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Distributed Leadership Practices of Principals in Government Secondary Schools of East Shewa Zone

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Abstract

The principal objective of this study was to assess the extent to which principals practice distributed leadership in government secondary schools in the East Shewa Zone. Pragmatic worldview guided the study. The study used quantitative approach. The population of the study includes secondary schools working in the Zone. Seven secondary schools were chosen as a sample using simple random sampling. 239 teachers, 14 department heads, and 7 supervisors were chosen as a sample using stratified and availability sampling, respectively. Questionnaires and documents were used to collect the data. Data analysis utilized descriptive statistics, nonparametric statistics, and ordinal regression. The findings indicated a low level of distributed leadership practice. It is recommended that: secondary school principals make effort to understand new leadership practices; Education Offices support secondary schools; the Regional Education Bureau supports principals and education officials; and the Ministry of Education checks the curriculum used for secondary school principals' training.

Keywords: distributed leadership; principals; and leadership practices.

1. Introduction

1.1 Background

Generally speaking, the results of studies conducted on leadership have long revealed that while leadership has been a topic of interest since the origin of humankind, leadership studies were taken seriously from the early 20th century onwards. As such, the study of leadership, which began with the Great Man and Trait theories, reached distributed leadership theory in the 21st century. Based on their areas of concern, leadership theories could be categorized into two: while the earlier theories of leadership focus on the character and personality of successful leaders, the recent theories concentrate on what leaders do [1] . Distributed leadership has arisen as a result of the research works that different authorities [2, 3, 4] have been through to search for solutions for the challenges that organizations face while practicing other theories of leadership [2].

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As such, staying mentioned in those earlier leadership theories in different forms, distributed leadership theory came to being independent, originating in the field of organizational theory in the mid-1960s [5] . Later, in the late 1980s and early 1990s, it gained more emphasis as organizational development reached the level at which it required sharing leadership practices among organizational constituents. As a result, the value given to leadership has grown in almost all sectors, and education has no exception [6] .

Since its emergence, distributed leadership has been differently defined before it came to take its current form [7]. These include shared leadership, collective leadership, collaborative leadership, co-leadership, inclusive leadership, and emergent leadership, to name a few. In these definitions, it is familiar to all that leadership is not the responsibility of a single individual and requires a more collective and systemic understanding of leadership as a social process.

Like other leadership theories, while being appreciated for their benefits, distributed leadership has also been questioned for the complexities that it brings to organizations. In this regard, while practicing distributed leadership, schools may face considerable challenges related to internal conditions like distance, culture, and structure [8]. In addition, a school could also come across three fundamental barriers while implementing distributed leadership: teachers may develop a fear of lacking acceptance from their colleagues; time concern, as teachers add leadership activities onto their already total teaching workloads; and principals may become reluctant to devolve their authority and power to teacher leaders [9].

Therefore, to combat the challenges it entails and implement distributed leadership in schools, three variables need consideration: interdependency, accountability, and interaction [2]. These variables are assumed to be mutually established for leaders and followers. For instance, with regards to accountability, if the role of school principals requires that they hold teachers accountable for the outcomes, this role also charges the principals with a responsibility to ensure that their teachers can do what they are required to do [10]. From an institutional perspective, organizational complexity is critical to general education and schools. School complexity is intertwined with many variables: a large number of students and teachers that a school principal is expected to deal with; upward and horizontal task relationships; systemic thinking, which assumes the interaction and interrelationship of the school community; and policy directives that propose decentralization and community participation in leading schools [11].

In this regard, when indicating solution that helps school leaders to cope with school situations, distributed leadership theory advocates that schools have to decentralize their leadership and create a possibility for a collective form of leadership [12] since, in a school where distributed leadership is practiced, its leadership is assumed to be accomplished through the interactions of multiple leaders [13].

In the Ethiopian context, school leadership became a reality following the introduction of modern education to the country. Since then, it has passed through different developmental steps: its evolution, replacement of Ethiopians for expatriates, de-professionalization, and re-emphasis of principals' preparation, to mention some [14]. So far, through the efforts made to study and define distributed leadership, authorities have come up with different forms. For instance, [15] defines distributed leadership with three dimensions: the leader, followers,

and their situation. Likewise, [16] defines distributed leadership by four dimensions: teaching-learning, school culture, collaboration, and motivation of those within the organization.

Further, [17] defines distributed leadership with a seven-dimensional model: school organization, school vision, school culture, instructional program, artifacts, teacher leadership, and principal leadership, and this implies that distributed leadership has been defined inconsistently. To this end, this study was designed to assess how school principals practice distributed leadership in government secondary schools in East Shewa Zone.

1.2 Statement of the Problem

Following the current complexity of schools and the demand it places on principals, the idea that school principals can independently lead schools to effectiveness is questionable [15]. Distributed leadership is becoming a preferred school leadership model in the 21st century [18, 19, 20]. In schools, distributed leadership is preferred with the assumption that it assists them in at least three ways: making a school a community where the interaction and interrelationship of all members are realized, enhancing effective teaching-learning in the classroom, and improving students' outcomes.

With the emergence and development of distributed leadership, school principals' attention is shifting from the former one-man leadership to shared leadership, where school leadership is defined as a function of the interaction between and among the principal, followers, and their situation [21], and this, in turn, necessitates two conditions to be fulfilled. First, leadership must be distributed to those with the knowledge required to carry out leadership tasks. Second, leadership distribution needs to be planned [22], which assumes that distributed leadership plays a critical role in school goal achievement by ensuring the quality of teaching-learning in the classroom' [23].

To this end, distributed leadership theory framed this study and informed the practice problem: how do policy provisions influence school practices so that all students learn and school effectiveness is realized? More specifically, distributed cognition frames the study. Distributed cognition is applied in systems design and implementation in specific work environments, such as a secondary school [24].

Concerning the practice of distributed leadership, the experience of different countries is almost similar. For instance, in Sweden, since the half of the 1970s, the government has been trying to understand schools as organizations and develop a system of school improvement through collaborative structures, shared responsibility, and everyday learning, making it part of state reforms. Following this, school principals have been practicing delegating responsibilities to teacher teams to boost their participation in decision-making. As a result, teacher teams with a cross-disciplinary structure are an institutionalized practice in most Swedish schools [11]. Similarly, in Ireland, the implementation of distributed leadership has legal grounds. Many recent policy documents from the Department of Education and Science advocate a 'whole school approach,' which refers to the involvement of all members of staff, parents, board of management, and partners; this implies that it is unlikely for one person to provide all the leadership required in a school context, and for a school to be effective, the implementation of distributed leadership is a prerequisite [25].

Like Sweden and Ireland, the implementation of distributed leadership in schools has legal provisions in Botswana. Intending to produce high-quality and cost-effective education, the Ministry of Education and Skills Development of Botswana encourages schools to establish cluster school management teams, Parents Teachers Associations (PTAs), and Student Representative Councils [26]. In this regard, the current practice in Ethiopia indicates that the philosophy behind educational leadership, in general, and school leadership in particular, is shifting from one-man leadership to distributed form. Distributed leadership has gotten more emphasis since the first half of the 1990s, with the Education and Training Policy by which the government planned to decentralize educational management [27] and the strategies issued for its implementation like Education Sector Development Programs (ESDPs) and General Education Quality Improvement Packages (GEQIP), to mention few. Nevertheless, when one looks at the current practice of the government secondary schools of Ethiopia concerning distributed leadership practices, it is not to the expectation. To this end, the data obtained from the output of research conducted concerning distributed leadership in different parts of the country at different levels of the educational provision indicates that in schools in general and secondary schools in particular, the practice of distributed leadership is not to the expectation [19, 28, 29, 30, 31, 32,]. In addition, the information obtained from archival sources also supports what is indicated by the research outputs. For instance, the analysis results of the Ethiopian Education Development Roadmap indicated that leadership is not practiced to the expectation, indicating that leadership challenge is one of the challenges faced by the government in implementing the policy. To this end, this study was designed to assess the extent to which principals practice distributed leadership in government secondary schools in the East Shewa Zone.

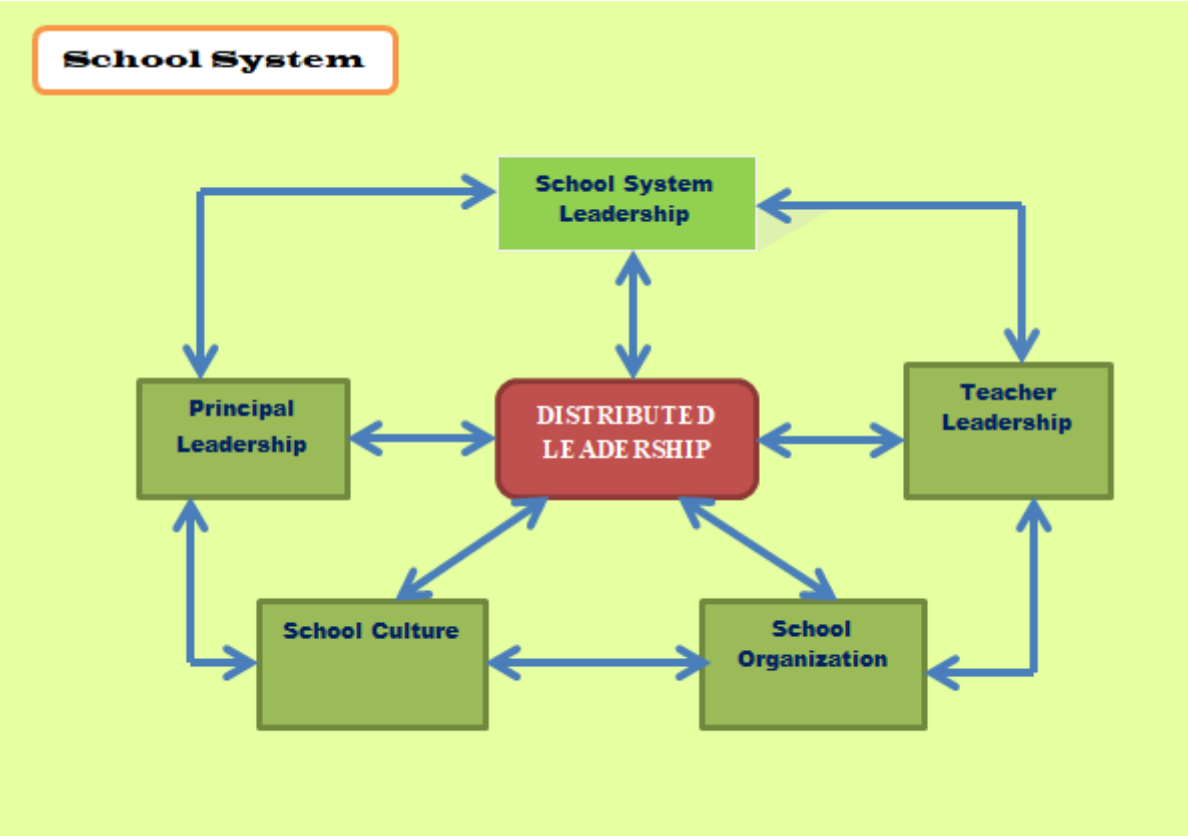

Figure1: Distributed Leadership Model.

Compared to the earlier researches conducted in the country and abroad in relation to the topic, this study was designed to follow a different approach. Different to the earlier works that utilized principals and teachers as the only data sources, the current study included teachers, department heads, and supervisors as data sources to widen the scope and obtain information from new sources and look at the research topic from different perspectives and thereby get more insight into the research topic. To this end, this study was designed to satisfy the following objectives:

1.3 Research Questions

Major Research Question:To what extent do school principals practice distributed leadership?

Research Sub-Questions:

1. To what level is principal leadership practiced?
2. What is the status of teacher leadership practice?
3. To what degree is system leadership practiced?

1.4 Significance of the Study

This study is assumed to extend the current research on distributed leadership in the Ethiopian education system in general and secondary schools in particular by bringing attention to secondary school principals' practice of distributed leadership. Distributed leadership practices of principals are assumed to contribute to school effectiveness by realizing at least three primary school conditions: securing staff members' full participation in decision-making; promoting meaningful collaboration and harmonious work relations; and generating passion for accomplishing tasks [33]. For this to happen, school leadership is expected to act as one of the significant factors contributing to the success of schools [34]. In this regard, the output of the study is expected to have the following importance:

1. It may help school principals to understand their current status of effectiveness in practicing distributed leadership and in gaining some insights on how to become more successful in this regard.
2. It may also help policymakers, education managers working at different levels, and other stakeholders to see the existing policy provisions and school-level situations supporting the practice of distributed leadership and work on the gaps identified by the study in this regard.
3. Further, it may also serve as a source of information for those interested in further studies in the same area.

1.5 Limitation of the Study

Due to time and other resource constraint, the research did not cover all the secondary schools (9-12) working in cities found in the study area. In addition, the research did not include those stakeholders found outside of the secondary schools. As a result, the output of the study might be negatively affected than had it been covered the full range.

2. Materials and Meths

2.1 Research Design

For this study, a pragmatic research paradigm underpins the methodology. The pragmatic research paradigm applies to quantitative methods research under which researchers draw from quantitative assumptions [35].

2.2 Sample and Sampling Technique

According to the data obtained from Zonal Education Department, there are ten woredas and 3 City Administrations in the study area. Accordingly, 5 of the ten woredas were selected as a sample using the purposive sampling technique considering the geographical location and the number of secondary schools and teaching staff they have [36]. Similarly, two of the three city administrations were purposively selected and included in the sample [37]. After selecting the sample woredas and the city administrations, the sample secondary schools were selected following two different mechanisms: the secondary schools that are working in the sample woredas were directly taken for the very reason that each sample woreda has only one secondary school (grade 9-12). From those secondary schools working in the sample city administrations, the sample secondary schools were chosen using the purposive sampling technique considering their teaching staff (taking the secondary school with the highest number of teachers). Accordingly, out of the five government secondary schools found in the sample city administrations, 2 of them were selected and included in the sample. Together, seven government secondary schools were taken as a sample. In selecting respondents, the sample size taken from teachers was determined using the sampling formula developed by [38, 39], and 239 teachers were selected and included in the sample. In addition, 14 department heads and seven supervisors were purposively selected and included in the sample, assuming they provided the reach data needed for the study. In total, 260 participants took part in the study.

2.3 Data Collection

Methodologically, this study followed the quantitative research method. As a result, data needed for the study were collected using the quantitative data collection method. To this end, a structured, closed-ended, 5-dimensional, 34 items, 5 points Likert-scale self-developed Distributed Leadership Inventory Questionnaire was used to collect data from teachers, department heads, and supervisors. The distributed leadership practices of principals and how their leadership practices are perceived by teachers, department heads, and supervisors were measured with the help of this survey questionnaire. For the questionnaire, the ratings range from 1 (Strongly Disagree) to 5(Strongly Agree). Accordingly, 260respondents (which include239 teachers,14 department heads, and seven supervisors) took part in the study by filling out the questionnaire administered to the respondents by the researcher himself.

2.4 Data Analysis Technique

For the study, three categories of respondents were used as data sources: teachers, department heads, and supervisors. The demographic characteristic of each of the three categories is presented in the table as follows:

Table 1: Background information of quantitative data sources.

Category	Classification	Job Position					
		Teacher		Department Head		Supervisor	
		N	%	N	%	N	%
Gender	Male	213	89.50	14	93.33	5	71.43
	Female	26	10.92	0	0.00	2	28.57
	Total	238	100.00	14	93.33	7	100.00
Age	Less than 30	57	23.95	3	20.00	0	0.00
	30-35	84	35.29	7	46.67	3	42.86
	36-40	43	18.07	3	20.00	1	14.29
	Above 40	54	22.69	2	13.33	3	42.86
	Total	238	100.00	15	100.00	7	100.00
Qualification Level	BA/BED/BSc	156	65.55	10	66.67	1	14.29
	MA/MSc	82	34.45	5	33.33	6	85.71
	Total	238	100.00	15	100.00	7	100.00
Work Experience	1-10	80	33.61	3	20.00	0	0.00
	11-20	90	37.82	6	40.00	5	71.43
	21-30	42	17.65	6	40.00	1	14.29
	Above 30	26	10.92	0	0.00	1	14.29
	Total	238	100.00	15	100.00	7	100.00

Table 1 above presents respondents that were data sources. According to the table, the respondents were seen under five indicators: gender, age, job position, qualification, and work experience. When seen by gender, 232 (89.2%) were male, while 28 (10.8%) were female. Similarly, concerning respondents' age range, 60 (23.1%) of them were found to be below the range of 30, 94 (34.2%) of them fell between the age range of 30-35, 47 (18.1%) of them fall between the age range of 36-40, and 59 (22.7%) of them fall above the age range of 40. When job positions saw respondents, 239 (91.9%) of them were found to be teachers, 14 (5.4%) of them were department heads, and 7 (2.7%) of them were supervisors. Respondents were also seen by qualification, of which 167 (64.2%) had first-degree while 93 (35.8%) were found to be second-degree holders. Lastly, respondents were also seen by their work experience. As a result, 83 (31.9%) of them were found to have 1-10 years of experience, 101 (38.9%) of them had 11-20 years of experience, 49 (18.8%) of them were found to have 21-30 years of experience, and 27 (10.4%) of them were found to have above 30 years of work experience. As their nature entails, quantitative data are analyzed using statistical techniques. Statistical techniques are preferred for they help to summarize data and thereby help researchers to understand it (Creswell, 1999). Accordingly, to analyze the data collected through the questionnaire, the researcher followed the following procedure: first, the data were checked and made ready for analysis. Then, the data were organized, coded, and entered into (SPSS V-20). After all, the data were analyzed using descriptive statistics (percentage, mean, and standard deviation) to assess the extent to which secondary school principals practice distributed leadership. In addition, inferential statistics (Spearman's correlation and ordinal regression) were used to analyze the extent to which the five dimensions of distributed leadership are related to one another in indicating the extent to which principals practice distributed leadership and to see the extent to which the five dimensions of distributed leadership vary in explaining distributed leadership practices of principals, respectively. For assessing distributed leadership practices of the sample secondary schools, the quantitative data were collected with a 5-point Likert-scale questionnaire; after collecting the data, to assess distributed leadership practices of the sample secondary schools in the five dimensions of distributed leadership and their subscales, cumulative mean scores of the Likert-scale items were used. Accordingly, interpretation of cumulative mean score values followed the

following ranges: 1.00–1.50 were interpreted as very poor, very inadequate, or very dissatisfactory;1.51 – 2.50 were interpreted as poor, inadequate, or dissatisfactory; 2.51 – 3.50 were interpreted as undecided, neutral; 3.51–4.50 were interpreted as good, adequate, or satisfactory; and 4.51 – 5.00 were interpreted as very good, adequate, or very adequate.

3. Results

Through the process of data analysis, after entering the data into SPSS, a trial was made to check its normality before going to analyze the data. Through the checking, it was found that the Sig. value was statistically significant, indicating that the data was not normally distributed. For this reason, the data were transformed with Log_{10} to be ready for analysis. After performing the transformation, it was again checked for normality. However, the result indicated that all the data values were statistically significant, meaning that the data are still not normally distributed. Due to this reason decision was made to use ordinary regression analysis. The data presentation and analysis followed the sequence in which the primary research questions were presented. Accordingly, data analysis results related to the extent to which principal leadership is practiced are presented. Next, data analysis results related to teacher leadership practice are presented. Furthermore, finally, the data analysis results related to principals' school system leadership practice are presented.

3.1 The Extent to Which Secondary School Principals Practice Distributed Leadership

This section presents the analysis results of the data collected to understand the extent to which secondary school principals practice distributed leadership in the secondary schools under study. It is divided into three significant variables to simplify its measurement: the extent to which principal leadership is practiced, the extent to which teacher leadership is practiced, and the extent to which school system leadership is practiced. Accordingly, their analysis is presented in the order that they are presented above:

Table 2: Respondents' perception of principals' distributed leadership practice.

	Item	N	M	SD
1.	The principal actively participates alongside teachers in their subject area instructional meetings.	260	3.35	1.19
2.	The principal is knowledgeable about the school's instructional issues.	260	3.50	1.10
3.	The school's goals are aligned with that of the school woreda's	260	3.50	1.13
4.	The principal provides leadership in improving students' academic achievement.	260	3.54	1.04
5.	The school has clearly written vision statement.	260	3.60	1.12
6.	Teachers have understanding about the school's vision and can clearly describe it when necessary.	260	3.50	1.20
Cumulative		260	3.48	1.13

As presented in table 2 above, to measure the extent to which principal leadership is practiced in the secondary schools working in the study area, six indicators were utilized: the principal actively participates alongside teachers in their subject area instructional meetings; the principal is knowledgeable about the school's instructional issues; the school's goals are aligned with that of the school woredas; the principal provides leadership in improving students' academic achievement; the school has clearly written vision statement, and teachers have an understanding about the school's vision and can clearly describe it when necessary.

For the analysis purpose mean and standard deviation of the indicators were considered. The measurement followed a rating between 1 and 5 on a Likert-scale range of measurement as a minimum and maximum points, respectively. Accordingly, the results are presented one after the other in the order they presented above. In measuring the extent to which principal leadership is practiced, principals' active participation alongside teachers in their subject area instructional meetings was rated as undecided (neither/nor) (M = 3.35, SD = 1.19). The fact that principals are knowledgeable about the school's instructional issues was also rated as undecided (neither/nor) (M = 3.50, SD = 1.10). Likewise, the extent to which school goals are aligned with the woreda was rated as undecided (neither/nor) (M = 3.50, SD = 1.13). The extent to which the principals provide leadership in improving students' academic achievement was rated as adequate/satisfactory (M = 3.54, SD = 1.04). Similarly, the degree to which the secondary schools under study have written vision statements was rated as adequate/satisfactory(M = 3.60, SD = 1.12). The extent to which teachers understand the school's vision and can clearly describe it when necessary was rated as neutral/neither/nor (M = 3.50, SD = 1.20).

When the cumulative value of the above six sub-scales is considered, a neutral value (M = 3.48, SD = 1.13) implies the extent to which principals practice distributed leadership, as rated by the 'principal leadership' sub-scale, indicates a neutral or neither/nor. From this, it is possible to deduce that principals' distributed leadership practice, as rated by the 'principal leadership' sub-scale, was below satisfactory.

Table 3: Respondents' perception of the extent to which teacher leadership is practiced.

Items	N	Mean	SD
1. Teachers are interested to participating in school leadership activities.	260	3.42	1.23
2. Informal school leaders play important role in improving the performance of their colleagues.	260	3.32	1.08
3. Informal school leaders play important role in improving students'achievement.	260	3.37	1.05
4. The school has improved its capacity by providing professional staff formal opportunities to take on leadership roles.	260	3.30	1.10
5. There is a clearly set criteria used to select potential teachers for leadership positions.	260	2.94	1.25
6. Teachers discuss and help one another to solve problems.	260	3.72	1.12
7. Teachers discuss strategies and share materials.	260	3.65	1.11
Cumulative	260	3.39	1.13

As presented in table 3 above, to measure the extent to which teacher leadership is practiced in the secondary schools working in the study area, seven indicators were utilized: teachers are interested in participating in school leadership activities, informal school leaders play an essential role in improving the performance of their colleagues, informal school leaders play an important role in improving students' achievement, the school has improved its capacity by providing professional staff formal opportunities to take on leadership roles, there is set criteria used to select potential teachers for leadership positions, teachers discuss and help one another to solve problems, and teachers discuss strategies and share materials. For the analysis purpose mean and standard deviation of the indicators were considered. The measurement followed a rating of 1 and 5 on a Likert-scale measurement range as minimum and maximum points, respectively. Accordingly, the results are presented one after the other in the order they presented above. In measuring the extent to which teacher leadership is practiced, teachers' interest in participating in school leadership activities was rated as neutral (neither/nor) (M

=3.42, SD = 1.23). The fact that informal school leaders play an essential role in improving the performance of their colleagues was also rated as neutral (neither/nor) (M = 3.32, SD = 1.08). The extent to which informal school leaders play an essential role in improving students' achievement was rated as neutral (neither/nor) (M = 3.37, SD = 1.05). The fact that the secondary school has improved its capacity by providing professional staff formal opportunities to take on leadership roles was rated as neutral (neither/nor) (M = 3.30, SD = 1.10). The existence of set criteria used to select potential teachers for leadership positions was rated as neutral (neither/nor) (M = 2.94, SD = 1.25). The level to which teachers discuss and help one another to solve problems was rated as adequate or satisfactory (M = 3.72, SD = 1.12). The level of teachers discussing strategies and sharing materials was rated as adequate or satisfactory (M = 3.65, SD = 1.11).

When the cumulative value of the above seven sub-scales is taken, a neutral value (M = 3.39, SD = 1.13) implies the extent to which principals practice distributed leadership, as rated by the 'teacher leadership' sub-scale, indicates a neutral or neither/nor. From this, it is possible to deduce that principals' distributed leadership practice, as rated by the 'teacher leadership' sub-scale, was below satisfactory.

Table 4: Respondents' perception concerning the practice of school system leadership.

	Items	N	Mean	SD
1.	The school uses teacher made assessment results to improve instructional programs.	260	3.72	1.11
2.	The school uses regional and national assessment results to improve instructional programs.	260	3.60	1.10
3.	Teachers and principals share accountability for students'academic performance.	260	3.76	1.02
4.	Teachers and principals share accountability for meeting external standards of school monitoring and evaluation.	260	3.55	1.10
5.	Teachers have the classroom skills and skills needed to work with teaching-learning teams.	260	3.97	0.93
6.	Through assessment for learning, every student's progress is monitored and constantly provided with support, remediation, and enhancement.	260	3.54	1.10
7.	The national curriculum framework remains recommended areas of study (lives more space for different learners to work at different depth).	260	3.38	1.00
8.	The education policy and other strategy documents provide school principals with the opportunity to share leadership practices.	260	3.35	1.17
	Cumulative	260	3.61	1.10

As presented in table 4 above, to measure the extent to which school system leadership is practiced in the secondary schools working in the study area, eight indicators were utilized: the school uses teacher made assessment results to improve instructional programs, he school uses regional and national assessment results to improve instructional programs, teachers and principals share accountability for students' academic performance, teachers and principals share accountability for meeting external standards of school monitoring and evaluation, teachers have the classroom skills and skills needed to work with teaching-learning teams, through assessment for learning, every student's progress is monitored and constantly provided with support, remediation, and enhancement, the national curriculum framework remains recommended areas of study (lives more space for different learners to work at different depth), and the education policy and other strategy documents provide school principals with the opportunity to share leadership practices.

For the analysis purpose mean and standard deviation of the indicators were considered. The measurement followed a rating between 1 and 5 on a Likert-scale range of measurement as a minimum and maximum points, respectively. Accordingly, the results are presented one after the other in the order they presented above. In measuring the extent to which school system leadership is practiced, the extent to which the secondary schools use teacher-made assessment results to improve instructional programs was rated as adequate or satisfactory (M = 3.72, SD = 1.11). The extent to which the secondary schools use regional and national assessment results to improve instructional programs was also rated as adequate or satisfactory (M = 3.60, SD = 1.10). The extent to which teachers and principals share accountability in the secondary schools for students' academic performance was again rated as adequate or satisfactory (M = 3.76, SD = 1.02). The extent to which teachers and principals share accountability for meeting external school monitoring and evaluation standards was rated as adequate or satisfactory (M = 3.55, SD = 1.10). The extent to which teachers have the classroom skills and skills needed to work with teaching-learning teams was rated as adequate or satisfactory (M =3.96, SD = 0.93). The extent to which through assessment for learning, every student's progress is monitored and constantly provided with support, remediation, and enhancement in the secondary schools was rated as adequate or satisfactory (M = 3.54, SD = 1.10). The level at which the national curriculum framework remains recommended areas of study in secondary schools was rated as neutral or neither/nor (M = 3.38, SD = 1.00). The extent to which the education policy and other strategy documents provide school principals with the opportunity to share leadership practices was rated as neutral or neither/nor (M = 3.35, SD = 1.17).

When the cumulative value of the above eight sub-scales is considered, a good or satisfactory value (M = 3.61, SD = 1.10) implies the extent to which principals practice distributed leadership, as rated by the 'school system leadership' sub-scale, indicating a satisfactory result. From this, it is possible to deduce that principals' distributed leadership practice, as rated by the 'school system leadership' sub-scale, was satisfactory.

In summary, the data was collected and analyzed to identify the extent to which school principals applied distributed leadership in secondary schools. The findings indicated medium to high results, implying that the secondary schools' principals' practice of distributed leadership was satisfactory, with more efforts needed to practice it to the fullest, where it could contribute to the maximum of its capacity for secondary school goal achievement.

3.2 Nonparametric Correlation Analysis

At the planning stage of the research, it was intended to conduct a correlation analysis to verify the level at which the five dimensions of distributed leadership (school organization, school culture, teacher leadership, school system leadership, and principal leadership) relate to one another in supporting principals' distributed leadership practice. Moreover, for correlation analysis, Pearson's correlation was planned. However, through the data analysis, when the data was entered into SPSS and checked for normality, It was found to be not normally distributed. Due to this, a transformation was made to facilitate the analysis. After transformation, the data was also not normally distributed, leading the researcher to apply nonparametric analysis. As a result, shifting was made from the earlier chosen Pearson correlation analysis to Spearman correlations analysis.

Table 5: Spearman correlations analysis result.

			SO	SC	TL	PL	SSL
Spearman's rho	SO	Correlation Coefficient	1.000	.644**	.713**	.673**	.594**
		Sig. (2-tailed)	.	.000	.000	.000	.000
		N	260	260	260	260	260
	SC	Correlation Coefficient	.644**	1.000	.788**	.655**	.660**
		Sig. (2-tailed)	.000	.	.000	.000	.000
		N	260	260	260	260	260
	TL	Correlation Coefficient	.713**	.788**	1.000	.764**	.674**
		Sig. (2-tailed)	.000	.000	.	.000	.000
		N	260	260	260	260	260
	PL	Correlation Coefficient	.673**	.655**	.764**	1.000	.697**
		Sig. (2-tailed)	.000	.000	.000	.	.000
		N	260	260	260	260	260
	SSL	Correlation Coefficient	.594**	.660**	.674**	.697**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.
		N	260	260	260	260	260
**. Correlation is significant at the 0.01 level (2-tailed).							

As presented in table 5 above, the analysis results of the correlation between and among the five dimensions of distributed leadership are presented here under the efforts made to measure the degree of relationship that exists between school organization and school culture; the data analysis results indicated a correlation coefficient of .644** and a Sig. value of 0.000 indicates a positive correlation between school organization and school culture, and the correlation is statistically significant at $\alpha = 0.01$ level of significance. That means school organization and culture dimensions go in line, supporting one another in indicating the degree to which secondary school principals practice distributed leadership indicates that as school organization improves, so does school culture contributing to practicing distributed leadership in the secondary schools under study.

In measuring the degree to which school organization and teacher leadership are interrelated, the data analysis results indicated a correlation coefficient of .713** and a Sig. value of 0.000 implies a strong positive correlation between school organization and teacher leadership, and the correlation is statistically significant; this indicates that as school organization improves, so does teacher leadership, and the two support each other in contributing to practicing distributed leadership in the secondary schools under study.

When the relationship between school organization and principal leadership is seen, the data analysis results indicated a correlation coefficient of .673** and a Sig. value of 0.000 indicates a positive correlation between school organization and principal leadership, and the correlation is statistically significant. The results of the data analysis to check the relationship between school organization and school system leadership indicated a correlation coefficient of .594** and a Sig. value of 0.000 indicates a positive correlation between school organization and school system leadership, and the correlation is statistically significant; this indicates that school organization supports principals' distributed leadership to practice at the secondary schools' leadership

support each other in contributing to practicing distributed leadership in the secondary schools under study.

Similarly, the data analysis made to check the degree to which school culture and teacher leadership are interrelated, the results indicated a correlation coefficient of .788** and a Sig. value of 0.000, indicating a strong correlation between school culture and teacher leadership, and the correlation is statistically significant; this implies that school culture and teacher leadership support each other in contributing to practicing distributed leadership at the secondary schools under study.

The data was analyzed to see the degree to which school culture and principal leadership dimensions are interrelated; the results indicated a correlation coefficient of .655** and a Sig. value of 0.000, indicating a positive correlation between school culture and principal leadership, and the correlation is statistically significant; this indicates that school culture and principal leadership support each other in contributing to distributed leadership in the secondary schools under study.

The correlation analysis results of school culture and school system leadership indicated a correlation coefficient of .660** and a Sig. value of 0.000, indicating a positive correlation between school culture and school system leadership, and the correlation is statistically significant; this implies that school culture and system leadership support each other in contributing to distributed leadership practice in the secondary schools under study.

The correlation analysis results of teacher leadership and principal leadership indicated a correlation coefficient of.764** and a Sig. value of 0.000, indicating a high correlation between teacher leadership and principal leadership, and the correlation is statistically significant; this indicates that teacher leadership and principal leadership dimensions support each other to a greater degree in contributing to the practice of distributed leadership in the secondary schools under study.

The correlation analysis results of teacher leadership and school system leadership indicated a correlation coefficient of.674** and a Sig. value of 0.000 indicates a positive correlation between teacher leadership and school system leadership, and the correlation is statistically significant; this implies that teacher leadership and school system leadership dimensions support each other in contributing to distributed leadership in secondary schools. The correlation analysis results of principal leadership and school system leadership indicated a correlation coefficient of .697** and a Sig. value of 0.000, indicating a positive correlation between principal leadership and school system leadership, and the correlation is statistically significant; this indicates that principal leadership and school system leadership dimensions support one another in contributing to the practice of distributed leadership in the secondary schools under study.

In general, the correlation analysis results indicated that all the five dimensions of distributed leadership (school organization, school culture, principal leadership, teacher leadership, and school system leadership) are positively related to each other in contributing to the efforts that secondary school principals make to practice distributed leadership in their respective secondary schools. When the correlation between the principal leadership dimension and the other four dimensions of distributed leadership (school organization, school culture, teacher leadership, and school system leadership) is considered, the teacher leadership dimension was

found to be the strongest predictor of distributed leadership. In contrast, the school culture dimension was the weakest predictor of principal leadership.

3.3 Ordinal Regression Analysis Results

In utilizing nonparametric statistics, in addition to Spearman's correlation, ordinal regression analysis was also done to analyze the data. Accordingly, the results indicated a statistically significant value under Model Fitting Information, meaning that the model fits the data well. For Goodness of Fit, the result indicated a not statistically significant value, indicating that the model again fits the data well; under the Pseudo R-square table, the value for Nagelkerke indicated that there is a 68% change on the dependent variable (principal leadership) as a result of the independent variables (school organization, school culture, teacher leadership, and school system leadership).

Under the Test of Parallel Lines, which indicates the proportional odds that imply whether the odds are consistent or the same across different thresholds, the results indicated statistically not significant values, implying that the test of proportionality is not violated; and under Parametric Estimates, the Sig. value for the independent variables indicated statistically significant results for all four except one (school culture). The ordinal regression coefficients are interpreted as the estimated or predicted change in log odds of being in a higher group/category on the dependent variable (controlling for the remaining independent variables) per unit increase on the independent variable.

The analysis result came up with two types of estimates (positive and negative) for teacher leadership and school culture. The positive coefficient is interpreted as 'for every unit increase on teacher leadership dimension, there is a predicted increase of 1.743 in the log odds of falling at a higher level on the principal leadership. Furthermore, the negative coefficient is interpreted as 'for every unit increase in school culture, there is a predicted decrease of -0.25 in the log odds of being in a higher level on the principal leadership.

From this, it is possible to understand that the teacher leadership dimension was a significant positive predictor of principal leadership while the school culture dimension was a significant negative predictor of principal leadership. It is also possible to deduce that the four dimensions (school organization, school culture, teacher leadership, and school system leadership) were seen to vary in providing support to practice distributed leadership in the secondary schools under study.

3.4 Discussion

The principal objective of this study was to assess the extent to which school principals practice distributed leadership in government secondary schools in East Shewa Zone. To this end, the research findings are discussed based on the the research questions of the study: to what level is principal leadership practiced?; what is the status of teacher leadership practice?; and to what degree is system leadership practiced? In addition, the significant challenges that negatively affect the practice of distributed leadership in the secondary schools under study are also discussed.

Level of principal leadership practice

As organizations, schools are led by principals. Currently, principal leadership is taking the distributed mode, first practiced in the developed world like the US and Europe, and later reaching the rest of the world [3]. One of the central arguments behind distributing leadership in schools is that school leadership could be best understood as a practice being stretched over schools' social and situational context [40]. To realize this, school principals utilize material and cultural artifacts like school organization and management directives. They also utilize school-level formal and informal teams to help them work together towards a common goal. This way, principal leadership contributes to distributed leadership by helping school principals with major activities like vision crafting and structuring for academic achievement [41]. In this regard, the results of data analysis indicated a neutral ((M = 3.48, SD = 1.13) value. From this, it is possible to conclude that principals' distributed leadership practice, as rated by the 'principal leadership' sub-scale, was practiced below a satisfactory level.

Status of teacher leadership practice

For the study, the second variable used to measure the extent of secondary school principals' distributed leadership practice was ‘status of teacher leadership practice’. Teacher leadership requires teachers to fulfill three professional responsibilities: contributing to student learning beyond the classroom; influencing colleagues to improve their professional practices; and contributing to a community of leaders [42]. Teacher leadership roles focus on improving instructional practices that range from teacher mentoring and instructional coaching to helping the principal create and implement a school improvement plan [43]. From this, it is understandable that promoting teacher leadership positively impacts the output of schools in general and secondary schools in particular. In this regard, data analysis results showed that secondary school principals' status of distributed leadership practice was rated as neutral (M = 3.39, SD = 1.13), indicating principals' 'below satisfactory' level of distributed leadership.

Degree of system leadership practice

Schools are assumed to be places where national initiatives are changed to educational practices. In doing so, four school system reform drivers help a school to become well-performing organization: personalized learning, professionalized teaching, intelligent accountability, and networking and collaboration [44]. Personalized learning tailors schooling to individual needs, interests, and aptitude, all of which are the basis for ones learning [45]. In addition, professionalized teaching involves three significant functions: giving greater attention to each child's learning style; enhancing the use of assessment for learning; and supporting students by quality teaching in the classroom and learning assistants like parents [46]. Further, intelligent accountability is a framework to ensure that schools work effectively and efficiently towards their common good and the development of pupils [42]. Furthermore, networking and collaboration in schools entail systems thinking which assumes looking at a school at multiple levels: students, classrooms, grades, departments, faculty, and administration [47].

In this regard, the results of data analysis indicated that the school system leadership sub-scale of distributed

leadership practice was rated as having adequate or satisfactory value (M = 3.61, SD = 1.10), indicating a medium result. From this, it is possible to conclude that principals' distributed leadership practice, as rated by the 'school system leadership' sub-scale though rated at a reasonable level, was not fully practiced, and the secondary schools were not benefitted to the expected level from the benefits of practicing school system leadership.

Implications for Educational Planning

The findings of the study indicated that distributed leadership is not practiced to the expected level in the sample secondary schools; and this implies that the Education and Training Policy's intention that states 'educational management will be decentralized,' even though practiced structurally decentralizing educational management from the Ministry to secondary schools, did not fully implement as it was planned. This result aligns with the educational assessment results of the 'Ethiopian Education Development Roadmap' project, which states that 'leadership is found to be weak at all levels of educational management.' In addition, it also goes with the outputs of earlier studies conducted on distributed leadership at different parts of the country and at different levels of educational provision, which indicated that in schools in general and secondary schools in particular, the practice of distributed leadership is not to the expectation. Furthermore, this has policy implications in indicating target areas of attention in planning for educational policy implementation, like secondary school principals' training and devising a controlling mechanism for implementing educational policy and strategies at secondary schools.

4. Conclusions

The principal objective of this study was to assess the extent to which school principals practice distributed leadership in government secondary schools in East Shewa Zone. To this end, the study findings indicated a low level of distributed leadership practice, which is below the expectation. A low level of distributed leadership practice implies that the secondary schools under study were not benefitted to the expected level from practicing distributed leadership functions like utilizing teams, improving instructional practices, tailoring schooling to individual needs, realizing accountability structure, and creating networking and collaboration. From this, it is possible to conclude that the principals of the secondary schools under study were found to discharge their leadership below the expected level, which may negatively affect their schools' output.

Concerning the extent to which secondary school principals practice distributed leadership, the research findings indicated that the principals working in the secondary schools under study had a low practice level. To this end, it is recommended that secondary school principals should make an effort to understand their duties and responsibilities. In addition, it is also recommended that woreda and city education offices support secondary schools through supervision and on-the-job training. Moreover, it is recommended that the Regional Education Bureau provide on-the-job training for secondary school principals, and the woreda and city education officials should provide strategies and directives. Finally, it is recommended that the Ministry of Education works to check the curriculum used for secondary school principals' education and training in a way that it provides them with the necessary information that helps in their actual work setting.

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