social and physical conditions specifically school conditions, classroom conditions, student-family background, and the teacher's behavior, whereas the review conducted on leadership implied that leadership had strong positive correlation with learning achievement. Findings in the literature reviews had significant relevance to the current research under consideration and coincides with its purpose. Thus, in the light of the review of the literature, the study examined the degree of influence of leadership and learning environment on the students' learning achievement level in the study area. For this purpose, the following null hypotheses were designed:

H01: Students' learning achievement is not influenced by the learning environment;

H02: Students' learning achievement is not influence by the school leadership practice.

METHODOLOGY

The study was concerned with the current situation of the schools in Gamo Gofa Zone of Ethiopia and, thus, the methodology employed was set accordingly. It was confined to Gamo Gofa Zone geographically for the sake of the manageability of the study and data accessibility. The study also focused on the second cycle primary schools because of its relevance to secure reliable data as per to the research purpose. Since the study was concerned with the current situation of the schools, and since the size of the target population was large, descriptive sample survey design and quantitative research methods were employed (Nietschmann, 2001). Data were collected from both

primary and secondary sources. Primary data was collected using the survey questionnaire, whereas secondary data was obtained from the schools' records. As regards to the secondary data, the average scores in three consecutive years of eighth grade regional examinations, of each of the sample schools, were secured from the records in the archives of Gamo Gofa Zone Education Office. The academic years considered were 2009, 2010, and 2011.

The study covered two upper primary schools which were selected by maximum variation sampling technique on the basis of the students' academic performance: Banda Primary School - the zonal lowest performer from Oyda District, and Zada Primary School - the zonal highest performer from Dita district in Gamo Gofa Zone of Ethiopia. Primary data was collected by using the survey questionnaire, suitably designed for this purpose. Two sets of questionnaires were used; the first set of questionnaires was for collecting the data on leadership practice and the second set for collecting data on the learning environment. Before conducting data collection, the survey questionnaires were pilot-tested in order to check the appropriateness of the items and Cronbach's alpha reliability measure (value of 0.89) confirmed that the items were reliable (Best and Kahn 2016). For collecting data on learning environment, 316 participants were included in the sample, comprising of 66 teachers and 250 students. Each of these categories of the respondents was included with the purpose of enhancing the reliability of the data. As regards to the selection of participants, all the teachers of both the upper primary schools were covered as their number was limited, and simple random sampling technique was employed for selection of students. The data collection process was handled by the first researcher. Before running the process of data collection, informed consent of the participants was obtained; the researchers also confirmed and realized the confidentiality of the information provided by the participants. The data analysis was conducted applying SPSS version 20 to compute the participants' perceptions and the scores of the students' academic performance. The variables considered in the study were learning achievement, learning environment and leadership. Leadership and learning environment were independent variables, whereas learning achievement was the dependent variable. Thus, the frequency distribution and independent samples t-test were employed to investigate the participants' perceptions on leadership as well as to investigate the learning environment and its association with the students' academic performance; alpha value of .05 was used for testing significance level (Best and Kahn 2016).

DATA ANALYSIS AND FINDINGS

Descriptive Statistics of the Students' Academic Achievement

The grade scores of the students and information on the rate of the students' promotion, as secondary data, were gathered from the schools' records, and this was shown in Table **1**.

This data was of three consecutive years, of eighth grade regional examinations, of each of the sample schools including 2009, 2010, and 2011. Thus, the mean grade scores and the promotion rate of grade eight students of Banda and Zada primary schools were presented in the table. Amongst the 120 students who sat for the examination in the Banda Primary School, 44 of them (37 per cent) scored the passing marks, whereas among the 150 students who sat for the examination in Zada Primary School, 121(81per cent) of the them scored the passing marks. Thus, the students' academic performance was better in Zada Primary School than in Banda Primary School.

The Respondents' Perceptions on Effectiveness of Leadership Practice

Data on the leadership practice of the sample schools was collected using the first set of

Table 1: Mean Scores of Grade Eight Regional Exams for Banda and Zada Primary Schools

Sl. No	School	Frequency Distribution									Min	Max	x	SD
		Below pass		Pass						Total				
		< 36		36 – 49		> 49		36 – 100						
		N	%	N	%	N	%	N	%	N				
1	Banda	76	63	34	28.30	10	8.30	44	37	120	23	64	34.71	8.37
2	Zada	29	19	97	65.00	24	16.00	121	81	150	28	80	42.38	8.97

Key: Max – maximum, Min – minimum, x – mean, SD – standard deviation.

Table 2: Respondents' Perceptions Regarding Leadership Practice

School	Variables	Respondents				WM	T	sig	df
		Leaders		Teachers					
		X	SD	X	SD				
Banda	Visioning	3.85	.537	3.42	.801	3.50	1.344	.187	36
	Staff Empowerment	3.53	.821	3.50	.734	3.51	.088	.930	36
	Leadership Styles	2.73	.332	2.54	.204	2.58	1.903	.065	36
	Average Leadership practice	3.37	.432	3.16	.473	3.20	1.093	.281	36
Zada	Visioning	4.25	.433	4.44	.329	4.40	-1.28	.206	37
	Staff Empowerment	4.39	.196	4.24	.501	4.26	.774	.444	37
	Leadership Styles	3.68	.251	3.15	.293	3.24	4.421	.000	37
	Average Leadership practice	4.12	.232	3.94	.298	3.97	1.365	.180	37

Note: t-critical (table) value = 2.02. Key: if x < 2.75 LP is ineffective, x = 2.75 – 3.50 moderate, x > 3.50 effective, X – mean, SD - standard deviation, WM – weighted mean, df – degree of freedom.

questionnaires. Thus, Table **2** is concerned with the respondents' perceptions regarding leadership practice in the sample schools.

As shown in Table **2**, the results of independent samples t-test indicated that there was no statistically significant mean difference between the perceptions of the two groups of respondents in Banda (as t(36) = 1.093, p = .281 > .05), and in Zada Primary School (as t(37) = 1.365, p = .180 > .05). The table also displayed that the mean perceptions of the principal and teacher respondents on leadership practice were 3.37 and 3.16, having standard deviation of .432 and .473 respectively in Banda, and 4.12 and 3.94 with standard deviation of .232 and .298 respectively in Zada Primary School. The weighted mean of the respondents' perceptions on leadership practice was 3.20 (≈ 3) and 3.97 (≈ 4) for Banda and Zada primary schools, respectively. Therefore, leadership practice in Zada Primary School was more effective than in Banda Primary School.

Perceptions on Conduciveness of Learning Environment

Data on the learning environment of the sample schools was collected using the second set of questionnaires. Table **3** is concerned with the respondents' perceptions, regarding leadership practice, in the sample schools. As shown in Table **3**, the results of independent samples t-test indicated that there was no statistically significant mean difference between the perceptions of the teachers and student respondents on the learning environment in Banda (as t(139) = 1.945, p = .094 > .05), and in Zada Primary School (as t(156) = .151, p = .880 > .05).

The table also displayed that the mean perceptions of the teacher and student respondents on learning

Table 3: Respondents' Perceptions Regarding Learning Environment (LE)

School	Variables	Respondents				WM	T	Sig	Df
		Teachers		Students					
		X	SD	X	SD				
Banda	School Conditions	3.87	.715	3.902	.495	3.89	.280	.780	139
	Classroom Conditions	3.88	.735	4.02	.550	3.99	1.140	.256	139
	Student-family Background	4.121	.721	4.206	.478	4.18	.781	.436	139
	Teacher Behavior	3.959	.496	3.134	.613	3.31	6.875	.000	139
	Average Learning Envir't	*3.95*	*.448*	*3.81*	*.322*	*3.84*	*1.985*	*.094*	*139*
Zada	School Conditions	3.64	.425	3.80	.613	3.77	1.468	.206	156
	Classroom Conditions	3.68	.653	3.43	.738	3.48	1.796	.074	156
	Student-family Background	3.03	.618	3.09	.616	3.08	.557	.579	156
	Teacher Behavior	3.92	.407	3.98	.601	3.97	.484	.629	156
	Average Learning Envir't	*3.57*	*.396*	*3.58*	*.390*	*3.58*	*.151*	*.880*	*156*

Note: t-critical (table) value = 1.96. **Key:** X – mean, SD - standard deviation, WM – weighted mean, df – degree of freedom.
LE is low if x < 2.60, moderate if x = 2.61 – 3.40, high if x > 3.41(He, 2012).

environment were 3.95 and 3.81, having standard deviations of .448 and .322 respectively in Banda, and 3.57 and 3.58 with standard deviations of .396 and .390 respectively in Zada Primary School. The weighted mean of the respondents' perceptions on learning environment was 3.84 and 3.58 for Banda and Zada primary schools, respectively. Therefore, the conduciveness of learning environment was high in both Banda and Zada primary schools. However, Banda had slightly more conducive learning environment than that of Zada Primary School.

The implication of these findings was that exercising appropriate leadership models and establishing conducive learning environment would lead to better students' academic achievement. Besides, dealing with leadership requires more emphasis than learning environment. However, the limitations of this study were that the findings may not be generalized beyond the districts from where the samples were taken as the sample size was limited. This calls for conducting further in-depth study in the problem area to alleviate the problem broadly. Thus, the result of this study would serve as a springboard of conducting further research.

CONCLUSION

The study led to the following findings: The students' academic performance was better in Zada Primary School than in Banda Primary School for three consecutive years and on average as well; leadership practice in Zada Primary School was more effective than in Banda Primary School; learning environment in Banda Primary School was slightly more conducive than in Zada Primary School. In light of these findings, it can be deduced that the students' academic achievement was higher in Zada Primary School where there was more effective leadership practice and relatively less conducive learning environment, whereas lower in Banda Primary School where there was less effective leadership practice and relatively more conducive learning environment. This implies that leadership tends to have a greater influence on students' academic performance than learning environment in the study area. However, dependable conclusions could be reached based on rigorous study supported by causal comparative model. Accordingly, it was recommended that the primary school principals in Oyda and Dita districts of Gamo Gofa Zone need to keep on applying appropriate leadership styles in their respective schools; In effect, they need to improve their leadership skills through relevant and systematically planned trainings. The school principals also need to work hard in order to keep the learning environment of their schools conducive. Moreover, rigorous research supported by causal comparative model has to be conducted in the area of the research problem under consideration so that it might contribute to the alleviation of the problem.

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