Chapter 10
K-12 Education Reforms in Saudi Arabia: Implications for Change Management and Leadership Education

Bader A. Alsaleh

Abstract The Saudi education system has been experiencing continuous reforms during the past two decades. However, despite the financial support education reforms are granted by the government, impact of those reforms on education outcomes, if any, remains minimal. The author argues that reviewing Saudi education reforms based on Rogers' (2003) characteristics of innovation (internal factors) and Ely's (1990, 1999) conditions of change (external factors) as a framework demonstrates that shortcomings of these reforms could be attributed to a lack or at best to weak change management and leadership that failed to provide for those factors during the implementation stage. Taking these factors into consideration by Educational Administration Departments at the Colleges of Education in Saudi universities should improve teaching topics and issues of educational administration and leadership at these departments as well as improving school's principals in their role as change managers. This chapter starts with an overview of the Saudi education system and the Tatweer education reform project followed by an overview of Rogers (2003) and Ely's (1990, 1999) proposed frameworks. Next, it critically reviews Saudi education reforms based on this framework. The chapter ends with proposed curriculum outlines in change management and leadership for the preparation of future graduates of the colleges of education at Saudi universities.

Introduction: An Overview of Saudi Arabia Teaching of Educational Administration and Leadership

The education system in the Kingdom of Saudi Arabia, both government and private, is composed of general education which is organised into three stages of elementary school for six years, intermediate school and secondary school for three years each and university and technical and vocational education. Only recently preschool has received special support with the Saudi Vision 2030 (Preschool Development Programme 2018). The Ministry of Education (MOE) (2018a) runs more than 38,000

B. A. Alsaleh (✉)
King Saud University, Riyadh, Saudi Arabia
e-mail: ba_alsaleh@yahoo.com

E. A. Samier and E. S. ElKaleh (eds.), *Teaching Educational Leadership in Muslim Countries*, Educational Leadership Theory,
https://doi.org/10.1007/978-981-13-6818-9_10

schools, with six million students and half a million teachers. Post-secondary education includes universities that offer bachelor's degrees in almost all academic majors in humanities and sciences and masters and PhD degrees in many majors. Presently, there exist 28 government universities, 10 private universities, and 42 private colleges (MOE 2018b). Further, the Technical and Vocational Training Corporation (2017) runs 71 technical colleges and many vocational training institutes.

The Saudi education system is centralised with a top-down management approach. K-12 education is managed at three levels; at the school level, principals manage the daily routine operations of the schools; at the district level, the education directorates manage schools in their districts; and at the national level, the MOE is responsible for setting educational policies and curricula, allocating financial resources, hiring staff, selecting and or authoring textbooks and maintaining the education system (Badawood 2003, cited in Meemar 2014, p. 14).

Until recently, the Saudi Universities were under the authority of the Ministry of Higher Education. However, a royal decree in 2015 merged the Ministry of Education and the Ministry of Higher Education into one entity which is now the Ministry of Education (Sack et al. 2016). The Technical and Vocational Training Corporation, which runs two-year and four-year technical colleges and vocational institutes for boys and girls and used to be an independent entity, has recently become under the authority of the MOE as well. The rationale behind this merger is to encourage alignment between universities and technical colleges' graduates and job market demands, develop qualified teachers, and improve system-wide efficiency (The Boston Consulting Group 2018). Even though Saudi education has witnessed huge expansion, and despite costly education reforms during the last two decades, reform outputs in terms of graduates ready for a highly competent job market have been criticised for their low quality (Mackenzie 2015; Pennington 2017; Saudi Transformation Plan 2020 2016; Saudi Vision 2030 2016).

Education reform implies change that is a complex and lengthy process because of many human and non-human factors involved. Thus, the success or failure of education reforms cannot be attributed simply to one cause. Taking this into consideration, the author argues that examining Saudi education reforms using a change management and leadership framework based on Rogers' (2003) characteristics or internal factors of innovation and Ely's (1990, 1999) conditions or external factors that facilitate innovation implementation will reveal that weak or an absence of well-planned implementation and change management and leadership of Saudi education reforms is a major factor of their shortcomings or failures. This suggests that educational administration and leadership graduate degrees need to cover more on change and innovation that is relevant to the Saudi context. To present this argument, the chapter begins with an overview of Rogers' characteristics of innovations (2003) and Ely's conditions of change (1990, 1999) followed by an overview of the Tatweer education reform project. Next, a critical review of Saudi education reforms based on the proposed framework is presented. The last part of the chapter proposes curriculum outlines in educational change management and leadership at the colleges of education in Saudi universities. In this chapter, change, innovation, and reform terms are used interchangeably.

Tatweer Education Reform Project

Education is the resource that nations heavily invest in to fuel and expedite their economic, social, health, etc., developments. The 2016/2017 annual budget for general Saudi education alone exceeded $35.2 billion (MOE 2018a). With the inception of a huge k-12 education reform, namely the King Abdullah Project for the Development of Education (publicly known as Tatweer means to develop or to reform) in 2007 with a budget of $2.4 billion, educational reform initiatives have gained more governmental support. Tatweer is managed by the Tatweer Holding Company which runs four companies aimed at transforming the Saudi school system into a twenty-first century model of education (Meemar 2014). Education reform has recently gained more momentum with the inception of the 2020 National Transformation Plan and became one of the main pillars of this very ambitious social and economic plan towards a knowledge- and service-based economy (Alnahdi 2014).

Tatweer's goals include the following: empowering districts and schools to manage and lead change; improving curriculum, instruction, and assessment; professionalizing teaching practice; leveraging technology to improve school and student performance, and improving governance, leadership, and policies to sustain change (Meemar 2014). Presently, Saudi education is focusing on three priorities: 'improving the basic level of education, ramping up vocational education and training; and improving the flow of young people, including university graduates, from education to employment' (Mackenzie 2015, n.p.). The GCC countries have implemented many education reforms but research of their impact is limited, which creates challenges for policy-makers and leaders in implementing further reforms (Alfadala 2015). Though research-based evidence of the impact of Saudi education reforms is sparse (Alyami 2014), Tatweer has been criticised for not having tangible impact on schools' improvement (Al-Essa 2009, cited in Tayan 2017, p. 68) which indicates the need to focus more on change management by faculty involved in teaching educational administrational and leadership.

Rogers' (2003) theory of the diffusion of innovations addresses the process from a social change perspective. The main components of this theory are the elements of innovation diffusion (the innovation, communication channels, time, and a social system), the stages of the innovation-decision process (knowledge, persuasion, decision, implementation, and confirmation), and the characteristics of the innovation itself. He defines five characteristics (internal factors) inherited in the innovation that can speed up its diffusion and adoption:

1. Relative advantages: The degree to which an innovation is perceived by a target audience as better than the old practice. Advantages may include ease of use, time or money-saving, etc. The greater the perceived relative advantages of an innovation, the more rapid its rate of adoption is expected.
2. Compatibility: The more the innovation is compatible with values, beliefs, and current practices as perceived by target audience, the more rapidly it will be diffused and adopted.

3. Ease of use: The innovation that is perceived as easy to understand and used within available skills and knowledge is expected to gain rapid acceptance and adoption.
4. Trialability: The innovation that gives the target audience an opportunity to try it out before making the decision to adopt it increases its likelihood of adoption.
5. Observability: The more the innovation results are easily observed by the target audience the more likely it will be adopted.

Ely (1990, 1999) argued that there is more to the successful implementation and adoption of innovation than the inherited qualities of the innovation itself. Therefore, he focused on conditions that exit in the innovation's environment (external factors) which facilitate its implementation; these conditions are:

1. Dissatisfaction with the status quo: Something must necessitate a need for change.
2. Knowledge and skills: Intended adopters must have the knowledge and skills required to implement the innovation.
3. Availability of resources: Resources necessary to implement the innovation must be available.
4. Availability of time: Provision of time to intended audience to learn and adapt the innovation to their needs.
5. Reward or incentives: Provision of intrinsic or extrinsic incentives or reward to motivate audience adoption of innovation.
6. Participation: Intended audience must have their inputs into the innovation process.
7. Commitment: Leaders must show continuing support to the innovation.
8. Leadership: Leaders must provide encouragement, support and inspiration for adopters.

Saudi Education Reforms: Education Administration, Change Management, and Leadership

Literature related to the causes of the failure of education reforms over times and across cultures reveals patterns or common factors that explain this phenomenon (e.g. Ely 1990, 1999; Fullan 2007; Rogers 2003). Akkary (2014) attributed failure of education reforms in the Arab countries to the following common factors:

- reforms are rigidly run by top-down management,
- lack of basic knowledge about effective education reform,
- lack of implementation management plan, and
- lack of professional capacity on the part of those targeted by reform.

Unfortunately, these factors are present in the case of Saudi education reforms that need to be focused on in education administration and leadership graduate programmes. A review of literature of those reforms (e.g. Alzaidi 2008b, cited in Alyami 2014; Alsalahi 2014; Oyaid 2009; Tayan 2017) reveals similar factors hindering the

implementation of Saudi education reforms. Dealing with these factors from a change management perspective is a prerequisite for successful implementation of education reform (Pont et al. 2008). Innovations may fail during the implementation stage if prerequisite conditions do not exist (Ely 1990, 1999; Fullan 2007, Rogers 2003). Therefore, I argue that despite the generous financial support education reforms are provided by the MOE, shortcomings or failure of those reforms can be attributed to a lack or weak change management and leadership during the implementation stage. This has been manifested through the absence of internal and external factors that facilitate implementation of education reforms as well as lack of change leadership's accountability, timetables of tasks implementations, effective change tracking procedures and timely interventions. In short, I believe that a major problem in Saudi education reforms lies in change management and leadership during the implementation stage which necessitates re-evaluation of educational administration and leadership programmes in terms of content and teaching to effectively and efficiently manage those reforms.

While Rogers (2003) emphasised the role of the characteristics or internal factors of innovation in its rate of diffusion and adoption, Ely (1990, 1999) addressed external factors that exist in the innovation environment and influence its implementation. Ertmer (1999, cited in Albugami and Ahmed 2015, p. 40) categorised factors hindering ICT implementation into internal factors (views and attitudes of school staff) and external factors (ICT resources and technical support). According to Alwani (2005, cited in Albugami and Ahmed 2015, p. 41) in the case of Saudi education reforms, external factors are related to the MOE. Likewise, Fullan (2007) argues that implementation is the 'big hurdle' of educational change for several interactive factors. These are internal factors (characteristics of change), local characteristics of change (district, community, principals, and teachers) and external factors (government and other agencies).

It appears then, based on related literature, that both characteristics of innovation (internal factors) and conditions in the innovation environment (external factors) are influential in determining the degree to which the innovation well be adopted and successfully implemented. This means that graduate programmes for educational administration and leadership are inadequate in preparing their graduates in change management. Change is a process composed of stages that happen over time; effective change management is a prerequisite for a smooth transition through those stages. Of those stages, the implementation stage is particularly critical (Fullan 2007). Based on this argument, educational change leadership must consider the provision of both internal and external factors of education reform.

Rogers (2003) specified five characteristics of innovations. When applied to Saudi education reforms based on related literature, one finds that Saudi authority responsible for leading and managing education reforms either ignore or at best does not give enough attention to those characteristics when planning and implementing educational reforms; this situation may be attributed to ill knowledge of the basics of change management and leadership and inadequate graduate programmes in educa-

tional administration and leadership. Below is a brief discussion of Saudi education reforms based on Roger's characteristics of innovation.

As mentioned earlier, the Saudi education system is centralised; decisions about reform agendas are taken at the education minister cabinet level; thus, input from a target audience into this agenda is almost absent (Akkary 2014; Algarni and Male 2014; Tayan 2017). Teachers are usually informed of reforms by circulars; thus, they are not well informed about their features and goals; consequently, teachers are not aware of the relative advantages of those reforms. Fullan (2007) considers clarity of change features an important factor of its success and points out that clarity of problems about teachers' new duties appears in virtually every study of change. Even with recent efforts by the MOE to involve teachers and school principals in matters related to education reforms initiatives by electronic means via e-portal, those initiatives are not well articulated as to what roles are expected of teachers and principals ahead of their implementation. This shortcoming needs to be addressed by educational administration and leadership curriculum as well as through the provision of professional development programmes.

A large part of Tatweer's project is related to digital technology with the goal to transform Saudi schools. This means that Tatweer implementation requires teachers well-trained in technology integration. However, review of related literature (Alyami 2014, 2016; Al Mulhim, 2014; Alnahdi 2014; Meemar 2014; Tayan 2017) reveals that teachers lack sufficient knowledge, skills, and technical support; consequently; they perceive reform as hard to implement (complexity); and because of sparse information about reform's effectiveness (Alfadala 2015; Alyami 2014), teachers have no knowledge of reform results (observability). In this context, teachers are expected to react negatively towards reform's initiative and not willing to try it out (trialability). It is worth mentioning that repetitive negative experiences with education reforms will eventually encourage teachers to be indifferent about them because they know from their past experiences will not last long.

Compatibility of innovation with existing school culture, the values and beliefs held by its staff is an important factor of innovation acceptance while its absence may cause resistance (Rogers 2003). Any type of change introduced to schools is often met with resistance if it is contrary to current practices (Hinde 2014, p.2). According to Alyami (2014, p. 1522), staff resistance in Tatweer's schools was up to 70%; teachers preferred to leave for other schools rather than to change their practices. Therefore, school leaders must be sensitive to school culture when initiating change (Fidler 1996, cited in Alyami 2014 p. 1523). In addition, school culture needs to be addressed in teaching educational administration and leadership. Numerous studies support the finding that a change supportive culture is necessary for its success (Hinde 2014). In a study of the relationship between school culture and teacher change, Schweiker-Marra (1995, cited in Hinde 2014, p. 8) found that teachers' qualities facilitated change, and in some cases, a new culture must be instituted to accommodate change. In Tatweer's case, some globally recognised educational systems such as Finland's and Singapore's were used as benchmarks to Saudi education reforms but without giving much thought to cultural differences and the need for an adaptation vision to accommodate those differences (Tayan 2017). According to Kotter (1995), a change

process occurs through phases and that transition from a current tradition to a new state of practice may not be achieved if culture is in direct contrast with intended change (Kotter 1995); this and other related issues should be included in the graduate programme of education administration and leadership.

External Factors of Innovation

Contrary to Rogers' (2003) emphasis on the characteristics of the innovation itself, Ely (1990, 1999) focused on external factors that exist in the environment and affect the implementation of innovation. In other words, he notes that even when the innovation is well designed, it may not succeed if certain conditions do not exist in the environment in which it will be implemented. This contention supports the concept of readiness mentioned by Abedor and Sachs (1978); according to them, readiness is necessary at the individual and organisational levels for the successful implementation of change. The more the change deviates from the status quo, the higher the level of readiness is needed at both levels. Readiness and other concepts related to innovation adoption should be part of education administration and leadership curriculum at the graduate programme at the colleges of education in Saudi Arabia. Fullan (2010, cited in University College of the Cayman Island, 2013) indicated that change success requires creating the right conditions and developing organisational and individual capacity. In the following section, review of Saudi education reforms based on Ely's (1990, 1999) conditions that facilitate implementation of innovation is presented. Topics reviewed in this section are: dissatisfaction with the status quo, knowledge and skills, availability of resource, availability of time, incentives or rewards, participation, commitment, and leadership.

Dissatisfaction with the status quo is probably the condition that most concerned educators and education leaders in the country agree with. In the Yidan Prize Summit in Hong Kong (Pennington 2017), the Saudi Minister of Education, Ahmed Al-Issa criticised the Saudi current education system as 'being the product of the past, not an enabler of the future' (n.p.). Tatweer's project itself is a strong indication of the urgency to improve Saudi education. The 2020 Saudi Transformation Plan (2016) and the Saudi Vision 2030 (2016) both have emphasised the urgent need to reform the Saudi general education to prepare young Saudis for the job market and increased global economic competitions. This reform should include the improvement of educational administration and leadership programmes. A rationale to transform Saudi education has been emphasised in both initiatives (MOE 2018b). These are clear articulations of the dissatisfaction with the status quo of Saudi education.

Probably, knowledge and skills in addition to availability of resources are the problems repeatedly mentioned by Saudi teachers. Alsalahi (2014) found that teachers need to be empowered with needed skills and knowledge to practice their roles as leaders and that preservice programme neglects training them with the knowledge and skills they need to practice this role. Not only teachers that need to be empowered in education administration and leadership skills but schools principals too;

Meemar (2014) for instance, found principals in Saudi schools perceive themselves as having a low to medium level of ability to implement administrative and technical authorities. For example, Alenezi (2017), who studied technology leadership in Saudi schools, reports that Saudi teachers are not well trained to integrate ICT into teaching. Al-Degether (2009, cited in Tayan 2017, p.65) calls for the need to improve Saudi teachers' skills and instruction via professional development to enhance the quality of Saudi education. Such professional development should include opportunities for training in educational administration and leadership teaching.

Ertmer (1999, cited in: Oyaid 2009 p. 43) indicated that teachers may not be able to integrate ICT into instruction due to the low availability of resources if schools do not provide enough support, training, time, and equipment. Al Mulhim (2014, p.491) discussed three factors that prevent teachers in Saudi schools from using ICT frequently and appropriately into their teaching; they included lack of access to technology, effective training, and time. Several Saudi studies about education reforms and ICT technology status in Saudi schools (e.g. Alenezi 2016; Alyami 2014, 2016; Al-Zahrani 2015; Meemar 2014; Oyaid 2009) found that problems of resource provision in schools including lack of software to support subject matters content and lack of technical assistance present major obstacles towards successful implementation of reforms. Alyami (2014) indicated that Tatweer's smart schools lacked human resources to use Intel programmes. Albugami and Ahmed (2015) found many factors hindering ICT implementation in Saudi schools among which are lack of management and technical support, lack of ICT policy, lack of ICT resources, and lack of teachers training. These findings highlight the important role of teaching education administration and leadership for those involved in change management to enhance the likelihood of adopting education reform.

Ely's (1999) fourth condition of successful implementation of innovation is the provision of time for teachers to practice and try out new teaching approaches. Time is one of the four elements of Rogers' (2003) theory of innovation diffusion. Realising that change usually takes considerable length of time can improve the chances of change success (Kotter 1995). Maroun et al. (2007) assert that reforms implemented with less time pressure have higher chances of success, and if teachers do not have enough time to learn about, implement, and reflect on intended change, effects remain questionable. In their study of time and school reform, Adelman and Walking-Eagle (1997, cited in Hinde 2014, p.6) explain that there are three stages in a reform process that are time-related: first teachers need time to learn about and practice new behaviours; second, in the implementation stage, teachers need time to integrate new change in their daily routine; and third, teachers need time to evaluate reform results. Over and over, related literature (Ertmer 1999; Franklin et al. 2001, cited in Oyaid 2009, p. 43; Muir-Herzig 2004,) identifies lack of time as a major barrier facing implementation and integration of ICT in schools. School leaderships have a major role in eliminating such barrier to see education reform realised in their schools.

Educators are usually very eager to see results of education reform soon after its implementation, but relevant literature (e.g. Ely 1990; Kleiman 2000; Kotter 1995; Rogers 2003) shows that those results are not easily tangible and take a considerable length of time. Kleiman (2000, p. 5) notes that full integration and use of technol-

ogy in k-12 schools 'takes years not weeks or months'. Al Asmari (2011, cited in Albugami and Ahmed 2015, p.41) stated that Saudi teachers do not have enough time to prepare ICT materials for their lessons. Alnahdi (2014, p.4) advises Saudi education officials to be patient in dealing with reforms process because it is 'complex, difficult, and very slow process and that the chance of seeing tangible results quickly after applying reforms and changes is minimal'. These characteristics of reforms need to be addressed by education administration and leadership curriculum.

Literature on change resistance emphasises the importance of incentives or rewards in the adoption process of change (Ely 1990, 1999; Hardy 1997; Hiatt 2006; Rogers 2003). Ladner and Brouillette (2000) describe three categories of education reforms: rules-based reform (e.g. extending school days and class time, changing teacher certification); resource-based reform (focusing on funds increase, Internet access, remodelling school facilities, etc.); and incentive-based reforms through public school choice (e.g. charter schools, choice among private schools by vouchers). They note that incentive-based reforms encourage traditional public schools to improve through market-based incentives which recent research indicates that it has had greater success than the rules or resource-based reforms. Evans (2001, cited in Alyami 2014, p. 1522) argued that teacher's pay system must be related to performance to generate motivational impact. According to Alyami (2014), participants in her study indicated that there was not any system of incentive to use Intel programmes in Tatweer's schools. Obviously, incentive should be given special consideration by education administration and leadership curriculum and teaching because of its direct influence on teachers' performance.

Research indicates that school autonomy is vital for the successful implementation of education reform and provision of leadership for improved learning (Pont et al. 2008). Ely (1999, p. 6) emphasised 'shared decision-making' in the implementation process of innovation. Hargreaves and Shirley (2009, cited in Tayan 2017, p. 66) argue that teacher's autonomy is fundamental to the success of education reform. Though the MOE (2018a) recently has been trying to involve teachers in decisions related to education reform via e-portals (e.g. MOE future gate), decisions to implement those initiatives are still largely dominated by the MOE. Tayan (2017) indicates that Tatweer is led and managed by a centralised approach that has not given needed authority to teachers to work as leaders and change agent; for example, Tatweer's smart schools were decided and introduced by the MOE authority without input from teachers, principals, or students. Also, Alzaidi (2008b, cited in Alyami 2014, p. 1517) argues that lack or weak authority given to head teachers in Saudi schools was the most important factor of teachers' dissatisfaction. It is important to consider perceptions of teachers and head teachers about any planned changes for school reform if they wish to implement it effectively which it did not happen with Tatweer's project (Alyami 2014).

In his study about the challenges of teachers' leadership in Saudi schools, Alsalahi (2014) found that all participating teachers were disempowered to play their role as leaders in planning their schools' strategic development. In another study, Al-Essa (2009, cited in Tayan 2017, p. 66) found that education reform implementation failed to effectively address and support teacher autonomy.

Commitment to support education reform during the implementation stage is vital to its sustainable and resource provision. According to Fullan (2001, p. 3), 'schools that sustained reforms had ongoing support from district and state allies'. While Tatweer's project relied heavily on technology integration in its second phase which included 50 smart schools, it failed to provide technical provisions for those schools (Alyami 2014). In Tatweer's schools, principals have little support in performing the new administrative and technical authorities granted to them (Meemar 2014). Fullan (2001, p. 3) emphasised the importance of commitment of change leadership to provide needed support during the implementation stage; according to him, continuation of the change will be jeopardised unless commitment for support and continuous follow up is present. This implies that graduate programmes in education administration and leadership at the Saudi colleges of education needs to cover the commitment of change leadership concept.

Leadership plays an important role in realising an effective educational system. Many reforms have failed because of lack of quality leadership (Hinde 2014 cited in Pont et al. 2008). Educational policy in the Organization for Economic Co-operation and Development (OECD) countries considered school leadership as a priority for motivating and empowering teachers to improve school outcomes (Pont et al. 2008). According to Fullan (2007), the role of school principals as change leaders is vital to the success of educational change. Scheerens and Bosker (1997), Teddlie and Reynolds (2000) and Townsend (2007, cited in Pont et al. 2008, p. 33) report that the past three decades of research findings about school effectiveness and improvement have repeatedly demonstrated the central role of school leadership. According to Pont, Nusche and Moorman (2008, pp. 33, 32), the general conclusion reached based on reviewing more than 40 studies indicates that 'school leaders have a measurable, mostly indirect influence on learning outcomes'; and that 'effective school leadership is essential to improve the efficiency and equity of schooling'.

Alfadala (2004, p. 6-7) states that education reforms in the Gulf Cooperative Countries (GCC) shifted the roles and relationships in school communities and created challenges such as weak leadership skills among principals, lack of clarity on methods of reforms and lack of student motivation and increased drop-out rates. These are important challenges that need to be focussed on by the education administration and leadership graduate programmes.

Because of the dominance of top-down decision-making, school staff have a long-held belief that the education reform process is the sole responsibility of the MOE; Bashshur (2005, cited in Akkary 2014, p.7) argues that 'teachers view change as something that happens to them rather than something that they initiate'. To Fullan (2010, cited in University College of the Cayman Island 2013, p.16), top-down management does not bring about successful educational change. Almannie (2014) found that Saudi schools' principals have limited leadership roles to perform tasks related to schools' improvement because they are not prepared for such tasks; they are more of managers rather than instructional leaders. Algarni and Male (2014, pp. 45, 46) criticised educational leadership in Saudi education for 'considering educational leadership as the responsibility of a single person and for its relying on maintaining the status quo instead of development and on management instead of leadership';

they suggest the 'devolution of much decision making from central authority to the schools and let the principals and teachers be catalysts change agents'. Almudarra (2017, p. 36.) supports this finding pointing out that the dominant leadership style in Saudi schools is mostly transactional where the focus is mainly on maintaining the day-to-day operations using the power of rewards and where future strategic planning and readiness for change implementation including training, incentives, and resources are not of concern and indicating a need for a different training in education administration and leadership that gives special consideration to these issues of change implementation.

The MOE has felt the need to delegate some tasks to school principals to minimise the centralisation of Saudi schools (Alyami 2014; Meemar 2014). Therefore, in 2001, 31 administrative authorities were conferred to school districts (Meemar 2014), and in 2011, 21 new authorities were conferred to school principals. Moreover, the MOE has realised the need to equip its educators with leadership competencies. Thus, as indicated in its 2016/2017 annual report, the MOE (2018a) initiated two professional development programmes: one is to train managers of education directorates at Harvard University; the other is to train school principals and teachers in universities abroad in such areas as managing school functions and become instructional leaders, creating a school culture that encourages teaching staff collaboration and diffusion of innovation among schools and the effective use of technology for teaching and learning purposes, and promotes schools–community relationships. The rationale for this programme is to strengthen the values, skills, knowledge, and attitudes of teachers, counsellors, and principals through practical experience in high-performing k-12 schools and to prepare school principals to serve as change agents when they return to their schools (MOE 2017, p. 3).

Technology is one of the main drivers of school transformation around the globe. Tatweer's project relies heavily on technology to transform Saudi schools into twenty-first-century learning. In this regard, graduate programmes in education administration and leadership should include technology leadership topics and issues in these programmes. The MOE (2018a) is currently implementing digital education initiative (Future Gate) and iEn (national education portal), and it has established a digital transformation unit to promote digital transformation in education. In this era of technology-oriented knowledge economy where digital culture is becoming more pervasive, a strategic vision for technology adoption and integration in education becomes a priority. This strategy needs school leadership and staff well informed about infusing technology into education. Al-Zahrani (2015) stressed the importance of the role of technology leadership in Saudi schools if ICT integration is to be realised; however, problems identified above also present with technology leadership. Alenezi (2016) points out that there is a lack of teacher preparation and training in digital technologies. Lack of this preparation may be attributed to ineffective school leadership and support. Also, Alyami (2014) notes that Tatweer smart schools lacked technical provisions. Further, Saudi school principals are often unable to solve problems in their schools due to limited decision-making power, lack of resources, and lack of training (Meemar 2014). Kleiman (2000) interprets the reasons k-12 schools

face difficulty in their efforts to integrate technology into teaching as being inadequate training provided to teachers, lack of technology resources, and insufficient technical support.

Change Management and Leadership Curriculum

The implications of the above review of Saudi education reforms based on Rogers' (2003) characteristics of innovations (internal factors) and Ely's (1990, 1999) conditions of change (external factors) as a framework show that Saudi education reforms suffer a real problem of lack or at best ill change management plan and leadership during the implementation stage. This plan had failed to consider the internal and external factors necessary to facilitate successful implementation of reforms as suggested by this framework. Schools and classrooms are the environments where implementation process of education reform takes place; hence, the roles of school principals and teachers in this process are vital. Below is an outline of suggested education curriculum in administration and leadership at the colleges of education in Saudi universities to prepare them for this role.

As reported above, the MOE (2017) has initiated a professional development programme to provide school principals with leadership competencies with the goal of preparing them to play their roles as change agents and be able to transform their schools into twenty-first-century learning. However, in-service training must not be a replacement of well-planned pre-service education. Therefore, pre-service education should be improved to include change management and leadership curriculum to equip future graduates of teachers, supervisors, and principals with fundamental skills in this field.

Curriculum to equip education staff with skills and competencies in management and leadership can be offered at two levels: the first is to provide all education majors with foundational concepts related to educational change management and leadership; the rationale behind this suggestion is to enable teachers, supervisors and schools' principals to be instructional leaders. The second level is directed to those majored in graduate educational administration. This level should go into more depth in the following topics: theories and models of change management and leadership, tools and techniques of change management; project management; tasks of change agent; educational change leadership; definition, concepts and types of leadership; building change leadership team; handling crises and conflict, transformative, pedagogical, and digital leadership; emotional intelligence; education reforms' case studies; and best practices. Soft skills of change management and leadership are equally important. Examples of these skills may include understanding why people resist change and how to overcome it, how to help people transit through change stages and provide them with needed support, how to involve school staff in change vision and strategy, shared responsibilities, collective leadership, skills for effectively communicating change and motivating target audience.

Administrators on the job at education directorates in cities, provinces, and districts also need to be equipped through in-service education with necessary skills in change management and leadership. Workshops, coaching, and short summer courses can help meet this need. However, ongoing professional development for all education staff should be provided whenever needed.

The types of readings that are suitable for graduate programmes in educational administration and leadership at the colleges of education in Saudi universities should include and adapt to the Saudi local context topics and issues of educational change addressed in such references as Ely 1990, 1999; Fullan 2001, 2007; Havelock and Zlotolow 1995); innovation diffusion theory of Rogers (2003); Owen (2015) on how to lead; and issues related to the Saudi contexts in educational administration and leadership addressed by Saudi theses and papers such as Alnahdi (2014), Alyami (2016), Algarni and Male (2014), and (Alsalahi) 2014 to name but a few.

Conclusion

This chapter discussed Saudi educational reforms based on a change management leadership framework of Rogers' (2003) characteristics of innovations (internal factors) and Ely's (1990, 1999) conditions facilitating implementation of innovation (external factors) in order to address needs in the educational administration and leadership curriculum. The author's critical review of those reforms based on this framework showed that weak or absence of change management and leadership explains to a large extent the failure or at best the minimal impact of those reforms on the improvement of k-12 education. The chapter ended with proposed curriculum focusses in change management and leadership for prospect graduates of the colleges of education. In conclusion, the Saudi education authority must build education reforms initiatives with well-designed change management plan and leadership during the implementation stage while paying special attention to the internal and external factors that facilitate the implementation and adoption of intended reforms in addition to the provision of pre-service education in change management and leadership. Finally, the author recommends the MOE to adapt Rogers' (2003) characteristics of innovation and Ely's (1990, 1999) conditions that facilitate implementation of innovation as a framework for the implementation of education reform initiatives and to serve as guidelines for the educational administration and leadership curriculum needed in these programmes.

References

Abedor, A., & Sachs, S. G. (1978). The relationship between faculty development, organizational development, and instructional development: Readiness for instructional innovation in higher education. In R. K. Bass & B. D. Lumsden (Eds.), *Instructional development: The state of the art* (pp. 1–20). Columbus, OH: Collegiate Publishing.

Akkary, R. K. (2014). Facing the challenges of educational reform in the Arab world. *Journal of Educational Change, 15*(2), 179–202.

Albugami, S., & Ahmed, V. (2015). Success factors for ICT implementation in Saudi secondary schools: From the perspective of ICT directors, head teachers, teachers and students. *International Journal of Education and Development using Information and Communication Technology, 11*(1), 36–54.

Alenezi, A. (2016). Technology leadership in Saudi schools. *Education Information Technologies, 22*(3), 1121–1132.

Algarni, F., & Male, T. (2014). Leadership in Saudi Arabian public schools: Time for devolution. *International Studies in Educational Administration, 42*(3), 45–59.

Almannie, M. A. (2014). Leadership role of school superintendents in Saudi Arabia. *International Journal of Social Science Studies, 3*(3), 169–175.

Almudarra, J. B. (2017). Leadership and supervision in Saudi Arabian educational context. *International Journal of Developing and Emerging Economies, 5*(11), 34–47.

Al Mulhim, E. (2014). The barriers to the use of ICT in teaching in Saudi Arabia: A review of literature. *Universal Journal of Educational Research, 2*(6), 487–493.

Alnahdi, G. H. (2014). Educational change in Saudi Arabia. *Journal of International Education Research, 10*(1), 1–6.

Alsalahi, S. M. (2014). Challenges of teacher leadership in a Saudi school: Why are teachers not leaders? *Academic Journal, 9*(24), 1416–1419.

Alyami, R. H. (2014). Educational reform in the Kingdom of Saudi Arabia: Tatweer schools as a unit of development. *Literacy Information and Computer Education Journal, 5*(2), 1515–1524.

Alyami, R. H. (2016). *A case study of the Tatweer school system in Saudi Arabia: The perceptions of leaders and teachers* (Doctoral dissertation, University of Reading, Institute of Education).

Al-Zahrani, A. (2015). The place of technology integration in Saudi pre-service teacher eEducation: Matching policy and practice. *The Turkish Online Journal of Educational Technology, 14*(1), 151–162.

Ely, D. P. (1990). Conditions that facilitate the implementation of educational technology innovations. *Journal of Research on Computing in Education, 23*(2), 298–305.

Ely, D. P. (1999). *New perspectives on the implementation of educational technology innovations*. https://files.eric.ed.gov/fulltext/ED427775.pdf. Accessed May 15, 2018.

Fullan, M. (2001). Whole school reform: Problems and Promises. Ontario Institute for Studies in Education, University of Toronto. http//michaelfullan.ca/wp-content/uploads/2016/06/13396044810.pdf. Accessed April 14, 2018.

Fullan, M. (2007). *The new meaning of educational change*. New York: Teachers College Press.

Hardy, G. (1997). *Successfully managing change*. New York: Barron's Educational Series.

Havelock, R. G., & Zlotolow, S. (1995). *The change agent's guide*. Englewood Cliffs, NJ: Education Technology Publications.

Hiatt, J. M. (2006). *ADKAR: A model for change in business, government and our community*. Loveland, CO: Prosci Learning Center.

Hinde, E. R. (2014). *School culture and change: An examination of the effects of school culture on the process of change*. https://www.researchgate.net/publication/251297989_School_Culture_and_Change_An_Examination_of_the_Effects_of_School_Culture_on_the_Process_of_Change. Accessed May 25, 2018.

Kleiman, G. M. (2000). Myths and realities about technology in K-12 schools. *The Online Journal of Leadership and the New Technologies Community, 14*. https://ncdli.fi.ncsu.edu/resources/docs/myths_realities_kleiman.pdf. Accessed June 28, 2018.

Kotter, J. P. (1995). Leading change: Why transformation efforts fail? *Harvard Business Review*, March/April 1–8. http://eoeleadership.hee.nhs.uk/sites/default/files/leading_change-why-trtansformation-efforts-fail.pdf. Accessed July 6, 2018.

Ladner, M., & Brouillette, M. J. (2000). *The impact of limited school choice on public school districts*. A Mackinack Center Report. https://www.miworkerfreedomorg/archives/2000/s2000-04.pdf. Accessed June 11, 2018.

Maroun, N., Samman, H., Mouzas. C. N., & Abouchakra, R. (2007). *How to succeed at education reform: The case for Saudi Arabia and the broader GCC region*. 1–36. Booz & Company Ideation Centre analysis. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.585.515&rep=rep1&type=pdf. Accessed June 13, 2018.

Meemar, S. S. (2014). *Tatweer school principals' perceptions of new authorities granted in the initial steps of decentralization*. Western Michigan University. http://scholarworks.wmich.edu/dissertations/384. Accessed May 22, 2018.

Microsoft Corporation. (2014). *Education transformation framework overview*. www.microsoft.com/education/. Accessed June 20, 2018.

@@@Oyaid, A. A. (2009). *Secondary school teachers' ICT use: Perceptions and views of the future of ICT in education* (Ph.D. Thesis, University of Exeter). htpp://ore.exeter.ac.uk/repository/bitstream/handle/10036/69537/OyaidA.doc.pdf. Accessed May 6, 2018.

Owen, J. (2015). *How to lead*. London: Pearson Education.

Pennington, R. (2017). *Saudi plans major overhaul to poorly performing education system*. Yidan Prize Summit Hong Kong. https://www.thenational.ae/uae/saudi-plans-major-overhaul-to-poorly-performing-education-system-1.683557. Accessed June 23, 2018.

Ministry of Education. (2018). *Preschool development program* (2018). https://kids.tatweer.edu.sa/ in Arabic. Accessed April 25, 2018.

Pont, B., Nusche, D., & Moorman, H. (2008). *Improving school leadership*. Organization for Economic Co-operation and Development (OECD), vol. 1 (Policy and Practice). http://www.oecd.org/education/school/44374889.pdf. Accessed May 16, 2018.

Rogers, E. M. (2003). *Diffusion of innovations*. New York: Free Press.

Sack, R., Jalloun, O., Zaman, H., & Alenazi, B. (2016). *Merging education ministries: Lessons learned from international practices*. UNESCO http://unesdoc.unesco.org/images/0024/002473/247344m.pdf. Accessed June 22, 2018.

Tayan, B. M. (2017). The Saudi Tatweer education reforms: Implications of neoliberal thought to Saudi education policy. *International Education Studies, 10*(5), 61–71.

Technical and Vocational Training Corporation. (2017). http://www.tvtc.gov.sa/English/TrainingUnits/Pages/default.aspx. Accessed on March 26, 2018.

The Boston Consulting Group. (2018). *New blueprint for education in Saudi Arabia*. https://www.bcg.com/industries/education/new-blueprint-for-education-in-saudi-arabia.aspx. Accessed April 25, 2018.

The Ministry of Education. (2018a). *Education annual report for the year 2016–2017*. https://drive.google.com/file/d/1Dms201KlLTuthlkK7lpFEYCNH1G99lKE/view. Accessed July 26, 2018.

The Ministry of Education. (2018b). *Education and vision 2030*. https://www.moe.gov.sa/en/Pages/vision2030.aspx. Accessed April 12, 2018.

The Ministry of Education. (2017). *Building leadership for change through school immersion (Cohort 2)*. https://www.britishcouncil.org/sites/default/files/rfp-building_educational_leadership_for_change_cohort_2_final.pdf. Accessed April 13, 2018.

The National Transformation Program. (2016). http://vision2030.gov.sa/sites/default/files/NTP_En.pdf. Accessed April 23, 2018.

The Saudi Vision 2030. http://vision2030.gov.sa/sites/default/files/report/Saudi_Vision2030_EN_2017.pdf. Accessed April 23, 2018.

University College of the Cayman Islands. (2013). The changing nature of educational leadership. *Journal of the University College of the Cayman Islands, 6*. http://www.ucci.edu.ky/_docs/jucci/JUCCI-Issue-6_Dec-2012.pdf. Accessed May 16, 2018.

Bader A. Alsaleh is a retired professor from King Saud University, Riyadh, Saudi Arabia. He has a Ph.D. from Michigan State University in Educational System Development (term used for Instructional Design and Technology at MSU), a Masters in Instructional Media from the University of Northern Colorado, and a BA in Arts and Education from King Saud University, Riyadh. His research interests are in the application of instructional design theories and models for learning and training, integrating instructional technology into teaching and learning, the diffusion and adoption of instructional innovations and educational change management. He is a Distinguished Arab scholar, granted by the Arab Association of Educational Technology (AAET), Cairo University, 2008. He translated and co-translated into Arabic five books of which two are 21st Century Skills: Learning for Life in our Times and Instructional Technology: Definition and Domains of the Field and has co-authored two books. He has delivered keynotes at more than fifteen conferences, forums and meetings at international, regional and local levels, has published over 25 articles in his field, and regularly reviews for a number of journals. In addition, he has regularly presented at local and regional meetings, forums and conferences as well as designed and delivered training workshops and programmes for teachers and professors for the Saudi Ministry of Education, a number of Saudi universities, and private and public schools. He also reviews research studies, research projects, academic programmes and faculty promotion in Saudi and Arab universities.