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Original Research

Primary School Principals' Change Leadership Behavior and School's Climate at Dukem Town, Ethiopia

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Abstract

The main objective of this study was to investigate relationships between the principal's change in leadership behaviour and the school's climate in Dukem Town. The two available public primary schools were examined using a concurrent embedded strategy and a mixed approach. A correlational design was used to collect quantitative data from all 65 teachers in both schools using two standardised instruments: the change leadership measure and the organisational climate description questionnaire. A case study design was used to collect qualitative data from purposefully selected participants. Interviews and document reviews were used to collect qualitative data. Quantitative data was analysed using the SPSS-20 version, and the result showed that both school principals displayed a moderate level of change leadership behaviour (M =3.22; SD =.43; N = 65); the mean value for change selling behaviour (M = 3.35; SD N = 65) excelled in change implementing behaviour (M = 3.08; SD =.86; N = 65) a bit. The three dominant school climate dimensions were found to be principals' restrictive behaviour (standard score = 599.34); principals' directive behaviour (standard score = 593.75); and teachers disengaged behaviour (standard score = 638.69), indicating "low" principal openness and "very low" teacher openness, respectively. The result of the correlation study showed a very strong positive correlation between school climate and change leadership behaviours (r(63) =.79, n = 65, p .000). The analysis of qualitative data indicated that the major reform undertaken was raising students' academic achievement without compromising access. Right-based approach, integrating Afaan Oromo and Amharic instructions into one school, under different shifts, with the same leadership serving as a strategy, was challenged by classroom overcrowding; however, expansion was not stopped; children's rights remained respected, and even magnificent progress in pass rate and steady increase in academic achievement were documented. Both schools' teachers were intimate, except they did not learn from each other.

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INTRODUCTION

The existence of effective principals' change leadership behaviour and a healthy school climate are essential requirements for successful implementation of educational reforms in schools (Higgs & Rowland, 2005; Higgs & Wren, 2005; Hoy, 2001; Price &

Moolenaar, 2015). Effective school principals who have successfully implemented educational reforms such as school improvement are those who have deeper knowledge of change management including: 1) having deeper understanding of the change process mainly conceiving change as a complex, multiphase process, that has sequences (Daggett & Jones, 2010; Huberman & Miles, 1984; Kotter, 1996), 2) having knowledge of the reason why people accept or resist change (Connor, 1995; Ford, Ford, & D'Amelio, 2008; Herscovitch & Meyer, 2002; Jick, 1993; Maurer, 1996; Yukl, 2010); 3) recognizing an effective change approaches and having appropriate mind set (Fullan, 2006; Higgs & Wren, 2005), 4) careful understanding of different types of change such as attitudinal or behavioral change, role or structural change, process change, use of technology, competitive or strategic change (Beer & Nohria, 2000; Beer, Eisenstat, & Spector, 1990; Yukl, 2010), and 5) applying appropriate change models (Fullan, 2006; Huberman & Miles, 1984; Yukl, 2010).

For change to be successfully effected, the school management must undertake a critical diagnosis of the school's existing situation (Gharajedaghi, 1999; Goodman & Rousseau, 2004) and clearly show the major problems and their possible solutions. The major social and developmental problem identified in least-developed countries, including Ethiopia, is low-quality education, expressed in terms of low academic achievement and poor student learning. No one allows continuing in such a state. The possible solution is to raise the academic achievement and learning of students by implementing school reform. To reduce resistance and implement school reforms successfully, it is important for school principals to explain why the change is necessary. This is called 'change selling' in the words of Herold, Fedor, Caldwell, and Liu' (2008). This is a step that requires convincing partners about the necessity of the change. It is when they understand the reason why improvement is needed that teachers, students, parents, and other partners support implementation. For school principals and educational leaders, besides having deeper knowledge of change management, equally, possessing better knowledge of the nature of (and variation in) the work place (work environment), mainly understanding the status of (and guiding) teachers-teachers and principal-teachers relations, is necessary for successfully implementing school reforms (Fullan, 2005; Hopkins, Harris, Stoll, & Mackay, 2011; Hoy, Tarter, Kottkamp, 2012). School climate, which is the collective perceptions of teachers about the school's work environment, that is, the kind of relationship that exists between and among themselves and the relationship that exists between teachers and principals, is a determinant situation for the success of reform (Litwin & Stringer, 1968).

School climate studies are also vital in that they systematically examine the work (and managerial) atmospheres of schools and use knowledge to improve organizations. When staff and principals have an open and healthy relationship, a better coalition is created (Kotter, 1996), which can take the improvement agenda further. Staff relationships and interactions can serve as a

source of satisfaction (or dissatisfaction). The feelings of staff about their relationships and interactions determine the level of their commitment. According to Hoy, Tarrter, and Kottkamp (2012), school climate indicates the extent to which the school atmosphere promotes openness, colleagueship, professionalism, trust, loyalty, commitment, pride, academic excellence, and cooperation.

Apart from the change leadership behaviours of change agents and the organisational environments, several related factors affect the successful implementation of school reforms. Many studies have documented factors that might affect reform implementation in schools positively or negatively (Bartunek, Rousseau, Rudolph, & DePalma, 2006; Commonwealth, 2013; Fullan, 2005; Herold, Fedor, & Caldwell, 2007; Higgs & Rowland, 2010; Higgs & Waren, 2005; Lucas, McEwan, Ngware, & Oketch, 2012; McKinsey & Company, 2007; Satnely, 2006; Voet, Kuipers, & Groeneveld, 2013).

Conditions that help successful implementation of school reform program were documented to include: "getting more talented people to become teachers …" (McKinsey & Company, 2007, p.1); adequacy of resources supplied (Lucas, McEwan, Ngware, & Oketch, 2012; Commonwealth, 2013); acceptance and support the change receives from employees (Bartunek, Rousseau, Rudolph, & DePalma, 2006; Herold, Fedor & Caldwell, 2007), clarity of the change content (Fullan, 2005), leadership change approach that considers change as a complex process (Higgs & Wren, 2005); having a clear implementation framework (Fullan, 2006; Satnely, 2006; Saunders, 2000); having set a bench mark by compiling the best experiences of high performing schools and systems (Hopkins, Harris, Stoll & Macky, 2011; Saunders, 2000); employing feasible strategies to implement school improvement program (Ashford & Patkar , 2001; Busher & Harris, 2000; Currington, Deppler, & Moss,2011; Dufour, Eaker, & Many, 2006; Harris & Mujis, 2005; MacBeath, 2005; Waters & Cameron, 2007) and demonstrating appropriate change leadership behaviour (Gill, 2003; Kotter, 1996; Rowland & Higgs, 2005; 2010) and the way it is implemented (Armenakis & Bedeian, 1999; Pettigrew, Woodman & Cameron, 2001; Self, Armenakis, & Schraeder, 2009).

Statement of the problem

A complex relationship exists between leadership change behaviours, organisational climate, and organisational success. Several studies have evidenced the existence of a positive linkage between a principal's change leadership behaviour and organisational success (Bass & Riggo, 2006; Herold, Fedor, Caldwell, & Liu, 2008; Liu, 2010) and between school climate and a school's effectiveness (Hoy, Tarter, Kottkamp, 2012); however, the findings are inconclusive. For instance, some research findings report the existence of a direct and positive relationship between principals' leadership behaviour and students' academic achievement (Hallinger & Heck, 1998; Leithwood & Jantzi, 1999; Osagie, 2016; Tatlah, Iqbal, Amin, & Quaraishi, 2014), while others still report the existence of an indirect effect of principals'

leadership behaviour on students' academic achievement. Dessalegn, Bekalu, & Frew (2016) examined the relationship between principals' leadership effectiveness and Western Harghe zone, Ethiopia, secondary school students' academic achievement. They used the cumulative grade point of grade ten students as a measure of academic achievement and correlated it with a standardised measure of leadership effectiveness. Their findings show no direct relationship between principals' leadership behaviour and students' academic achievement.

On top of inconsistent findings with regard to the relationship between a principal's leadership behaviour and a student's academic achievement, the existence of a complex relationship between change leadership behaviour, organisational climate, and organisational success is found to be a reality. Lars (2010) examined the relationship between organisational climate and performance in Germany and found the existence of a significant positive relationship between organisational climate and profitability, growth, and organizations. Eshraghi, Harati, Ebrahimi, and Nasir (2011) examined the relationship between organisational climate and the leadership styles of the managers of physical education organisations in the Isfahan province of Iran, and the findings show that there is a significant relationship between organisational climate and the leadership behaviour of the managers. The correlation coefficient indicated a significant positive relationship between the autocratic leadership style and closed organisational climate and between the democratic leadership style and open organisational climate at the 0.01 significance level. However, envisioning improvements and successfully implementing them in schools remained a difficult task because leading and managing change, creating a suitable working environment in schools, and raising the academic achievement of students are complex matters.

On the other hand, leading and managing school reform programmes that aim at raising students' academic achievement and learning have become decisive but remain challenging. With respect to the complexity of change leadership and management, several studies have documented that around seventy percent of change initiatives fail (Kotter, 1996; Carnnel, 1999; Higgs & Rowland, 2005). Schools might fail to be effective mainly because of several reasons, including: lack of adequate resources (Lucas, McEwan, Ngware, & Oketch, 2012; Commonwealth, 2013); shortage of more capable and committed school administrators, teachers, and support staff (Malen, Croninger, Muncey, & Redmond-Jones, 2002; Rice & Cornninger, 2005); and change leaders' lack of deep understanding of the change process that impairs leaders from displaying proper change leadership behaviours and approaches (Fullan, 2006; Higgs & Rowland, 2010; Higgs & Waren, 2005; Voet, Kuipers, & Groeneveld, 2013; Waters & Cameron, 2007).

School climate, itself, is not a simple concept; it has six dimensions that are categorised under two big interactive behaviours: principals' behaviour and teachers' behavior. The principal's behaviours are conceived in terms of supportive,

directive, and restrictive behaviors. The interaction patterns of elementary teachers were described in terms of collegial, intimate, and disengaged teacher behaviors.

In Ethiopia, the absence of effective school change leadership who can explain the reason why change is needed, overcome resistance, create a suitable work environment, and raise the quality of education is a serious problem (Lemlem, 2010; Beyene, 2016; Tirunesh, 2015). Thus, this study had twin purposes: first, to investigate the current status of principals change leadership behaviours in implementing school reform and the current status of school climate in the study area; and second, to investigate the relationship between principals change leadership behaviours and the school climate.

The following research questions guided the study:

1. What are the dominant change leadership behaviours of public primary school principals in the study area?
2. To what extent are school climates open?
3. What relations exist (and to what degree) between primary school principals' change leadership behaviour and the school's climate?
4. What progress has happened in the study area because of the reform attempt?

The purpose of this study is to show that successful implementations of educational reform require principals' and educational leaders' effective leadership behaviour, which guides the change along the right path and provides the necessary support. Similarly, an open climate where staff interactions (the relationship between and among teachers and between principals and teachers) are smooth, collegial, and supportive helps staff learn from each other and provide the necessary technical, social, and psychological support needed for each other to easily pass through the trauma of change. Collegial and supportive school work environments facilitate open dialogue, which eventually reduces resistance to improvement. The overall purpose of this study was to show the importance of effective principals' change leadership behaviour in influencing schools' work environments.

Significance of the Study: The study addressed middle-level primary schools. Second-cycle primary school teachers and principals are the direct beneficiaries. The study indicated how school climate mediated the effect of principals changing their leadership behaviour on the success of school reform.

The Study Area: Dukem Town

Located in Oromia regional state, Ethiopia, 37 KM south-east of Addis Ababa, Dukem town lies on a total land area of 3,583 hectares and has a total population of 37,386 (18,038 female) with an annual population growth of 7.5%. According to the Dukem municipality booklet, the town is believed to have been established in the year 1914/15 and has 105 different projects placed on 85 hectares of land with a capital investment of more than 3.5 billion USD that has opened job opportunities for more than 7, 000 people. Out of the 80 large-scale industries planned to be built in the Chinese industry zone, which lie

on 300 hectares of land in the town, five of them have already begun production.

Education in the Study Area: More than 9000 students attend different levels of education in six kindergartens, 10 primary schools (two public), three first-cycle secondary schools, one preparatory school, and one technical vocational school. There are 303 teachers (198 public) in the town. Currently, the town has two public primary schools that host a total of 5,999 students (2636 female, 43.94%) in two shifts. Despite efforts made by parents, teachers, and student association committees, dropout rates (0.9% in 2014) and repetition rates (0.8% in 2014) remained problematic in the town.

Contextual background of the two public primary schools in Dukem Town

The *Dukem Kuter Hulet* middle-level primary school has 2,000 students (934 female, which is 46.7%) and 64 teachers (39 females). Out of the total 2000 students in the school, 926 students (360 female) attend instruction in the Afan Oromo language, while 1074 students (574 female) attend instruction in the Amharic language in the opposite shift. Similarly, *Dukem Kuter Aned* primary school had 3999 students (1710 female, which is 42.7%), attending grades one to eight, and 59 teachers (39 female, which is 66.10%) in 2015/16. The corresponding number of students in grades five to eight of Dukem *Kuter Aned* Primary School was 1994 students (1,083 female, which is 54.48%), and the number of teachers in the second primary cycle was 34 teachers (20 female, which is 58.8%) who teach in grades 5–8. Out of the 1994 students who attend grades five to eight in the school, 1347 students (766 females) who attend instruction in Afan-Oromoo are organised into 12 sections, three sections in each grade, making the average number of students in a classroom 112. The 647 students (317 female) who attend instruction in Amharic language are arranged into two sections for every grade from five to eight, making the student-to-section ratio equal to 1:81. This way, the same school (its facilities and teachers) are arranged to serve both the Oromo and Amharic-speaking communities under one leadership. This is one example of a wise use of resources. As well, it is a good sign of respect for a child's right to get a basic education in their mother tongue. However, class room overcrowding is a serious problem. The national standard for primary schools is to have 50 students in a section. Both the Afaan Oromo and Amharic shift classrooms are overcrowded. The correct measure was at least to double the number of sections in each grade. Doing that would have reduced the class size from 112 to 56, which is reasonable to accept. Such measures will require a larger number of teachers and will overburden existing teachers until more are deployed.

Profiles of Both School Principals: The principal of *Dukem Kuter Aned* was trained as a mathematics teacher, had seven years of experience in leadership positions (three years as vice principal and four years as principal), and attended one semester (last summer) of postgraduate diploma in school leadership. On the other hand, the school principal at the other school, *Dukem Kuter Hulet*, was a physics teacher for a long time, had three years of experience in a leadership position (as a principal), and also attended the summer postgraduate school leadership diploma

program. Except for a slight difference in work experience (*Dukem Kuter Aned's* principal has three years extra service as vice principal and one more extra service year as principal over the corresponding *Dukem Kuter Hulet*'s principal, where the latter later served as a teacher), both principals have similar educational backgrounds.

Progresses Made on Raising Students' Academic Achievement and Pass Rate at Dukem Town

Despite classroom overcrowding and overburdened teachers, a steady increase in the eighth grade student pass rate was documented in schools. Out of the total students who sat for the eighth grade national exam, the pass rate of students from public schools in the town has shown a steady increase from 72.6% pass in 2010 to 88.44% pass in 2014. In all subjects (and for both shifts), students' average achievement (scores obtained from subject-teacher assessment) has shown an increase from year to year since 2010. For example, the average mark for seventh grade students' was 58.80 in 2010/11, which was raised to 64.63 in 2013/14. The plan for the same grade this year was to raise it to 70%. Similarly, the grade eight average marks were 61.97 in 2010/11 and rose to 67.73 in 2013/14, with a plan to increase it to 70 this year.

The Method Section

Instruments: Qualitative data was collected from teachers using semi-structured interviews, focus group discussions, and document review guides. Two standardised instruments were used for quantitative data collection. These were the modified change leadership measures (Liu, 2010) and the organisational climate description questionnaire (OCDQ-ML) developed by Hoy and Mikel (1987). The change leadership measure has 18 items (originally, it was developed by Herold, Fedor, Caldwell, & Liu, 2008, but later tested and modified to 18 items by Liu, 2010). It contains seven items under leaders' change-selling behaviour and 11 items under leaders' change-implementing behavior. The questionnaire lists statements that describe the behaviours of leaders to be rated on a Likert scale from "1", which means strongly disagree, to 5, which means strongly agree.

The second standardised instrument is the 50-item organisational climate descriptive questionnaire for middle-level schools (OCDQ-ML), developed by Hoy and Mikel (1987), which measures the domain of climate along a continuum from open to closed. Teachers describe the interaction patterns in their school. OCDQ has six dimensions: three for group characteristics: collegial, committed, and disengaged; and three principal behaviours: collegial, committed, and disengaged.

Mixed Method: The study employed a mixed research method, specifically a concurrent embedded strategy. Both data are collected simultaneously. The quantitative data is predominant, and the qualitative data is embedded in it. In this study, the relationship examined between the principal's change leadership behaviour and the school's climate was quantitative data, while the qualitative part addressed the process (and pattern) of interaction and the progress made because of school reform. Quantitative data collection and analysis applied to a co-relational design While the qualitative data collection and

analysis were guided by the case study design, A co-relational study was appropriate as it "involves collecting data to determine whether, and to what degree, a relationship exists between two or more variables" (Gay, Mills, & Airasion, 2009, p. 196). A case study was appropriate as it investigated the happening of a phenomenon within a specific context (Creswell, 2007, p. 74). Thus, it is appropriate to use a mixed approach as it combines both qualitative and quantitative data in a single study (Gay, Mills, & Airasion, 2009, p. 468).

Findings

Participants: As can be seen from Table 1, all 65 (50.77%) female teachers of the two public middle-level schools in Dukem Town were involved in the study. The finding that says the number of female teachers is nearly equal to that of male teachers is the real reflection of the urban teaching population. In urban centres of the country, the number of female teachers in primary schools is equal to the number of males because of the possibility of transfers.

Table 1

Participants by Institution and Gender

schools	participants	Male	Female
1. Dukem No 1 Middle level Primary school teachers (grades 5-8)	34	16	18
2. Dukem No. 2 Middle level Primary school teachers (grades 5-8)	31	14	17
Total Respondents	65	32(49.23%)	33(50.77%)

Descriptions of Change Leadership Behaviours Displayed by Principals in Middle Level Public Primary Schools at Dukem Town

To reduce resistance and implement school improvement plans successfully, it is important for school principals to first explain why the change is necessary. It is when they understand the reason why improvement is needed that teachers, students, parents, and other partners support implementation. Thus, prior implementation, overcoming the barriers of resistance, building coalitions, effectively communicating the vision, and creating a common understanding are necessary. And for the success of implementation, empowering people, monitoring and providing periodic feedback, and refreezing the practice are important.

To note the actual change leadership behaviours principals displayed for implementation of a particular change named the school improvement programme, Liu's (2010) 18-item change leadership measure was adopted and employed. Teachers of Dukem middle school public primary school were asked to indicate their principals' use of change selling and change implementation behaviours by rating the statements in the questionnaire from "1", which means strongly disagree," to 5, which means strongly agree.

As can be seen from Table 2, the mean score of principals' change selling of both public primary school principals' was found to

have been moderate (*M* = 3.35, *SD* =.69, N = 65), indicating that principals show more than regular effort to explain the need for improvement. Descriptive statistics showed that the selling behaviour of the principals of both schools was nearly the same (for more detail, see Table 2). However, since the appropriate statistical tool that measures differences between two groups is the *t-test, the t*-test was conducted at a 95% confidence interval. The null hypothesis tested was that there was no significant statistical difference between the changing selling behaviours of both principals. The t-test value (*t* (63) = -.37, *p* =.716, *df* = 63) showed that there is no statistically significant difference between the two school principals' changing selling behaviors. Thus, it can be understood that the principals of middle-level public primary schools in Dukem Town displayed modest change-selling behaviour.

Table: 2

Descriptive Statistics Values of Change Leadership Dimensions by Primary Schools

Dukem ML Public primary School principal's change leadership behavior									
	Dukem No 1			Dukem No 2			Dukem town		
Change Behaviors	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
1.Explained why change was necessary	34	3.47	.76	31	3.65	1.38	65	3.55	1.09
2.Built a broad coalition to support	34	3.08	.51	31	2.61	1.75	65	2.86	1.27
3. Effectively communicated the vision	34	3.29	.72	31	3.51	.89	65	3.40	.81
Selling Change	34	3.28	.46	31	3.42	.89	65	3.35	.69
1.Empowered people	34	3.58	.78	31	2.68	1.25	65	3.09	1.14
2. Provided regular feedback	34	2.85	.66	31	3.35	1.47	65	3.24	1.03
3.Carefully monitored and communicated progress	34	3.44	.50	31	3.03	1.38	65	3.15	1.12
4.Celebrated short term wins	34	2.47	.75	31	3.22	1.56	65	2.83	1.26
Implementing Change	34	3.09	.49	31	3.07	1.06	65	3.08	.86
Average Change Leadership Behavior	34	3.19	.00	31	3.24	.62	65	3.22	.43

Key; N= Number of participants; M= mean; SD= Standard deviation; ML = middle level

On the other hand, the average change implementation behaviour of both principals of Dukem town was found to have been better than average (*M* = 3.08, *SD* =.86, *N* = 65), indicating that principals are trying to implement the school reforms through the combined effort of staff.

The overall change leadership, which is the average of change selling and change implantation behaviours of both schools, was found to be modest (N = 65, *M* = 3.22, *SD* = .43); meaning the average change leadership behaviour, that is, the average change selling and change implementing behaviour displayed by both principals, is about 64.40 percent of the expectation of teachers. As can be seen from Table 2, the overall change in leadership behaviours of both principals seems similar. However, since the appropriate statistical tool that measures differences between two groups is the *t-test, the t*-test was conducted at a 95%

confidence interval. The null hypothesis tested was that there was no significant statistical difference between the changes in leadership behaviours of both school principals. The result of the t-test ($t(63) = 1.25$, $p = .217$, $df = 63$) showed that there was no statistically significant difference between the change in leadership behaviours between the two school principals.

As perceived by school teachers, the average school improvement programme implementation level of both middle-level public primary schools in Dukem Town was found to be 3.08 out of 5.00 on a Likert scale, indicating about 60 percent implementation of what the staff expected. The average scores of change selling and change implementation were found to be close to each other, as anticipated. And, the score for implementation ($M = 3.08$, $SD = .86$) was a bit lower than the scores for change selling ($M = 3.35$, $SD = .69$) since the incomplete unfreezing of the selling change stage has a negative impact on implementation.

In sum, the two school principals' demonstrated a modest level of change leadership behaviours, which is a bit above the average point, that is, in the lower part of the third quartile, for both change selling and implementing. The mean score values for change leadership being low show that the change leadership behaviours of the two school principals were underdeveloped. Further, incomplete unfreezing due to incomplete principals' selling change leadership behaviour has failed to fully address people's concerns (or part of it), leaving some people ill-prepared (or unconvinced) for implementation. On top of that, principals' implementing change behaviours being near the medium level, in the lower portion of the third quartile, shows that the principals' change implementing capacity is also underdeveloped, and change implementation was not undertaken with the full capacity as expected by the staff.

The School Climate

Teachers collegial, committed, and disengaged behaviours determine their level of openness. Correspondingly, principals supportive, directive, and restrictive behaviours determine their openness. To measure Dukem public middle-level primary school teachers' openness, principals' openness, schools' openness, and then the school climate, an OCDQ-ML questionnaire was used. The questionnaire asked teachers to rate the descriptive items on a four-point Likert scale, which ranges from "1" which means "rarely occurs" to "4", which means "very frequently occurs".

A rank order of mean scores of the school climate dimensions (for detail, see Table 3) shows that teachers collegial behaviour ($M = 29.80$, $SD = 5.22$, $N = 65$) is the dominant climate, followed by principals' supportive behaviour ($M = 26.03$, $SD = 5.55$, $N = 65$). To clearly see the dominant school climate, calculating the raw standardised scores of school climates and interpreting them accordingly is necessary. Hoy's (2014) formula for converting school climate dimensions into standardised scores and the same writer's interpretation were adopted in this case (for a detailed explanation of Hoy's (2014) conversion formula and interpretation, see Appendix 1).

Table: 3

Dukem Town Middle Level Primary School Teachers Perception of their School Climate

Description of School Climate	Dukem middle level public primary school								
	DukemNo1			Dukem No2			Dukem Town		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
Collegial Behavior (11 items)	34	28.65	3.82	31	31.29	6.22	65	29.80	5.22
Supportive Behavior (11 items)	34	28.06	3.88	31	23.58	6.17	65	26.03	5.55
Committed Behavior (9 items)	34	23.65	2.88	31	23.58	2.57	65	23.51	3.61
Disengaged Behavior (9 items)	34	19.91	3.61	31	23.40	4.39	65	21.58	3.61
Directive Behavior (6 items)	34	14.41	2.15	31	14.13	3.79	65	14.34	2.97
Restrictive Behavior (4 items)	34	10.12	1.72	31	11.23	3.49	65	10.62	2.74
School Climate	34	124.79	15.95	31	127.06	19.41	65	125.88	17.58

A close analysis of the school climate of both middle-level public primary schools in Dukem Town using the standardised scores showed that teachers disengaged behaviour is the highest of all school climate dimensions, followed by principals' restrictive behaviour, with a standardised score for teachers' disengagement, *SdS for Dis = 638.9,* and a standardised score for principals' restrictiveness, SdS for Res = 599.4, respectively (for details, see Table 4). In the standardised score interpretations, since the mean of the "average" school is 500, scores between 551 and 600 are "high" and scores above 600 are "very high". Teachers' disengaged behaviour at both Dukem town's middle-level public primary schools (*Kuter Aned* and *Kuter Hulet)* is at a very high level (*SdS for Dis* = 600); likewise, principals' restrictiveness at both schools was found to be at a high level (*SdS for Res* = 599.4).

Further, the average standardised score of principals' openness for both *Dukem* Town's public primary schools was found to be 411.34, which is interpreted as "low". Correspondingly, the average standardised score of teachers' openness for both *Dukem* Town's public primary schools was found to be 419.77, interpreted also as "low". These indicate that the openness level of both principals and respective schools' teachers is low.

Table: 4

Hoy's (2014) Standardized Score Conversion Formula and its values by schools

Standardized scores	Conversion Formula	Dukem Kuter Aned	Dukem Kuter Hule	Dukem Town
Standardized Score for Teachers Disengaged Behavior	SdS for Dis=100 X (Dis-15.56) / 2.18+500	699.54	859.63	638.69
Standardized Score for Principals' Restrictive Behavior	SdS for Res =100 X (Res 9.11)/ 1.52+500	566.45	674.17	599.34
Standardized Score for Principals' Directive;	SdS for Dir=100 X (Dir-12.09)/ 2.40+500	596.67	585.00	593.75
Standardized Score for teachers' Collegial Behavior	SdS for Col =100 X (Col-29.30)/ 3.01+500	478.41	566.11	516.61
Standardized Score for Principals' Supportive Behavior	SdS for Dir =100 X (Dir-12.09)/ 2.40+500	471.15	373.97	427.11
Standardized Score for Teachers' committed Behaviour	SdS for Com =100 X (Com-26.76)/2.74 +500	387.00	383.94	381.39
Principal Openness	(SdS for Sup)+(1000-SdS for Dir) + (1000-SdS for Res)) /3	436.20	371.60	411.34
Teacher Openness	(SdS for Col)+(SdS for Com)+ (1000-SdS for Dis)) / 3	388.62	363.47	419.77

The findings that indicated high disengagement of teachers of both schools, more restrictive behaviour of both principals and low levels of teacher and principal openness are typical evidence that indicates the organisational climate of both public primary schools in Dukem own were closed climates. From qualitative data, it was learned that teachers of both schools are socially related to each other and provide each other with all necessary support during crises and happiness. In a personal interview, one male teacher said, "Teachers have 'idir' [social groups meant for social support during the loss of loved ones] that provide them with better social support. Female teachers have better performance in this respect. They provide better support to each other during childbirth and during the loss of loved ones". A female teacher elaborates:

> *To my understanding, the teacher-teacher relationship provides strong support. As an extension of the community's culture, school teachers eat porridge together when a female teacher gives birth. There is a kind of ritual whereby teachers bless a woman who wants to bear a child next, even if she is barren. They put the porridge tray on her head and called blessings over her, which might happen. Once, an infertile teacher was blessed on such an occasion. Later on, she bore a child. I like the porridge ceremony. It is interesting. The other thing I like about the teacher-teacher relationship is the financial support offered to colleagues during sickness. A senior female teacher, for example, fell in school and broke. Teachers contributed money and paid for her medication.*

Further, a school principal recognised that teachers provide each other with strong social support. He said, "They support each other during sickness. One of the staff members suffered from disc dislocation, to which the teachers contributed up to 50, 000 Birr and paid the medical fee".

From these excerpts, it can be understood that teachers are related to and support each other both within the school compound and outside. Even so, they value their relationship as a basis for spiritual blessing. The community's culture seems to have served as a model. However, both principals and participant teachers agreed that teachers invite each other to their homes but never invite each other to their classrooms. The professional support they offer each other is in its infancy, indicating that the teachers' openness level is very low. Nevertheless, the existing socially supportive teacher-teacher relationship can serve as a base for establishing and nurturing a professional learning community.

Relationships between the principal's change in leadership behaviour and the school climate

The null hypothesis tested was that there was no statistically significant relationship between principals changing leadership behaviours and school climate. The alternative hypothesis claimed that at least there is one pair of these variables (change in leadership behaviours and school climate) whose correlation coefficient is different from 0 at a 95% confidence interval.

As can be seen from Table 5, the result of the correlation coefficient (N = 65, g =.79, r =.000) showed a strong positive correlation between principals' change in leadership behaviour and the schools' climate.

Table 5

Relationship between school climate and Principal's Change Leadership Behavior in Pearson Correlation Coefficient

Variables Correlated		Pearson Correlation Coefficient	Sig	N
School Climate	Principal's Change Leadership Behavior	0.788	0.000	65

Summary and Conclusion

The change under implementation was raising students' academic achievement and learning without stopping expansion. In implementing the school reform, interestingly, the public primary schools in Dukem Town were found to be applying the UN's right-based strategy. Both schools in Dukem Town were organised in a two-shift system in such a way that their facilities and teachers serve both the Oromo and Amharic-speaking communities under one leadership. Taking this measure, that is, integrating instructions given in Afaan Oromo and Amharic in one school, under different shifts and the same leadership, sounds ethical since it respects every child's right to get primary education in their own mother tongue. The findings of the study show that access is not compromised. However, classrooms are highly crowded. The improvement is greatly hampered by the scarcity of resources, mainly teachers and class rooms. The finding that lack of adequate resources challenged reform success conforms to two studies (Lucas, McEwan, Ngware, & Oketch, 2012; Commonwealth, 2013). In both schools, the main focus of the principals needs to be mobilising the necessary resources to meet the national standard.

Under this approach, teachers prepared in *Oromia* teachers training college serve both. The effectiveness of the practice of using teachers trained in Afaan Oromo instruction to deliver lessons in Amharic is questionable. One of the recommendations suggested is to undertake programme evaluation.

The mean score of principals' change selling behaviour of both Dukem town's public primary school principals' was found to have been moderate (M = 3.35, SD =.69, N = 65). The average change implementation behaviour of both principals of Dukem town was found to have been better than average (M = 3.08, SD =.86, N = 65). Change selling behaviour is the dominant principal change leadership behavior. The overall change leadership behaviour of both principals, which is the average of change selling and change implantation behaviours of both schools, was found to be modest (N = 65, M = 3.22; SD = .43). This implies that principals' changing leadership behaviours have a positive influence in raising students' achievement and schools' effectiveness. Document review revealed the magnificent progress made in grade eight students pass rate (that was, 15.84% increment; change from 72.60% pass in 2010 to 88.44% pass in 2014) and steady increase in students' academic achievement (eighth grade national exam average marks

increased from 61.97 in 2010/11 to 67.73 in 2013/14).

Both schools' principals have a first degree in science, have taught for many years, were principals for the last three years, and had summer training in school leadership. Although Dukem Kuter Aned's principal has three years of extra service as vice principal and one more year of extra service as principal over the corresponding Dukem Kuter Hulet's principal, their change of leadership didn't show a significant difference. This finding that says three years of principal ship work experience don't make any significant difference in effectiveness conforms with Bush and Middilewood's (2005) claim that the first three years of principal ship experience are the toughest phase of the career, when the novice learns much to survive rather than becoming competitive.

The study revealed that teachers' improved social interaction has provided social and spiritual support to staff. However, the absence of collegial relations (among and between teachers) has hampered the possibility of learning from each other. Further, the study indicated that both schools' climates are closed. The three dominant climate dimensions were teachers' disengaged behaviour, principals' restrictive behaviour, and principals' directive behaviour. The finding that says principals' restrictive and directive behaviours were dominant over supportive implied that both leaders showed more authoritarian leadership behaviour; it conforms to several studies (Eshraghi, Harati, Ebrahimi, and Nasir, 2011; Higgs & Rowland, 2010; Higgs & Waren, 2005; Voet, Kuipers, & Groeneveld, 2013). Eshraghi, Harati, Ebrahimi, and Nasir (2011) found a positive relationship between authoritarian leadership and a closed organisational climate. According to Hoy and Sabo (1998), in a disengaged school climate, teachers lack meaning, common goals, focus, and show less effort. Teachers' behaviour in such a climate often tends to be negative and critical of their colleagues and the school. To better direct the efforts of teachers towards the same goal, it is highly recommended that both principals learn to be democratic, more transformational, and focus on creating (and communicating) a shared vision. The result of the correlation coefficient (N = 65, g =.79; r =.000) showed a strong positive correlation between principals' change leadership behaviour and the schools' climate.

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