

Distributed leadership and school effectiveness in Egypt and Oman: an exploratory study

DL and SE in
Egypt and
Oman

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Abstract

Purpose – The purpose of this study is to examine teachers' perceptions of the levels of distributed leadership (DL) practices and the indicators of school effectiveness (SE) in Egypt and Oman. It also investigated the role of accreditation on these perceptions.

Design/methodology/approach – The study sampled 635 teachers in Egypt and Oman using the SE index (Hoy, 2009) and the DL scale (Özer and Beycioğlu, 2013).

Findings – The average score of the perceived level of DL practices of school principal and SE indicators showed was below the agreeableness level. DL was shown to be a positive and significant predictor of SE. The Omani teachers had a significantly higher perception of the availability of DL in their schools and of their schools' effectiveness than the Egyptian teachers. The results also gave support to the belief that the school accreditation process is a way to increase DL in schools and also to increase the indicators of SE.

Practical implications – One implication of the findings is the need for training school principals on DL practices that can potentially enhance SE. Another implication is a wider adoption of accreditation practices.

Originality/value – This study provides empirical evidence about teachers' perceptions of the availability of SE and DL in schools in two Middle Eastern countries, Egypt and Oman. It also adds support to the belief in the importance of the role of accreditation in increasing SE and DL practices.

Keywords Egypt, Accreditation, Distributed leadership, Oman, School effectiveness

Paper type Research paper

Introduction

When an education system fails to deliver quality output, fingers are pointed at the ineffectiveness of schools in achieving their role in society. This rage against the education system and demand for it to improve its practices is aggravated when international comparisons are made, to the detriment of the countries under examination. Faced with these comparisons, the public demands greater effort from ministries or departments of education, insisting that they improve their capacity to meet the needs and fulfill the expectations of both local society and international agencies. This study proposes that the distribution of leadership in schools is one way to increase the effectiveness of the education system because it makes schools more responsive to student needs and shares accountability of practice. Harris (2011) suggests that the impact of distributed leadership (DL) is greater when structural barriers to such leadership are part of the culture; this is indeed the situation in the Middle East, where hierarchy is entrenched in the culture in general and exclusive leadership by the school principal is prevalent. In such contexts, a reform which flattens leadership roles would result in more effective schools. This leads us to believe that using DL in the Middle Eastern context may result in substantial changes in school development and might give the school community a more central role in the teaching and learning processes.



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This study aims to contribute to the international literature in two ways: first, by examining these assumptions and providing evidence about the availability of DL and school effectiveness (SE) in two Middle Eastern countries, Egypt and Oman; and second, by providing a demonstration of the suitability of the use of measurement tools borrowed from the international literature in a Middle Eastern context. The study will then examine the extent to which teachers observe the levels of DL practices, and will compare the differences in teacher perception in each country, as well as the indicators of SE in both countries. After that, it will test whether the level of DL can predict SE. The final test will be to find out whether accreditation plays a role in DL practices and SE; this will be done by comparing accredited and non-accredited schools according to the study measurements.

Literature review

While a comprehensive literature review on these topics is beyond the scope of this paper, this short review will explain the basic concepts of DL and of SE, and will give a summary of their relationship and their effect on each other. In order to contextualize the problem discussed in the study, the review will conclude by giving further information on the educational context in Egypt and Oman, as well as on the status of school leadership in the two countries.

DL

The concept of DL is not new in education. The concept originated in the 1950s in the literature of social psychology (Gronn, 2002), but it was only in the 1990s that educationalists became aware of and interested in the idea. The most helpful definition of DL was given by Spillane *et al.* (2001); they see it as “distributed practice,” in which school leadership is practised not only by the school principal but also by many other individuals (Spillane and Healey, 2010). They refer to the concept as that of the “principal plus,” meaning that schools are not run exclusively by one single individual, the principal; neither are they run only by individual(s) in formal leadership and management positions (Spillane *et al.*, 2008; Leithwood *et al.*, 2007). However, as Harris (2011) eloquently explains, DL is not merely about creating a greater number of leaders, nor even about distributing leadership responsibilities. Rather, it involves both the overall quality of leadership in a school and also the development of a capacity for leadership in all school members, a change that will result in schools that are more productive and also more responsive to learners’ needs. This, Stoll (2009) argues will eventually create schools in which everybody is committed to collective responsibility.

Spillane and Healey (2010) gave a further explanation of DL. After comparing three major studies in the area, they concluded by positing three dimensions through which we can view the topic; they label these the “who,” the “what” and the “how.” The “who” refers to which individuals carry out leadership responsibilities; these leaders may be in positions which are designated both formally and informally. The “what” refers to the actual leadership functions that are distributed, and the “how” to the way in which leadership is distributed, whether it is done through empowering teachers with leadership roles or collaboratively sharing the decision-making process with them. There is one more dimension to be considered, namely, whether the distribution of leadership is planned and intentional, or whether it happens spontaneously and without planning.

SE

There are many definitions of and measures for SE because of the multifaceted and complex nature of the construct (Uline *et al.*, 1998). The concept went through four phases since the 1960s, simply covering wide variations and approaches to find out the reasons schools are good and ways to make them better. The first wave of studies in the 1960s until the

mid-1980s tries to prove the effect of schools on students' outcomes. The second phase, which lasted from mid-1980s to early 1990s, focuses on the system model of inputs/outputs and properties of effective schools. The third phase took place during the 1990s, and focuses on the input/process/ output model to verify reasons for SE. The current phase of the concept is distinguished by three features: having more internationalization of the field, being closer to the school improvement research, and reflecting dynamic and complex relationships (Reynolds *et al.*, 2014). While the current study uses a model from the second phase of SE research, it still reflects the trend of internationalization in the current phase of the field, and subscribes to the alignment of SE with school improvement. This is an exploratory study and it can benefit from a more general, simple, and realistic model through which to view and measure SE.

The model used in this cross-national study was first provided by Hoy and Miskel (1982), and later further validated by Hoy and Ferguson (1985). Hoy and Ferguson (1985) explain that their conceptualization views schools as open social systems. It is based on the multifaceted perspectives of organizational effectiveness proposed by Mott (1972), whose model evaluates effectiveness through a number of factors: the quantity and quality of the organization's product, the efficiency of production, and the adaptability and flexibility of the organization. This combines two theoretical frameworks of organizational effectiveness, the system model and the goal model. It has four dimensions of effectiveness, adaptation, goal attainment, integration and latency, which are defined and measured as follows:

- (1) Adaptation: this refers to the school's ability to adapt to its environment, and is measured by its ability to be flexible and innovative.
- (2) Goal attainment: this is measured by the academic achievement of the students in the school.
- (3) Integration: this is measured by the cohesiveness and collaboration of individuals in the school.
- (4) Latency: this is measured by the organizational commitment of individuals to the school, and by their motivation (Hoy and Ferguson, 1985).

DL and SE

The literature points to a clear, albeit indirect, effect of school leadership on SE, with possible variations in the way such an effect emerges across countries (Reynolds, 2010). It was found to be more directive in Oriental cultures and more lateral/vertical in Anglo Saxon ones (Reynolds *et al.*, 2014). Reynolds and Teddlie (2000) identify the participatory leadership a key component through which effective leadership contributes to the processes of effective schools. A number of aspects of leadership contribute to this important effect: creating a shared school vision and mission (D'Agostino, 2000), crafting a positive school climate, building professional learning communities (Louis and Marks, 1998), cultivating teacher self-efficacy, supporting school improvement and organization processes (Leithwood *et al.*, 2010), and maintaining a thriving relationship with parents (Bell *et al.*, 2003). All of these aspects of leadership result in higher student achievement.

A number of studies have indicated that SE can be increased by supporting the different dimensions that make schools effective as organizations. Having a quality management system in the school was found to positively influence the school climate and lead to more collaboration in creating school rules and initiatives (Gálvez *et al.*, 2016). These aspects fall largely under the integration dimension of Hoy and Ferguson (1985). According to Gálvez *et al.* (2016), the existence of a quality management system in a school provides more direct channels for teachers and other members of the school community to participate and collaborate in the school's internal management processes (Gálvez *et al.*, 2016). Also, the

effectiveness of a school impacts on student's academic achievement. Although many empirical studies have concluded that the most important factors in determining academic achievement are students' background and personal characteristics, others show that factors such as the quality of teaching and the nature of school leadership definitely play a less direct but still influential role in student achievement (Leithwood and Riehl, 2003; Leithwood *et al.*, 2010; Muijs, 2011). School principals may need to play different roles in schools with different socio-economic status (SES). While effective principals in school with middle SES may just need to be good managers, in lower SES schools they need to initiate a lot changes and cope with scarce resources (Teddlie and Stringfield, 1985).

Context of the study

The International Competitiveness Report published annually by the World Economic Forum ranks the quality of the education systems, and many other issues, across the world. In 2013, Egypt's education system was ranked as the worst in the world, and in 2015/2016 it was only one step above the worst, ranking 139 out of 140 countries. While the ranking for Oman ranks much higher in the same index in 2015, at 106 out of 140 countries, the quality of its education system is still in the bottom quarter of the index. This is cause for concern, especially as the report shows that other countries in the Gulf Corporation Council (GCC) are doing a great deal better. Qatar, for example, is ranked as having the second best education system in the world after Switzerland, with the United Arab Emirates taking the 12th place (World Economic Forum, 2015). Indeed, all the other GCC countries are ranked higher than Oman, which raises an important question about the effectiveness of the education system to meet the needs of a competitive economy. In mathematics and science education specifically, the picture is similar. The TIMMS scores of Omani students in mathematics and science in 2011 were among the lowest in the countries measured (Mullis *et al.*, 2012). The results of such international accountability reports question the productivity of the educational efforts in Oman, and suggest a need to make them more effective and efficient.

While it is important to interpret such rankings within larger economic and other contexts, as well as within the specificity and limitations of the index itself, these results should trigger an alarm warning and force us to see for the urgent need for educational reforms. Indeed, both countries have already starting making efforts in this field. In Egypt, a National Quality Assurance and Accreditation Authority was established in 2006, and prepared an accreditation manual with clear standards and indicators for the school system. A year later, the Egyptian education law was amended, setting up new and improved classifications for jobs in education, and imposing new job requirements, including licensing. This new law also ordered the establishment of a professional development academy to provide for continuous professional development for the whole educational cadre, including school principals. This academy was also given specific tasks to undertake, such as licensing practitioners, setting requirements for educational qualifications and creating the assessments required to occupy educational jobs (Egyptian Government, 2006, 2007, 2008).

Any assessment of the education system in Oman must take its history into account and remember that until 1970, only three schools existed in the whole country, while today there are more than a thousand. In the 1970s and 1980s, unsurprisingly, the simple provision of education was the main focus, but a shift was made in the mid-1990s with the 1996 strategic plan called "Oman Vision 2020"; the key focus of this plan was to provide quality education that would meet the needs of the labor market. Since then, multiple initiatives have taken place to improve the quality and effectiveness of the education system. Recent efforts include a new strategic plan called "Oman Strategy 2040," which is establishing many projects, one of which focuses specifically on improving the quality of the education system through adopting quality assurance mechanisms, setting standards for educational

qualifications and performance assessments, improving student academic achievement, enabling students to gain twenty-first century skills, and meeting the needs of the labor market. Another major initiative is the declaration of the establishment of a national center for professional teacher training, which is to include training for all academic staff, including school principals (Oman Education Council, 2014). All of these efforts, and others, are yet to prove their worth in improving the ability of the education system to compete internationally, as shown earlier in the results of the International Competitiveness Index and the TIMMS mathematics and science scores.

The role of school leadership in increasing SE in Egypt and Oman should be viewed within the above context, which clearly shows the many challenges with which principals must deal. In order to better face these ongoing challenges, school leadership needs to adopt more vertical and lateral ways of working, strengthening the leadership capacity in schools by having multiple points of leadership (Harris, 2011). The research evidence from the two countries so far provides little assurance that school principals are contributing adequately to the effectiveness of schools through this type of leadership, despite clear guidelines laid down in Egypt as early as 2004 by ministerial decree number 28. The decree specifies the expected role of school principals and clearly states that they are expected to involve staff, collaborate with them, and point out their contribution (Egyptian Ministry of Education, 2004).

However, much work remains to be done. In an article published by the Egyptian Comparative Education and Administration Society, Al-Hussaini and Ahmed (2005) argue that most Egyptian schools lack effective leadership capacity. They describe the leadership style of school principals as bureaucratic and lacking in awareness of the need to delegate responsibility, with the result the school community's participation in the decision-making process is very limited. Abdul-Salam (2009) shares this view and stresses the need to increase principals' effectiveness by training them in DL strategies. The need for training is also stressed in the Strategic Educational Reform Plan (2007/2012) created by the Egyptian Ministry of Education.

In Oman, the situation is similar to that in Egypt, as shown in a study carried out jointly by Oman's Ministry of Education and the World Bank. This study concluded by noting the need to develop the leadership skills of school principals, and recommended that this be done in order to enable them eventually to create a supportive learning environment (Omani Ministry of Education, 2012). Other studies have noted the same lack of DL in Omani schools, with Al-Kindi (2009) finding that principals allowed for only limited involvement of school staff in sharing authority and responsibility and Al-Ahussani (2012) reaching the same conclusion, that principals allowed their school community only little involvement in the decision-making process.

As a response to this challenge, the Omani Ministry of Education (2009) has been working on a number of initiatives to increase practices of DL. The schools' self-management school project, started in 2006, provides schools with a degree of autonomy so they can be more responsive to the needs of their specific school community. This is a remarkable step for schools in the predominantly centralized educational system in Oman. This initiative, if practiced appropriately, provides for distributed practice. Another broadly practiced initiative is the school performance development system. This initiative distributes many responsibilities in schools by increasing the role of senior teachers in evaluating other teachers, situating teacher training in schools, and making schools responsible for the improvement of their performance. It is therefore no longer possible for the school principal to achieve all of these objectives without the collaboration of other school staff and the distribution of the tasks needed for school development. Indeed, the instructions for the initiative prescribe the principal's involvement of others. While not an accreditation process as such, this school performance development initiative is similar to that process, with required self-assessments by the school, and onsite visits from an external team to follow up and

monitor the school's progress. We therefore believe this study comes at a timely point as it can provide an initial picture of SE in Oman and Egypt, and can also identify the potential role of DL in improving it.

Methodology

Research design

This study employed a correlational research model to empirically examine the relationship between DL and SESE. Data were collected through a questionnaire with three parts. The first part obtained demographic information. The second part consisted of a scale to measure teachers' perceptions of DL, while the last part was the scale to measure teachers' perceptions of the effectiveness of their schools. Necessary instructions and explanations were printed at the beginning of the questionnaire. Teachers in the government/public schools in the capital cities of Egypt and Oman were invited to fill in the questionnaire; this was on a voluntary basis and replies would be anonymous.

A cluster sample was used for the purposes of this exploratory study. In Egypt, the three-stage cluster sampling strategy (Thomas, 2006) was used to sample schools based on school gender, school level and school accreditation status. Based on these clusters, a random sample of 15 public schools in Cairo was selected, and then 30 surveys were randomly distributed to teachers in each school. Out of the 450 distributed surveys, 330 teachers responded, which corresponds to a response rate of 73.3 percent. In Oman, the two-stage cluster sampling strategy was used to sample schools based on school gender and school level, which resulted in randomly selecting 18 public schools in Muscat. Then, 20 surveys were randomly distributed in each school. In total, 305 teachers completed the surveys, which correspond to a response rate of 84.7 percent. A total of 635 teachers completed the questionnaire from both countries. The Egyptian sample consisted of 330 teachers, making up 52 percent of the total sample, while the Omani sample was made up of 305 teachers, corresponding to 48 percent of the total (see Table I for more demographic variables).

Research instruments and validation for the Middle Eastern sample

Two instruments were used to measure the two variables in this study. Both instruments were translated into the Arabic language by the researchers and were reviewed by other academics for language accuracy and face validity. DL was measured first, using the DL scale developed

Country Variable	Egypt (<i>n</i> = 330)		Oman (<i>n</i> = 305)		Total (<i>n</i> = 635)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Gender</i>						
Male	165	50	213	70	399	63
Female	165	50	92	30	236	37
<i>Experience</i>						
1-5	117	35	41	14	157	25
6-10	78	24	154	36	319	50
More than 10	135	41	110	50	159	25
<i>School Level</i>						
Primary (1-4)	246	75	109	36	355	56
Preparatory (5-10 or other)	84	25	196	64	280	44
<i>Accreditation (Egyptian sample only)</i>						
Accredited school	150	45	–	–	150	45
Non-accredited	180	55	–	–	180	55

Table I.
Demographic
background of
the respondents

by Özer and Beycioğlu (2013). This Likert-type scale includes ten items answered on a rating scale ranging from 1, or “never,” to 5, or “always.” The validity and reliability analyses performed by Özer and Beycioğlu (2013) revealed that items related to DL yielded a single-factor structure. Factor loadings of the items varied between 0.70 and 0.82, and a total of ten items explained 58.26 percent of the variance in DL scores. The authors also concluded that the internal consistency coefficient of the scale was 0.92 with item-total correlations varying between 0.70 and 0.82. In this study, the results of explanatory factor analysis replicated the same factor structure as Özer and Beycioğlu’s (2013), with the ten-item factor loadings ranging from 0.67 to 0.87 and accounting for 70.58 percent of the total variance (see Table II). The internal consistency coefficient for the scale was 0.95, indicating excellent reliability. Item-total correlations ranged from 0.67 to 0.88.

The second step was the measurement of SE using the SE index (SE index) developed by Hoy (2009). It consists of eight items measuring the overall effectiveness of a school in five dimensions: the quantity and quality of the product, and the efficiency, adaptability, and flexibility of the output produced by a school. In this version, the eight items of the SE index measure the degree to which a school is perceived to be effective by its faculty by asking them to describe the operation and performance of their school on a six-point Likert scale from strongly disagree to strongly agree. Many studies, including those by Hoy and Ferguson (1985), Hoy *et al.* (1991) and Miskel *et al.* (1979), consistently found high reliability for the scale with alpha coefficients ranging from 0.87 to 0.89. The validity of the SE index was also reinforced in a comprehensive study in high schools by Hoy and Ferguson (1985). In the current study, the results of an explanatory factor analysis replicated the same factor structure as the ones found in Hoy (2009) and Alanoğlu and Demirtas (2016). The scale consisted of eight items with factor loadings ranging from 0.59 to 0.87 and accounting for 61.44 percent of the scale total variance (see Table II). Furthermore, the scale was found to be highly reliable with an internal consistency coefficient of 0.91 and item-total correlations ranging from 0.59 to 0.86 (see Table III).

DL scale		SE index	
Item number	One factor	Item number	One factor
DL 1	0.875	SE 5	0.869
DL 6	0.868	SE 1	0.818
DL 8	0.862	SE 8	0.812
DL 3	0.862	SE 6	0.807
DL 2	0.858	SE 4	0.795
DL 4	0.858	SE 7	0.793
DL 10	0.844	SE 2	0.758
DL 9	0.842	SE 3	0.589
DL 5	0.840		
DL 7	0.672		
Eigenvalue	7.06	Eigenvalue	4.916
% of variance	70.58	% of variance	61.44

Table II.
Exploratory factor
analysis for DL
scale and SE index

Notes: Extraction method, principal components; rotation method, varimax with Kaiser normalization

Variables	No. of items	Mean	SD	Cronbach's α s	1	2
DL scale	10	3.80	0.94	0.953	–	0.801**
SE index	8	3.67	0.90	0.910		–

Table III.
Descriptive statistics,
Cronbach's α s
and Pearson's
correlations for DL
scale and SE index

Note: **Significant at 0.01

Results and discussion

Following the previous analysis of the validity of the study measures, in this section the authors present and discuss the results of further analyses of the data in order to achieve the research aims described earlier. Descriptive statistics were used to check for the level of two variables as perceived by teachers in their schools. A simple linear regression was used to test for the contribution of the perceived DL practices on the perceived SE indicators. Differences based on country and accreditation status were then checked using *t*-tests.

Level of DL and SE

Table III presents the means, standard deviations, and correlation coefficients between DL and SE for the total sample. The two variables are positively and significantly correlated ($r = 0.80, p < 0.01$). Score means for the two variables indicate that teachers perceived the level of DL (= 3.80) at a slightly higher level than that of SE (= 3.67). On a scale from 1 to 5, the two means are slightly above the middle, indicating that the average responses of the total sample are between “somewhat disagree = 3” and “somewhat agree = 4” on both the level of DL and on SE. This indicates that the sample did not even “somewhat agree” on the level of availability of the two variables.

These results are in line with claims made by the previous studies on the lack of effectiveness of schools in Oman and Egypt and on the low use of DL practices by school principals (Abdul-Salam, 2009; Al-Hussaini and Ahmed, 2005; Al-Kindi, 2009; World Economic Forum, 2015). One possible explanation for the low level of DL might be the principals' false assumption that they will lose authority if leadership tasks are distributed. However, studies show that this is not the case. Leithwood *et al.* (2010) found that, in schools with DL, the principal still had the greatest influence in the school. In fact, Hallinger and Heck (2009) found empirical evidence showing the importance of a principal's leadership role in building leadership capacity in others. Training programs in DL and its practices will result in more understanding and probably more adoption of these practices.

Contribution of DL in SE

As presented in Table IV, the simple regression analysis revealed that DL was a positive and significant predictor of SE ($\beta = 0.80, p < 0.01$), and it explains nearly 64 percent of the variance in SE scores. This finding means that a change in DL can lead to a change in the effectiveness of a school. In other words, if school principals exhibit or increase their practice of DL, the perception of the schools' effectiveness will also increase. Similarly, Tatlah and Iqbal (2012) found that leadership style is a significant factor in school achievement. In that study, the leadership style was termed the selling leadership style, in which principals are described as being participatory, a trait that is also part of the DL style.

Country differences in DL and SE

As can be seen in Table V, *t*-test results show that teachers in the two countries have different degrees of perception both of the level of DL and of SE. For both variables, the Omani teachers had significantly higher perception of the level of these variables in their schools than the Egyptian teachers. These results are consistent with the International Competiveness Report

Table IV.
Regression analysis
for variables
predicting SE

Variables	B	SE	β	t
Constant	0.780	0.127		6.138**
Distributed leadership	0.763	0.032	0.801	23.501**

Notes: $R = 0.80$; $R^2 = 0.64$; $F(1, 633) = 552.31$; $p < 0.00$, **Significant at 0.01

(World Economic Forum, 2015), which also ranked the education system in Oman at a higher level than that of Egypt. Similar findings are also found in Al-Mahdy *et al.* (2016), who compared the level of professional learning communities and the roles of the school leadership in Oman and Egypt. The authors found that the Omani sample rated the level of these leadership practices substantially higher than the Egyptian sample. One possible explanation for this result might be the unstable socio-economic environment in Egypt and the change of political regime there, which has affected the availability of resources in schools as well as the amount of professional development and training offered. This situation adds an extra burden for school principals as they try to provide quality and effective learning conditions.

The role of accreditation in DL and SE

Table VI presents two comparisons to check whether the accreditation or non-accreditation status of schools made any difference in teachers' perceptions of DL and SE. The first comparison is between accredited vs non-accredited schools in Egypt, and the second comparison is between accredited-only Egyptian schools vs Omani schools. The results of both *t*-tests clearly show that accreditation provides a better environment for practices of DL, and raises the level of indicators of SE, with the means of both variables in the accredited schools being significantly higher in both comparisons than those in the non-accredited Egyptian schools and the Omani schools. This is possibly because the accreditation process demands a high level of collaborative effort from the whole school community if the accreditation standards are to be met. In Egypt, it probably shifted the leadership roles in the school so that they were more widely distributed and may have sharpened the focus on SE, especially on student achievement. Bird *et al.* (2013) found in a similar study that principals' leadership practices predicted their districts' use of best practices in the school improvement process.

Implications and conclusions

This study provides evidence from two Middle Eastern countries on the level of DL practices and their role in increasing SE and quality of output, as well as the possible impact

Dimension	Country	<i>n</i>	Mean	SD	<i>t</i> -value	df
DL	Egypt	330	3.31	0.79	-7.32**	633
	Oman	305	4.07	0.73		
SE	Egypt	330	3.54	0.78	-2.04*	633
	Oman	305	3.76	0.75		

Notes: *,**Significant at 0.05 and 0.01, respectively

Table V.
Means, standard deviation, and *t*-tests for DL scale and SE index by country

Scale	Accreditation	<i>n</i>	Mean	SD	<i>t</i> -value	df
Distributed leadership	Accredited Egyptian schools	150	4.34	0.17	14.17**	328
	Non-Egyptian accredited	180	2.45	0.92		
School effectiveness	Accredited Egyptian schools	150	4.53	0.22	13.59**	328
	Non-Egyptian accredited	180	2.70	0.93		
Distributed leadership	Accredited Egyptian schools	150	4.34	0.17	2.89**	453
	Omani schools	305	4.07	0.73		
School effectiveness	Accredited Egyptian schools	150	4.53	0.22	7.59**	453
	Omani schools	305	3.76	0.75		

Note: **Significant at 0.01

Table VI.
Means, SD, and *t*-tests for DL scale and SE index by accreditation

of accreditation processes on these two variables. It found that the average score of the perceived level of DL practices of the school principal and SE indicators was below the level of even partial agreement. The study also confirms that the two concepts of DL and SE are highly correlated and the first predicts an increase in the second. The Omani teachers had a significantly higher perception of the level of both DL and SE in their schools than did the Egyptian teachers. While there are different contextual factors such as the social, political and economic factors that affect the quality and the conditions of schools in both countries, school principals in both Oman and Egypt still need to redesign and reinvent their schools if they are to make them more effective in the light of the ongoing changes in education worldwide and to enable them to meet international standards. Providing training for them on DL practices can potentially enhance that role.

In addition, this study found support for the idea of that the school accreditation process can play a role in increasing DL in schools, with accredited schools in Egypt doing much better than even the Omani schools, which enjoy a better social, political and economic environment. One implication of this finding is the need for a wider adoption of accreditation practices in the educational policies of Oman and Egypt. As indicated earlier, many initiatives and investments are currently being pushed to improve SE in Oman and Egypt in order to improve their international ranking. Educational leaders and policy makers need to envision new roles of school leadership in these initiatives. They can accelerate adoption of these roles through implementing country-wide policies. A similar conclusion showing the value of the role of state policy in fostering the development of DL was found in the study by Hallinger and Heck (2009), which looked at the effect of a state policy initiative in increasing DL in 200 elementary schools in the USA over a three-year period.

This study, naturally, has limitations. The study focuses only on teachers' perceptions of DL and SE, and does not claim that these are totally objective. This was done because, as suggested by Harris (2011), one of the difficulties in studying DL is the multiple sources of influences in schools and their impact on SE, which makes it hard to isolate practices exclusive to DL. Future studies should therefore take a more comprehensive approach in investigating the phenomenon, with triangulated data using students' achievement levels and the perspectives of parents and the wider community, including potential employers.

Another limitation of this study is that it continues to contextualize leadership as the practices of school principals in their formal role of, looking at how far they try to distribute leadership responsibilities, encourage others to take a role in decision making, and practise leadership functions collaboratively with multiple individuals in the school. This means that the focus is still on the practice of leadership by only one person, so does not incorporate the "principal plus" perspective of DL (Spillane *et al.*, 2008). As a result, its perception of other informal leaders in the school is limited, as is its picture of the methods of leadership distribution in schools (Leithwood *et al.*, 2007). In addition, creating world-class schools requires "systems not people" to assure the continuance of the system when key people leave (Reynolds, 2006, p. 555). These lingering perception of leadership, however, could be profitable areas of future research studies in the context of education in the Middle East.

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