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Investigating the Barriers to Change Management in
Public Sector Educational Institutions

ABSTRACT

Purpose - This research explores barriers to the change management in the public sector of educational institutions such as public schools of the ministry of education in the GCC countries. The exploration of the research is based on ADKAR change management model that consists of five key elements which are Awareness, Desire, Knowledge, Ability and Reinforcement. The ADKAR model was used for many reasons, among these reasons, is that it allows management to separate the change process into parts, pinpoint where change is failing and addresses that impact point.

Methodology - Five public schools and employees from the educational directorate were taken as samples in this study. The unit of analysis was the employees, and data on these change drivers were collected from questionnaires and interviews.

Findings - The study findings were articulated through strengths and weaknesses. The strengths were the desire to change and networking. The weaknesses were the knowledge element such as the absence of predetermine guideline for the implementation of the system. Another observed weakness was in the leader's authority, where leaders do not have clear definition of authority and responsibility to take a decision, and lastly the deficiency in performance appraisal for not being taken on regular basis and rewarding system for not being linked to performance appraisal.

Implications – The study provides an empirical evidence that gives a deep insight about the elements that act as barriers to change in the public sector of educational institutions, as there are certain elements that are tied to the nature and characteristics of the public sector itself that act as barriers to change.

Originality/value - Knowledge development is an essential part in the public sector development scheme. Effective training programs are the most important means to develop knowledge, considering that it has to be properly designed and delivered. Training programs should also be structured in a way that fills the knowledge gaps that exist between the present state and the future state. One useful technique for filling and assessing the gaps between the current state and future state requirements is by writing new job descriptions for employees which should include details of knowledge and skills needed to perform that role during and after the transition.

Key words: Awareness, Desire, Knowledge, Ability, Reinforcement (ADKAR), GCC, Bahrain, Education, Barriers change management, public sector, training program.

1.0   Introduction

Due to the unconstrained development and advancement in knowledge and science in all fields, it became necessary for societies to undergo and cope with major changes in order to make significant changes in their economic system (Al-Alawi, et al 2007). In the business world, manager's struggle in dealing with organizational change as it tends to be the most complicated to deal with due to the difficulty of projecting the results and the outcome (Somerville, 2008). Despite the increase of using suitable change methodologies and strategies, cooperation's yet end up being resistant due to the ambiguity of the outcome (Balassanian, 2007). Therefore, many experts claim that most of the change projects end up not living to its potentiality in the sense of achieving its end results (Somerville, 2008).

 In light of the above, public sector organizations unlike the private sector are often perceived to be resistant to change, they seek capacity (the ability to get things done) but not change – a different way of doing old and new things (Balassanian, 2007). This is because the public sector is highly controversial as it lacks negotiable timescale and planning scale, as well as logistical and political implementation issues that are not taken into consideration (Andrews et al. 2008).

In respect of the above, The Kingdom of Bahrain – Economic development board (EDB) (2008, P.1) made the following statement; "Economic Vision 2030 for Bahrain outlines the future path for the development of its economy. This has been shared with a host of opinion leaders from the private sector, academia and development organizations, and the public sector, at the heart of the Economic Vision lies the aspirations for Bahrain economy, government and society in accordance with the guiding principles of sustainability, competitiveness and, fairness. In collaboration with the legislative body, civil society and the private sector, the Bahraini government will develop detailed strategic and operational plans for making these aspirations a reality. In particular, the Economic Vision will be translated into a tangible and coordinated national strategy across government institutions".

This study is designed to determine the change management barriers in the public sector based on ADKAR model which is a change management module of five elements as indicated below:

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- Awareness of the need to change
- Desire to participate and support the change
- Knowledge of how to change (and what the change looks like)
- Ability to implement the change on a day-to-day basis
- Reinforcement to keep the change in place

According to the Bahrain Economic Development Board (2008), Bahrain will use its resources to invest for the future, improving its human capital through education and training, particularly in the field of applied sciences. The Embassy of Kingdom of Bahrain (2007) in the USA stated that education reform has been a top priority in the Kingdom of Bahrain. Aside of the Ministry of Education, the Ministry of Labor, the Bahrain Chamber of Commerce and Industry, the Supreme Council for Women, and the Economic Development Board (EDB) have also cooperated to lay a modern foundation for Bahraini education. They studied the most successful reforms undertaken around the world, to develop a bold and a comprehensive reform plan for Bahrain educational system.
The findings resulted in four reforms:

- Create a Quality Assurance Authority that is independent on the Ministry, to assure quality performance of schools, universities and vocational institutes.
- Strengthen teacher recruitment and training.
- Create a polytechnic school that educates the future private sector.
- Improve higher vocational education to improve private sector productivity.

Education is exhibited as a key component of reform policy in Bahrain and this is reflected in Education and Training initiatives (Refer to Appendix A), both figures are adopted from |EDB (2008) and both exhibited that education is the future of Bahrain. Hence, according to the Human Development Index by United Nations Development Program, Bahrain is ranked in the "high human development category" and highlighted as the highest among others GCC averages in education.

The purpose of this study is to identify why changes are limited in some area and define the necessary steps to make change successful. The researchers had to break down the change into parts, understand where change is failing and address those specific points by using ADKAR model to identify the gaps in change management process. The problem

of this study was to determine the barriers of change in public sector as represented by one of the ministries of education in the GCC countries.

This study is significant in that:

- It provides a basis for the positive and efficient change.

- It provides helpful information for effective management of the people dimension of change, which requires managing five key elements that form the basis of the ADKAR model.

- Furthermore, the baseline data gathered from the result of this study shall serve as a guideline for other researchers in their quest for additional information. It can also be for those interested in the fields of change management. Likewise, the change management in GCC is somewhat a newly introduced subject and concept that will need intensive research and efforts for change management leaders to learn and digest to achieve successful change.

More specifically, the following research questions guided this study:

- What are the barriers, which restrict change management in the public sector organization such as Ministries of Education in GCC countries?

- What are the weak elements as barriers of change in the Ministries of Education in GCC countries, which are in accordance to ADKAR model and how significant are these elements?

- How significant is knowledge management to contribute positively or negatively to competitive advantage?

1.1 Research objectives

The aim of this study is to understand the change barriers of the organization and determine the failure cause depending on the ADKAR model elements that effects change pursue. The research objectives can be summarised as follows:

- To identify the weak elements as barriers of change in the Ministries of Education in GCC countries in accordance to ADKAR model.

- To analyse the significance of each element of ADKAR model in the public sector such as Ministry of Education in GCC countries.

- To understand how knowledge management contributes positively or negatively to competitive advantage.

1.2 Research Hypothesis

The researchers established the following research hypothesis as a guide to this study which was framed around the five elements of the ADKAR model for determine the barriers of change management.

H1 There is a difference between gender and ADKAR five key elements in change management.

H2 Change management project and awareness about change

H2.1 There is a positive relationship between qualification and awareness about change.

H2.2 There is a relationship between experience and awareness about change

H2.3 There is a positive relationship between level of career and awareness about change.

H3 Change management project and desire to change

H3.1 The desire to change is different according to age.

H3.2 There is a positive relationship between qualification and desire to change.

H3.3 There is a positive relationship between level of career and desire to change.

H4 The relationship between success of change and knowledge about change**.**

H4.1 There is a positive relationship between experience and knowledge about change.

H4.2 There is a relationship between level of career and knowledge about change.

H5 The relationship between success of change efforts and ability to change

H5.1 There is a relationship between age and ability to change.

H5.2 There is a relationship between qualification and ability to change.

H6 The relationship between success of change and reinforcement efforts.

H6.1 There is a positive relationship between experience and reinforcement efforts.

H6.2 There is a positive relationship between qualification and reinforcement efforts.

1.3 Definition of Terms

For the purpose of this applied research, the following terms were defined.

Independent variable: for this study, the independent variable was the ADKAR five key elements.

Dependent variables: for this study, the dependent variable is the change management barriers in the public sector organization.

Change management: Change management is the set of processes, tools and practices that were used to manage the people side of a change. Change management is the final element of realizing change effectively.

Finally, this section reflects the purpose of this research which was intended to identify the weak elements as barriers of change in the Ministry of Education in accordance to ADKAR model. The next section presents the literature review for this study.

2.0 Literature review

According to Andrews et al (2008) it is widely accepted that the context within which managers have to implement change is broader in the private sector than their counterparts in the governmental sector. This is attributed largely to the nature of public policy which they describe as based upon ministerial edict (combined with threat), highly controversial in substance, tight and non-negotiable timescale, no planning window, no consideration of the logistical and political implementation issues. Andrews et al (2008, p.67) suggested that "public sector managers have much less satisfactory experiences of change than their private sector counterparts"

Balassanian (2007) likewise, argues that despite the fact that employees hold strong views of the new vision of change, they feel handicapped by obstacles in their paths which management are aware about but don't remove doubts concerning process of change which cause failure to the whole process. One reason among others for this dilemma is management reluctance to deal with difficulties, air potential problems, and clear uncertainties some employees may have. Balassanian (2007) argue that the prospect of changes in the way people work causes anxiety which, in turn, causes resistance and only people who instigate change enjoy it; others have to suffer it.

2.1 Change management

According to Somerville (2008), organizational change is a complex subject. Achievements in change management are difficult to predict in terms of results, most experts believe that most of change projects do not achieve its final goals. Balassanian (2007) stated that organizations in public sectors are the most perceived for change

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resistance, as many of these organizations focus on getting things done rather than looking for new ways of doing things. The introduction of increased use of appropriate change management strategies and methods in development cooperation will often be resisted due the difficulty of precise definition of their results and the uncertainty of their outcome. Balassanian (2007, p.5) stated that "The first and most obvious definition of change management is that the term refers to the task of managing change. Managing change is in itself a term that has at least two meanings. One meaning of 'managing change' refers to making changes in a planned and managed or systematic fashion. External events may also necessitate organizational change. Hence, the second meaning of managing change - the response to changes over which an organization exercises little or no control (e.g., a rapid rise in the price of oil, devaluation of the national currency, civil unrest, new legislation, and so on). The recognition of the need for timely adjustment to external events has given rise to the concept of the 'learning organization'. Change management refers to an area of professional practice and the related body of knowledge that has grown up within and around this subject".

Change management is facilitated by a systematic approach that includes making use of the knowledge acquired in an organization as well as the resources available that can be used to extract the benefits of the change. It is also seen that having a systematic approach results in better management of the method of change as it impacts the productivity and performance of change in a positive manner (Metre, 2009). Nonetheless, it is also viewed that a systematic approach can result in time constraints and restrictions in resources to evaluate the process of change and to concurrently apply the change as premeditated (Hudescu and Illies, 2011).

According to Burnes (2004), Organization change must be handled and approached properly or else any planned or occurred changes will be in conflict rather than in alignment. Furthermore, the approach should be determined based on what is suitable for the forms of changes, particularly the change that is anticipated and looked for in the organization framework. Therefore, change leaders and agents have a significant part in ensuring the success of the change process (Al-Yahya, 2009).

Ulrich and Brockbank (2005) discussed that change management is impacted by the internal elements of an organization such as the employees, culture, policies, procedures,

and management, which make change agents and the corporate culture a critical part of change management. However, to maintain a solid culture that can be subjected to change, the change approach must be subjective and inclined by the corporate culture and change leadership (Erdogan et al., 2006, Al-Alawi & El Naggar, 2018)

Leadership is also a crucial aspect in change management as it has a strategic function in handling and controlling resistance to change through using appropriate factors of organizational culture to foster and increase employee participation in the method of change (Jaskyte, 2004, Al-Alawi, 2006). According to Cameron et al.(2006), change is coordinate through the leader of the organization or change agents who have the authorization to act as change enablers, which is inclined by resistance from employees.

According to Northouse (2013), change leaders behavior can be demonstrated through two general types. First, is a motivated and inspired leader that demonstrates task behaviors for goal achievement as well as integrates his employees in such process to ease their comfort and make it easier for them to adapt to the change. Moreover, Hamstra et al. (2011) stated that in successful organizations that achieve their goals. Leaders played the role of both traditional and transformational leaders through supervision of change management and through recognizing the need of change and constructing a path to implement it.

2.2 Change resistance

Robbins & Judge (2009) states that it is well documented from many studies of individuals and organizations that both organizations and its members resist change, despite the fact that resistance to change in itself is positive to some degree as it maintains stability and predictability in behavior, for example resistance to re-organization plan or a change in product line can stimulate a healthy debate over the merits of the idea and result in a better decision. Nevertheless, evidently resistance to change, restrict adaptation and progress.

They also suggested that resistance to change can be categorized to four types, overt, implicit, immediate, and deferred. The easiest for management to deal with is overt and immediate, while the most difficult and challenging to deal with, will be implicit and deferred. They added that implicit resistance behaviors is considered as subtle- loss of

loyalty to the organization, loss of interest to work, increased errors, increased absenteeism due to sickness – and hence are more difficult to manage**.** Luc Moriceau & Fronda (2008, p. 605) suggested that "The persons observed do not refuse to change in the absolute; they refuse to sign up to a change which is imposed from the summit of the organization and whose ultimate purposes they do not share. This is the reason why approaches to resistance to change, such as that of human relations seem reductionist. It is not enough simply to 'communicate' for change to take place. Communication is highly difficult when the communicants have in their minds contradictory frames of reference for justification".

For change management to be successful, it should consider individuals as agents or actors, and not as subjects. In normal cases, an individual can adapt at some margin to change by certain adjustments in his culture and characters, boosting flexibility in his principles and values. But deep and radical changes which are directly connected to the national cultures such as religious, geographical, demographical and political are deep rooted and often not extremely difficult to change (Luc Moriceau &Fronda, 2008; Al-Alawi, & AlKhodari, 2016; Kophuting, & Mutshewa, 2017).

Lawrence (1954) and Maurer (1996) stated that the reason my change initiatives do not end up successful is due to change resistance. Moreover, resistance to change can result in incurring costs and time constraints in the process of change (Ansoff, 1990) to the extent that it becomes hard to predict, and controlled and must be taken into concern (Lorenzo, 2000). From another perspective, resistance can help change agents to gather information and can help understand how to come up with a successful change process (Beer, 1996).

The implementation of change can occur in alignment with the objectives and internal environment of the organization as well as the external environment (Quattrone and Hopper, 2001). In order to achieve a successful change management initiative, the leader must be a transformational leader rather than a traditional leader in the sense of having an optimistic character regarding the initiatives in addition to exhibiting commitment to the change process (Abrell-Vogel and Rowold, 2014).

It is important for a change agent or leader to motivate and inspire the employees of the organization (Gilley et al., 2009). When employees are motivated and inspired, they are

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less likely to resist change and more likely to accept it, which can be done through associating the employees with the leader in the change process. However, attaining collaboration between employees and the leader in change construction depends on the attributes and characteristics of the leader (Griffith-Cooper and King, 2007).

Nazim et. (2014) stated that a change agent is a person who identifies the need of a change, then presents it, which leads and results in having an applicable environment for change where change can be implemented and evaluated. This indicates that change agents have certain obligations when dealing with change. According to Luscher and Lewis (2008), change agents must be extensively involved with the process of change and must be highly cooperative and flexible when interacting with employees. In other words, for example, Hudescu and Ilies (2011) stated that leaders must communicate with the employees in terms of making them understand the basics of change or else employees will not value the purpose of the change process and will resist it, which will act as a boundary to the change process. It is not easy to communicate information about the change process. However, if achieved, employees will be supportive in terms of easing and assisting the method of change (Al-Alawi, et al., 2016, Nazim et al., 2014).

2.3   Organizational Change Process Models

Edgehouse et al (2007) stated that despite the fact that the ultimate goal of organizational change is aiming to change attitudes, practices and values of constituents to a more desirable state for individuals or organization, the available well-recognized models to achieve these common goals vary in approach and execution, Edgehouse et al (2007, p.7) suggested that, "Models are useful tools. Not only because they provide path to follow, but also because may are powerful mechanisms that can down out anxieties about unknown future result".

According to Robbins & Judge (2009), there are several approaches to managing change. Four models have been selected for the purpose of this study. The first three models, Lewin's three- step change model, Kotter's eight-step plan, the seven S-Action Word Model, have been demonstrated with some details for enlightening how they differ from ADKAR model that is chosen as a base for this research project.

2.3.1 Lewin's Three –Step Change Model

According to Latta (2009), Robbins & Judge (2009), Cellars (2007) this model has three sequential steps to follow to ensure successful change. The term Unfreezing refers to the commencing point in such situation which is considered as an equilibrium state, from which we need to move to new equilibrium status, by overcoming the pressures of both individual own resistance as well as group conformity. Then term *Movement* can be described as the transformation process from existing equilibrium to the new equilibrium (desired end state). While *Refreezing* can be explained as stabilizing the change by balancing the driving forces and restraining forces and can be sustained over time through monitoring and reinforcement.

2.3.2 Kotter's Eight –Step plan

According to Robbins & Judge (2009), John Kotter of the Harvard business school creates this approach for implementing change. Kotter began by listing common failures that managers make when trying to initiate change.

Kotter's model (1995) identified eight steps for change initiatives that included:
- Sense of urgency to establish at first stage.
- Coalition of people who support and appreciate the need for change should be established at soonest.
- Vision of desired end goals is clear and realistic.
- Different communication media to be used to promote vision.
- Using all means and tools to empower and act on the vision
- Build momentum and motivations by making short-term wins that will accelerate ongoing change.
- The change program must always be strengthened, adjusted based on reassessment and addressing of rising problems.
- Having the change efforts evident in the organization success will empower the change program.

2.3.3 The Seven S-Action Word Model

Cellars (2007) stated that Tom Peters and Robert Waterman 1978 created the McKinsey 7-S Model. The 7-S Model is made up by seven holistic components for collective company change; shared values, strategy, structure, systems. Lennon (2009), Cellars (2007), Edgehouse et al (2007), argue that the McKinsey 7-S model (1978) identified 7-S for change initiatives that included:

Scan: The initial survey of the institution to find out the working mechanism, and strategies, strengths and weaknesses.

Select: leaders need to select. At this point, the leader to be carefully chosen, extraordinary individuals, appropriate plans, determine the vision. The selection process in organizational change has to involve calculated decision-making, shared values, vision and mission to be put in practice smoothly.

Sense: sensitivity plays important role in organizational change; decision makers of change project must sense feeling, attitudes, stress and insecurities of effected people. Organizational change without sensitivity becomes successful with task but not people and therefore will not be effective and will not last long.

Sicken: change in organization move forward and to be appreciated when people get sick of doing things unprofitably, inefficiently and not content with it, but nobody dare to change. Leaders take the risk and sacrifice their reputation for the sake of fruitful change.

Sifting: in the organizational change is the process of separating of good and bad, as excessive change may backfire if not performed carefully and selectively. Leaders should be flexible, reliable, authentic and honest when it comes to ideas, people and procedures.

Speak: it is very common that organization change affects people at different extends. People who are expecting to be affected negatively, want the change agents – leaders to speak to them about it and remove or at least reduce the stresses they burden.

Spread: leaders should spread the authority and responsibility of the organizational change with others, as this will empower, entrust and sustain the change as well as speeding the process of change and make it more effective and pleasant for all to join and participate in.

2.3.4   ADKAR model

For successful change management, Hiatt (2006) has identified five elements, named it as ADKAR model; these elements must be followed in the right sequence to ensure the success of change projects: Awareness, Desire, Knowledge, Ability and Reinforcement.

2.4   Overview of ADKAR model elements and the relation with other studies

According to Hiatt (2006) ADKAR model when was structured was meant to be as an individual change management model. In other words, ADKAR represent the essential elements of change of a single individual person or groups. During a change project, in the work place, when change struggles due to a missing link or weak element, applying ADKAR model can define this missing link or element that can undermine business change and rectify it.

For instance, in the event of absence of both awareness and desire, you bound to expect stronger resistance from employees, weaker adherence to change, delay in implementation. When awareness and desire are very low, failure is very likely to happen. However, Edgehouse et al (2007) Argues that Employee's desire and acceptance to change will largely contribute to the success or failure of change efforts. It is also emphasized, that willingness and acceptance to change is much affected by employee's acceptance of new procedures.

Hiatt (2006) stated that the lack or shortages in knowledge and ability will naturally lead to inefficient utilization of all organization resources, improper utilization of new processes and tools, a negative impact on customers and sustained reduction in productivity.   When reinforcement element is not empowered and being effectively monitored, individuals involved in the change project are bound to become less interested and revert to old behaviors; one or more of these elements may affect and undermine the possibility of successful change project. He also suggested that when the change subject is identified, ADKAR model can be used as a starting point to provide a sequential framework for managing human part of change (also refer to Bin Taher, et al 2015).

2.5.1   Awareness

Hiatt (2006) stated that one of the first corner stone's of ADKAR model is, Awareness of the need for change. In this stage, the change process, its nature, and the need for it, is rightly and effectively communicated to the concerned people at all levels in the organization.   A study conducted by Hiatt (2006) in 2005 on a group of 411 companies all undergoing major change projects, concluded that the largest single cause, attributed to resistance to change and consequently failure of change project was lack of awareness of

why the change was being made. The employees and key personal of the change projects had no clear views of what the change would add to the organization, so they could better understand and participate in the change process and align themselves together towards the success of the project.

2.5.1.1 Elements affecting the awareness' receptivity

Communication: Frahm & Brown (2007) stated that Commencement and maintenance of organizational change would largely depend on the communication process. Therefore, the success or failure of change efforts depends on how effectively the goals of change are communicated to the employees who are the targets of the change.

Kane (2008) argue that communication in organizational change is a crucial element in the consciousness of employees ' receptivity system to accept change and implement it. Hiatt (2006) argue that the most important massages to share with employees, project management stated communicate the business need for change and explain why the change is necessary, provide the compelling reasons for the change and emphasize the risk of not changing.

Robbins& Judge (2009) stated that a study of German companies revealed that changes are most effective when a company communicates its rational balancing various stakeholder (shareholder, employees, community, customers) interests versus a rational based on shareholder interests only. They also suggested that resistance in employees can be dealt, with and reduced by communicating to them and help them to understand the reasons behind change.

Communication can be effectively used to deal with change resistance in more than one level, first, to correct the false information (rumors) that it finds its ways to the employees from different sources either from inside or outside the organization and therefore, clear the negative effects of these false information. Secondly, proper communication will emphasize the importance and essentiality of need project and its success for the organization to sustain.

Information distribution: In Frahm & Brown (2007) study, Witherspoon & Wohlert (1996) found that in most cases information is improperly distributed in such a downward

and differential way, and that the flow of information stops at supervisor level. This naturally raises doubts about lower level employees' ability who should participate in change without being aware of all facts concerning change. Nevertheless, Robbins& Judge (2009) argue that indeed research show that the way need for change is sold matters, change is more likely when the necessity of changing in packaged properly.

Create a vision: According to Kane (2008) the first responsibility of leadership involves the ability of employees to create a vision.

Latta (2009), Kane (2008) identifies the vision as the end state or goal, an organization desire to reach. It provides people with a direction to move. It inspires people and motivates them to a common goal through which the organization unity is built; it allows people to form a linkage between their different activities and how to contribute to the end goal. Khane (2008, p.54) stated that

> "A vision and effectively developed and communicated, are addressing the broader organizational questions, why are we here? and why is it important that we are here? It can move mountains".

 Khane also stated that vision can only be effective when it posses certain characters such as interesting, compelling and plausible and more importantly can be translated into organization realities allowing employees to accept it, absorb it and imagine the desired future form of the organization, in which case it serves the long terms interests of all constitutes. Furthermore, adding focus to vision will make it easy to followers understand it as basis for all future decision making. It should also be simple, easy to communicate, ambitious, inspirational, having both intellectual and emotional appeal.

Standardized work: According to Liker & Hoseus (2008) for the employees to understand their roles properly, focus should be made on standardized work it is the foundation of creating a repeatable process that reliably produces the desired result. Standardized work is also the foundation for training. It is impossible to improve un unstable process that is being done differently by everyone. Any improvement simply becomes just one more way of doing the same job. To teach a team member how to do a job, the method must be clearly defined.

2.5.2   Desire:

Hiatt (2006) stated that Desire is the second sequential element of ADKAR model; it creates motivation and inspiration for employees to support and participate in the change process. The desire for change has to be felt by employees themselves, the management part in this process is limited to introduce the change and make employees understand the reasons behind it. This can be a challenging task for the management, as it possess no control over people's feelings and choices. It is no way like awareness building in which case defined steps are predetermined to achieve end result, reaching a self convincing desire to change remains deceptive and, by definition, not under our direct control. Hiatt (2006, p. 17) stated that, "In the workplace, managers can develop new processes, tools and organizational structures. They can purchase new technology and promote new values for their organization. However, they cannot force their employees to support and engage in these changes".

Elements affecting the desire receptivity

Participation: Andrews et al (2008) emphasized the role of stakeholders and their commitments, early involvement and support to the idea of change right from the beginning of change project. Managers also should form a group of people around them who are dedicated and committed and have strong characters to influence other employees to join them in the change project. Therefore, careful selection should be exercised to pick up this group of highly influential people who should the capability to represent the project to other employees and to the organization in all. As quoted by Andrews et al (2008, p.307) "It depends on how change is managed. It should be about taking people with them, rather than doing it to them. They need to involve and consult people rather than force them into it."

Robbins & Judge (2009) argue that individuals normally will not resist or object to a change decision in which they involved in its formation prior to making the change, Therefore, those who oppose can be brought into the decision process, but care need to be taken that those who are participating in the decision making, have the expertise and knowledge to do so. Naturally, their participation can reduce resistance, bring commitment, and enhance the quality of the change decision. Nevertheless, in spite of

these benefits, there are the disadvantages: potential for a limited, poor contribution and great consumption of time.

Failing to create a sense of urgency and win over hearts and minds will reduce impact of change programs. A survey taken by the society of Human resource management indicated that performance and character are the two leadership behaviors and skills of importance. There is no greater test of performance and character than your ability to have courage during turbulent organization times (Kane, 2008).

Problem solving: Liker& Hoseus (2008) stated that problem solving should always receive immediate attention as it affects employee's interests in their jobs. He resembled the problem solving as connecting two value streams, product & people. If the two value streams together make up the organizational DNA of the company, then problem solving is the code, which connects the two together. Problem solving should be a regular practice in the organization; otherwise, a gap is bound to occur in the transformation process.

According to Kane (2008) research indicates that involving stakeholders directly in the problem solving, knowledge sharing, and examining of the progress and challenges of the change effort always yield a better result. Liker& Hoseus (2008) stated that management should give the team the encouragement and self-assurance to bring out their initiative, intellectual and innovative abilities on the way towards long sustainable, effective change. They must also be truthful with them in terms of their feedback to their input. Kane added that a good leader will cultivate a desirable culture, by the selection of the words he speaks and acts he does and by doing so, he sets the right tone and example for the whole organization. Confidence, respect and authority must all be evident in the leader's communications. Kane acts must be reflections of the organization esteem values, with characteristics of honesty and integrity. Leader's enthusiasm and eagerness should serve as a benchmark for other employees. Leader must be of open style, and should welcome all perspectives views.

2.5.3 Knowledge

According to Hiatt (2006), every organization has some kind of training program that match its requirements in a large variety of areas, in both aspects technical and human

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resources. Normally, competent professionals of high skills, who must have good tools, materials and know what they are doing, take charge of delivering the training. Liker& Meier (2007, p. 8) stated that "Yet, go where the actual work is being done and ask people how they learned their jobs and you get a different picture. People have learned their jobs over time in a relatively an organized way, and the training courses are interesting but often do not have a direct bearing on the day -to -day job."

Elements affecting the knowledge receptivity

According to Hiatt (2006), there are many factors affected knowledge receptivity as following:

A person's current knowledge base: The gap between a person's current level of knowledge and the knowledge requirement associated with the change will directly impact the probability of success for those individuals.

Capability of the person to learn: As well as the possible existence of knowledge gaps among us, each of us has a different capacity for learning different things. Some people could pick up new information without much of an effort, while others may have problems in learning new processes or tools.

Available resources to provide training and education: Resources could include the availability of subject matter, experts, teachers, books and other educational materials, equipment, systems for student use, and sufficient funding to support the training program.

The access to, or existence of, the required knowledge: For some desirable changes, the knowledge might not exist and if it existed, it may be hard to access. Depending on the geographic location of the organization, access to knowledge may be a barrier to learning. For instance, some parts of the world have little or no access to educational institutes or subject material; Internet connectivity also can be a limitation in terms of organizations' knowledge access (Al-Alawi, et al 2007).

2.5.4 Ability

Liker& Hoseus (2008) suggested that success can be ensured by provisions of two elements, A) production system that highlight the problem, and B) human system that provide the people to indentify the problem and be able to solve it. People of the right characters, team minded, competent, and well trained to deal with all rising problems are needed to ensure success. Liker& Hoseus (2008, p.40) stated that they "view errors as opportunities for learning. Rather than blaming individuals, the organization takes corrective actions and distributes knowledge about each experience broadly". They also suggested that learning is an endless process, superiors pass their experience and knowledge to subordinates and predecessors do the same for successors; team individuals at all levels should share knowledge with one another. Liker& Hoseus (2008, p. 3) stated that "When former Toyota Motor Manufacturing North American president Atushi (Art) Niimi was asked about his greatest challenge when trying to teach Toyota way to his American managers, he responded: 'they want to be managers, not teachers.' He explained that every manager at Toyota must be a teacher. Developing exceptional people is Toyota's number one priority".

Elements affecting the ability receptivity

Teamwork and team problem solving: It is essential here to point out the importance of collective teamwork approach to solving problems. Liker& Hoseus (2008, p. 45) stated "At Toyota the old adage 'all of us are smarter than any of us' is truly practiced on a daily basis. Many companies have thought problem solving and have groups that meet periodically to make improvements, but Toyota has integrated this into the daily management system. Getting the right people together to solve a problem is the way much of the work gets done in engineering, sales, finance, and in the factory. People are organized into work team with team leaders and review daily progress, taking problems as opportunities". They also emphasized on Work continuously to ensure open ways of communication throughout the team by emphasizing on the key values of mutual trust and respect, sharing the management point of view, and encouraging team members to participate in team activities and share their ideas.

Intellectual capacity: according to Hiatt (2006), intellectual capacity also plays an important role in developing any new ability. All individuals have different unique skills

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of intellectual ability. For example, some have a natural talent when it comes to finance and math, whereas others do extremely well in innovation and creativity.

Depending on the nature of change, some individuals may have psychological barriers to implementing the change. In the case study of the network equipment manufacturer, only 20% of the sales people were able to change their selling approach because of the nature of their analytical skills. Many could not develop the abilities on problem solving, financial analyzing and business case development within a reasonable time to generate the revenue result.

The available time for developing needed skills: According to Hiatt (2006), time can be a vital aspect for any change. If people could not change in the specific required timeframe, then the change is likely to fail, even if the person had the potential to change.

2.5.5 Reinforcement

According to Hiatt (2006), reinforcement is the final element of the ADKAR model. It includes any action or event that strengthens and reinforces the change with an individual or an organization. Reinforcement does not always require major events. In a study of customer service employees, the number one recognition desired by customer service agent was a personal thank you and an expression of appreciation by their supervisor. This gesture is meaningful because of the unique nature of the employee supervisor relationship.

Elements affecting the reinforcement receptivity

Celebrating successes: According to Hiatt (2006) in the work place, many project teams ignore the potential of celebrating small success. When changes are new and when the difficulties of changing are the greatest, opportunities present themselves for celebration. These moments can be turning points for the change. Identifying and acting on these opportunities is a critical part of reinforcing the change. The converse is also true. If no accomplishment have been made, any attempt to rewards or recognition can backfire, individuals want to be acknowledge for meaningful contributions and progress. Using recognition or rewards in the absence of demonstrated achievement reduces the value of recognition now and in the future. Hiatt (2006, p. 40-41) stated that "In the absence of continual reinforcement, it is possible that old habits and norms will creep back into the

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work environment. If this occurs, then the organization builds a negative history related to change. When the next change comes along, individuals remember how previous changes were managed and how they were treated during the process. Reinforcement serves three purposes, first, reinforcement sustains the change and prevent individual from slipping back into old behaviors or old way of doing work. Second, reinforcement builds momentum during the transition. Finally, reinforcement creates a history that individuals remember when the change occurs. If change is reinforced and celebrated, the readiness and capacity for change increase"

2.6   Summary

Why do some change fail while other succeed, many extensive research performed on hundreds of organization undergoing major change, concluded that inadequate communication or poor training are not the main causes of failure. Success in change is not attributed all to excellent project management, or even the best vision or solution to a problem; it is also beyond the daily busy activities that surround change project. The secret to successful change is rooted in something much simpler, which is how to facilitate change with one person (Hiatt, 2006). The next section shall present and discuss the researches selected methodological approach.

3.0 Research methodology Introduction

 This section describes the methodology used for collecting data on the barriers to change in the Ministry of education. It then describes the sources of data used, including the processes and procedures related to developing and administrating a questionnaire and interview on change management, the unit of analysis in this research were the employees of one of the Ministry of Education in the GCC who participate in change projects.

The results from this section helped to understand participants, their point of view about organizational change and address the research objective.

3.1 Population of the Survey

Questionnaires were distributed on a sample of: Employees from a Ministry of Education from GCC countries - General and Technical Education Sector, which consists of, Intermediate Education Directorate, Secondary Education Directorate, Primary Education Directorate, Technical and Vocational Education Directorate.   The samples were

Employees of educational directorate: Directors, Heads of Educational District, School Principles, Teachers and others (senior teacher, senior specialist). The survey participants were around 60 individuals all from the Ministry of Education out of which 40 were from 5 schools that were included in the improvement projects and 20 were employees of Educational Directorate from the Ministry itself. As this was not a statistical research, but needed to canvass the views of the correct section of the organization, therefore the number of participants per organization was not critical, but aimed to be representative; seven people were interviewed, one from each school and two from the Ministry of Education.

3.2 Survey Method

The survey was intended to supplement data through interviews and questionnaire, likewise, the practices and individual perceptions in the organization. The aim was to gain an understanding of the barriers of implementing the change in addition to the opinions and understanding of the employees.

3.3 Design of Questionnaire

Questionnaire design was adapted for use based on Glendinning (1991). Researchers attempted to design and structure the questionnaire after the majority of the literature review was completed to obtain a more complete picture. The questions in the questionnaire were provided with a Likert scale for response. Given that it may be socially desirable for the respondents to respond in certain ways, a five point Likert scale was proposed. The questionnaire was translated into Arabic, and this package was presented in a bilingual format- English and Arabic as Arabic language is the mother tongue of the sample people, so respondents were able to respond in the language of their choice. The questionnaire had structured questions with set of responses in order to map the barriers of the organizational change.

The following sections provide a brief discussion concerning the five ADKAR elements measured in the survey, Awareness, Desire, Knowledge, Ability and Reinforcement.

3.4   Awareness

Many researchers e.g., Frahm & Brown (2007), Hiatt (2006) have highlighted the importance of building awareness as defined within ADKAR means which is sharing both the nature of the change and answering why this change is needed which need to be

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widely communicated throughout the organization, moreover creating clear vision and goals.

Table 3.1 presents the questions relating to awareness that were included in the questionnaire and were aimed to focus on the implementation of the awareness.

Insert Table 3.1: Questions relating to Independent Variable – Awareness

3.4.1 Desire

Desire is another prominent driver of change that is highlighted in the literature e.g., Andrews et al (2008), Hiatt (2006) therefore, number of questions concerning desire were included in the questionnaire, once an individual has an understanding of why a change is needed. Awareness, the next step in questionnaire is to examine the individual decision to achieve the organizational change that needs encouraging the employees to develop their full potential. Table 3.2 presents the questions relating to Desire that were included in the questionnaire.

Insert Table 3.2: Questions relating to Independent Variable – Desire

3.4.2 Knowledge

The importance of Knowledge related questions were to explain what to do during the transition and how to perform effectively in the future state. Knowledge is only effective when the individual already has Awareness and Desire as has been noted by many researchers (e.g., Liker& Hoseus, 2008, Hiatt, 2006). Table 3.3 represents the questions relating to Knowledge that were included in the questionnaire.

Insert Table3.3: Questions relating to Independent Variable – Knowledge

3.4.3 Ability

Hiatt (2006) stated that this is the stage in the process where the changes actually occurs and is defined by the demonstrated achievement of the change such that the expected performance, results that are achieved. There are many processes that can enhance the Ability to obtain the required skills and behaviors such as performance monitoring, direct involvement of coaches**.**

Table 3.4 represents the questions relating to Ability that were included in the questionnaire to uncover and evaluate individuals' response to this issue.

Insert Table 3.4: Questions relating to Independent Variable – Ability

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3.4.4 Reinforcement

Finally, it is important to change the organization's structures and processes to ensure that they are congruent with the desired culture. Reinforcement is such a critical component of successful change, while making the change is difficult, sustaining a change can be even more difficult. There are a number of ways to support the Reinforcement, such as individual performance review, feedback with possible support (Hiatt, 2006).

Table 3.5 represents the questions relating to Reinforcement that were included in the questionnaire to uncover and evaluate respondents' opinions.

Insert Table 3.5: Questions relating to Independent Variable – Reinforcement

3.5   Pretest of the Questionnaire

In order to determine the best means of obtaining valuable responses to this questionnaire and interview from the organizations. Advice was sought from advisor, a draft questionnaire was pre-tested with several professionals working in different area, including professor from Arabian Gulf University, who is very knowledgeable about the public sector employees surveys and norms. Manager from the private sector who has a long experience in management, and head of district from Ministry of Education who has participated in change management projects.

These individuals were given a copy of the draft questionnaire and asked to provide feedback regarding the introduction, clarity of the questions, and they all commented by saying that it would be possible for respondents to give a reasonably accurate estimate noting that some minor changes were required to provide additional information. Time was measured in the pretest and found to be approximately 25 minutes to complete the questionnaire.

3.6   Interviews

For the purpose of the reassurance of the results obtained, collection of thoughts and opinions about the subject semi-structured interview style was used and the questions are as the following:

1. Please describe any difficulties that affected your adoption of the change project system as a head of the organization.

2. Please describe any challenges concerning people change with change projects.

3. To what extent was the physical environment of the workplace impacts the process of change projects?

3.7 Survey procedure

The researchers approach to the design of the interview and questionnaire was as follows:

- Preliminary framework built on the literature review from academic literature prior to design of questionnaires and structured interviews.

- Pilot questionnaire – restructure the questions as necessary

- Taking notes during Interviews, recording key words and phrases and creating full record immediately after interview.

- Questionnaires explained, handed out and collected during the same session.

The research was performed in the Ministry of Education, for which access has been granted to carry out the interviews and questionnaire after submittal of a letter to the Scientific Research Directorate to allow the researchers to implement the questionnaire in the Ministry of Education; their approval was obtained. Accordingly, appointments had been fixed by telephone calls. The participants were visited to carry out the interviews and questionnaire as organized during March 2010.

A cooperative and rapid response was obtained, surveys issued were collected promptly. The close and friendly relationship that the researchers enjoys with colleges and school principles were a great help to gain the required number of participants.

In order to make the process go smoothly and to obtain a prompt and efficient response to the surveys, the participants group were met in the Ministry of Education where all of the participants were present and during which time the questionnaire were handed out and collected after being filled. That ensured both a high response rate and has the correct participants answer the survey. It also enabled the researchers to explain clearly the aims of the research, control how the survey was fulfilled and clarify any enquiries that might a rise.

To summarize this section has discussed the research methodology that is most suited for this study. The next section will present the results of the questionnaires, interview and presents the study's findings based on the results.

4.0 Analysis of results

This section presents the statistical analysis of the findings used to answer research questions, two types of data (quantitative and qualitative) together provided a concise record of the findings for this study seeking to determine the barriers of change management in the Ministry of education.

4.1   Data analysis

The questionnaire was distributed, all were filled and returned; except for one, and therefore, 60 Participants in total, 59 of them responded which makes 98.3% response.

The results from the questionnaires served to help address research objectives. The completed questionnaires data were entered into Statistical Package for the Social Science (SPSS, Version 22.0) for analyzing the necessary statistics.

Demographic characteristics of the participants were calculated including the breakdown of the number of participants by gender, age brackets, educational background, experience and career. Valid percentages were used to represent the proportion of participants falling into each of the appropriate categories.

Descriptive statistics, including minimum, maximum, mean and standard deviation were used for all key elements .These descriptive statistics were calculated by summing all items making up the appropriate scale and dividing by the total number

4.2   Results

4.2.1   Respondents categories

The results contained statistics and measurements in terms of the percentage of respondents in categories such as gender, age, qualifications, level of career and experience (Refer to Table 4.1 to Table 4.5 in Appendix B).

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4.2.2 Determination the barriers of change

One of the research objectives was to identify the weak elements that are considered as barriers of change, and this was reflected through the following mean responses which were significant to understand as comparisons were made with five key elements. One out of the five variables- 'Knowledge' significantly scored low (Mean= 2.98, SD = .644). It is also important to draw attention to the variable 'Desire' where the participants scored high (Mean=3.72, SD = .602). The other three did not show significant score, where the awareness (M=3.48, SD=.708), ability (M=3.37, SD=.647), reinforcement (M=3.43, SD=.823). Refer to Figure 4.1 and Table 4.6.

It seems that employees do have the desire and knowledge when it comes to change however there is a large gap between their desire and knowledge with their ability such as being given the necessary tools to build their own ability, support from top management, and having the right environment to cope with the change. Moreover, employees are introduced suddenly to change instead of being introduced gradually to it, which reduces their awareness about the change especially, that they are not aware how this change benefits them in addition to the lack of reinforcement such as lack of incentives and rewards or acknowledgements.

Lowest mean = 2.8, highest mean =3.8, mean greater than 3.2 = weak, mean greater than 3.4 = strong, mean between 3.2 and 3.4 = mediocre.

Insert Table 4.6 Determination the barriers of change

Insert Figure 4.1: determination the barriers of change.

4.2.3 General observation on sample responses on interview questions

1. Please describe any difficulties that affected your adoption of the change project system as a head of the organization.

The most comments are

- Lack of morale support from management.
- Insufficient financial resources.
- Lack of incentives matching to responsibilities.

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- Weak feedback during execution of projects.

2. Please describe any challenges faced concerning people change with change projects.

   - Significance number of old aged employees who lack the modern technological skills to match the change requirement.

   - Lack of training programs that match employees' needs.

   - Gap in transfer of experience and knowledge from superiors to juniors.

3. To what extent the physical environment of the workplace had impact on the process of change projects?

   - Limitations to availability of internet network that necessitate employees perform their duties in their home.

The 'Desire' key element produced the lowest average level of perceived problems in questionnaire; it also exhibited the same result in the interview sample.

4.2.4   Overall view to individual questionnaire concerning key elements

An overall view of individual questionnaire concerning the five key elements which are awareness, desire, knowledge, ability, reinforcement were examined in order to analyse the significance of each element of AKDAR model in the public sector. The examination determined metrics such as the percentage of the less problematic response in each of the five key elements (See Table 4.7 to Table 4.19 in Appendix B for details).

Testing hypothesis

H1 There is a difference between gender and ADKAR five key elements in change management.

An independent-samples t-test was conducted to compare the gender scores for male and female. Table 4.20 and Table 4.21 show that the level of significance for awareness is 0.504 and scores for males (M=3.55 SD=.570) and females (M=3.42 SD=.811). Significance for Desire is 0.769 and scores for males (M=3.70, SD=.608) and females (M=3.74 SD=.606). Significance for Knowledge is 0.974 scores for males (M=2.98, SD=.469) and females (M=2.98, SD=.769). Significance for Ability is 0.842, scores for males (M=3.35, SD=.528) and females (M=3.39, SD=.740) and for Reinforcement significance is 0.803, scores for males (M=3.40 SD=.674) and females (M=3.45, SD=.941) which are all significance greater than 0.05. Therefore, there is no significant difference in scores for males and females to the five key elements.

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Insert Table 4.20: Gender group statistics

Insert Table 4.21: Independent - samples t-test for gender and ADKAR five key elements

H2 Change management project and awareness to change

H2.1 There is a positive relationship between qualification and awareness about change. According to Anova test the level of significance is 0.175 which is greater than 0.05. Consequently, there is no relationship between qualification and awareness about change as shown in the following Table 4.22.

Insert Table 4.22: The correlation between qualification and Awareness

H2.2 There is a relationship between experience and Awareness about change. Based upon the Anova test the level of significance is 0.017 that is less than 0.05. Accordingly, Table 4.23 shows there is significant difference between experience and Awareness, so the hypothesis is valid.

Insert Table 4.23: The correlation between experience and Awareness

H2.3 there is a relationship between level of career and Awareness about change. According to Anova correlation, the level of significance is 0.03, which is less than 0.05. As a result, Table 4.24 shows that there is significant difference so the hypothesis is valid. This indicates that when an individual that has a high level of career and is subject to change, they are more likely to have awareness about it in comparison with an individual who has a low level of career.

Insert Table 4.24: The correlation between career and Awareness

H3 Change management project and desire to change

H3.1 The desire to change is different according to age.

According to Anova test the level of significance is 0.408 which is greater than 0.05. Consequently, there is no relationship between age and desire about change as shown in Table 4.25. This means that age does not affect one's desire to change and that age and desire have no correlation together when it comes to change.

Insert Table 4.25: The correlation between age and Desire

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H3.2 There is a positive relationship between qualification and desire to change. According to Anova correlation the level of significance is 0.107 which is greater than 0.05. Thus, there is no relationship between qualification and desire to change. Refer to Table 4.26. This means that level of qualification does not influence one's desire to change, and that an individual with low qualifications can still desire change and an individual with high qualifications can either desire or not desire change. Therefore, desire and qualifications are not dependent on each other in terms of change.

Insert Table 4.26: The correlation between qualification and desire to change

H3.3 There is a positive relationship between level of career and desire to change. According to Anova test the level of significance is 0.196 which is greater than 0.05. Consequently, Table 4.27 shows that there is no relationship between level of career and desire to change.

Insert Table 4.27: The correlation between level of career and desire to change

H4 The relationship between success of change and knowledge about change.

H4.1 There is a positive relationship between experience and knowledge about change. According to Anova test, the level of significance is 0.14, which is less than 0.05. Consequently, Table 4.28 shows there is significant difference between experience and knowledge about change, so the hypothesis is valid, which therefore signifies the objective of understanding how knowledge management contributes to competitive advantage. Moreover, when employees are knowledge workers and have enough experience, the outcome of the change is most likely to be successful as the knowledge and experience of the workers will make it easier to handle, introduce, and deal with the change.

Insert Table 4.28: The correlation between experience and knowledge about change

H4.2 there is a relationship between level of career and knowledge about change. Based upon the Anova test the level of significance is 0.03 that is less than 0.05. Accordingly, Table 4.29 therefore there is significant difference between level of career and knowledge about change, which indicates how knowledge management can be

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understood in terms of its contributions to competitive advantage. Also, the more experience an individual has and knowledge, the more likelihood the outcome of the change is to be successful.

Insert Table 4.29: The correlation between level of career and knowledge

H5 the relationship between success of change efforts and ability to change
H5.1 there is a relationship between age and ability to change.
According to Anova test the level of significance is 0.262 which is greater than 0.05. Consequently, Table 4.30 shows that there is no relationship between age and ability to change. This means that age and ability are independent on each other in terms of change. The degree of ability could be the same regardless the number of age.

Insert Table 4.30: The correlation between age and ability to change
H5.2 There is a relationship between qualification and ability to change.
According to Anova test the level of significance is 0.032 which is less than 0.05. Consequently, Table 4.31 shows that there is significant difference between qualification and ability to change. So, the hypothesis is valid. A person who has high qualifications is more likely to have much more ability to change in comparison with a person who has no qualifications. Qualified people tend to have more knowledge and experience than people who does not, which increases their ability to change.

Insert Table 4.31: The correlation between qualification and ability to change
H6 The relationship between success of change and reinforcement efforts.
H6.1 There is a positive relationship between experience and reinforcement efforts.
According to Anova test the level of significance is 0.461 which is greater than 0.05. Consequently, Table 4.32 show that there is no relationship between experience and reinforcement efforts.   It does not matter how much experience a manager has in order for him to initiate reinforcement efforts, a manager with less experience than a manager with high experience can still make reinforcement efforts regardless of the outcome and type of the reinforcement methods.

Insert Table 4.32: The correlation between experience and reinforcement
H6.2 There is a positive relationship between qualification and reinforcement efforts.

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According to Pearson test the level of significance is 0.172 which is greater than 0.05. Consequently, Table 4.33 shows there is no relationship between qualification and reinforcement efforts. This indicates that the qualifications of a manager do not contribute to the efforts that are done in terms of reinforcement. Reinforcement efforts can be done regardless of the level of qualifications of an individual.

Insert Table 4.33: The correlation between qualification and reinforcement

In summary, as may be determined from the foregoing, the survey exposed the key determinants of change management barriers. The findings of the data provided responses for the research question and validated the study's hypothesis. The next sections will discuss the findings and recommendation.

5.0 Findings, limitation, conclusion and recommendation

This section describes the main findings of the study. First, an overview of the findings is presented. This is followed by a discussion about the strengths and weaknesses of the study. Finally, a recommendation for future research is discussed.

Part of the objective stated in the introduction was to identify the barriers concerning the change management in the public sector: Ministry of Education

5.1 Findings

This research has been successful in achieving the stated objectives of identifying the barriers in areas of management of change at the Ministry of Education through analyzing the significance of each element of AKDAR model in the public sector such as ministry of education, and understanding whether knowledge management contributes positively or negatively to competitive advantage. The change management at Ministry of education is relevantly a new issue that demanded attention and concern with some urgency. The survey itself appeared to be successful in identifying the issues. The responses to the survey yielded no major surprises, however it provided essential data without which objective analysis could not have been achieved.

The research findings are presented below which may be summarized as follows:

5.1.1   The strengths can be summarised as following:

Desire to change: The desire to change is evident by the result of the research and data collected through the questionnaire and interview, which show that there is a distinctive and a strong desire for making change. This positive attitude towards change will provide the assurances for change success as human being factor is the most essential part for change to succeed. This does not in itself overcome the natural fear of uncertainty in any new features of a new project, but staff are used having to cope with it (Carr, 2000, Hornstein, 2015).

Networking: Another strength is the fact that networking is perceived to be effective. The regular setting up and disbanding of project teams means that individuals meet a range of opposite numbers in different groups with which they must interface on each project. Groups of individuals who gain good experience from team members on one project can make useful contacts when difficulties arise on later projects.

This feature can at least partly explain why individuals generally perceive satisfactory interpersonal relationships while experiencing some remoteness from members of their home department and line management.

5.1.2   The barriers discussed under the following:

Knowledge: Knowledge key element has the greatest negative impact on change management success; developing knowledge requires a broad spectrum of activities that enable each person to learn in a way that is most effective for employees (AL-Alawi, et al 2007).

Leader's authority: Another weakness is the fact that leadership is perceived to be ineffective and even discouraging. Employees in the public sector organization need clear definition of authority and responsibility for leaders to take decisions of all kinds.

Performance Appraisal: deficiency in the performance appraisal for being infrequent and arbitrary. Linked to this perception is the perception that there is insufficient attention of rewards, recognition and encouragement with potential for linking such appraisal to rewards and recognition. The researchers believes in the importance of performance appraisal in encouraging creativity. In addition to the questionnaire, researchers during

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the interview also recognized the importance of less tangible elements like emotional support and commitment.

5.2 Limitations

The information and feedback collected from the questionnaire may not represent all of the facts of the questionnaire subject, therefore, the researchers may have to use unstructured interview to enhance the quality of information obtained. Due to the long bureaucratic procedures for issuance of permission from the higher research authorities (Scientific Research Directorate) to apply the questionnaire in the Ministry of Education, this took nearly three weeks, which was long considering the time available to end the research and resulted in a significant change in the project schedule. It also significantly affected the number of respondents proposed from 100 to 60 samples, and schools from 10 to 5, to ensure rapid data analysis and results. Nevertheless, the fact that the number of respondents in the questionnaire under manager title was only one, due to the absence of some managers during the questionnaire, this caused a limitation in the results obtained and in the resultant analysis.

5.3 Recommendation

Measure of performance: As a short-term measure, managers should realize the importance of performance appraisal of individual staff on regular basis. The performance and rewards should be strongly linked to the performance appraisal.

Developing knowledge: Knowledge development is an essential part in the Ministry of Education development scheme, according to Hiatt (2006) the following tactics suggested for developing knowledge:

Effective training and education programs: Effective training programs are the most important means to develop knowledge, considering that it has to be properly designed and delivered. The modern techniques such as audio and video programs, web-based seminars and other multimedia programs should all be considered as essential means to develop knowledge. The training programs should also be structured in a way that fills the knowledge gaps exist between the present state and the future state needed. Training requirements and the resulting training programs should address how to operate in the future state and how transition is made to a new way of doing work.

One useful technique for filling and assessing gaps between the current state and future state requirements is by writing new job description for employees that contain details about the knowledge and skills required to perform that role both during and after the transition is clearly stated in the new job description.

Job aiders: Many types of knowledge content go beyond what people can easily remember. Job aiders such as checklists and templates should be made available to enable employees to follow more complex procedures; it is found in many cases that mistakes can accrue simply because people are not able to memorize some complex procedures. Online help files and scripts can serve this role in an effective way.

One-on-one coaching: Since individuals learn in different ways and at different pace and each individual may have different needs, one-on-one coaching can address all these differences.

User groups and forums: Peers can be a very handy, reliable and powerful source of information and learning. During implementations, nominate a collection of employees who have mastered the implementation of the tools and can teach others. These super-users typically have their own forum for sharing and organizing forums for other employees that are new to the implementation.

5.4   Recommendation for future work:

This study recommends that in any future research, close attention to be given to examine the knowledge and hence, evaluate the effectiveness of training program in place.

5.5   Summary

The Results suggest that out of the five change drivers considered in this study, knowledge key element has greatest negative impact on organizational change management success. Further, developing knowledge requires a broad spectrum of activities that enable each person to learn in a way that is most effective for him. These activities should include:

- Formal training and educational programs.
- Job aiders such as templates, check list, online files all made available to all employees.
- One-on-one   coaching   from   supervisors   or   subject   matter   experts.

References

1. Al-Alawi, A. I, Al-Marzooqi, N & Fraidoon, Y (2007) "Organizational Culture and Knowledge Sharing: Critical Success Factors" *Journal of Knowledge Management*, Vol. 11, No 2, pp. 22-24, Emerald Group Publishing Limited, USA

2. Al-Alawi, A.I. (2006), "Investigating the Strategies for Successful Development of Health Information Systems: A Comparison Study", *Information Technology Journal* 5(4), pp 615-635

3. Al-Alawi, A.I and AlKhodari, H. J (2016), Cross-cultural Differences in Managing Businesses: Applying Hofstede Cultural Analysis in Germany, Canada, South Korea and Morocco, Elixir Inter. Busi. Mgmt. 95 (2016) 40855-40861

4. Al-Alawi, A.I, Al-Azri, A. S, and Mohammad, H. N. (2016) "Investigating the Factors Affecting Job Satisfaction and Turnover: Case of Sultan Qaboos University", J*ournal of Human Resources Management Research*, Vol. 2016 (2016), Article ID 301733, DOI:10.517/2016.301733
http://www.ibimapublishing.net/journals/JHRMR/2016/301731/301731.pdf

5. Al-Alawi, A. I., & El Naggar, N. F. (2018). Factors Affecting Women Leadership to Reach Top Management and Its Impact on the Economy: The Case of the Kingdom of Bahrain. In *Arab Women and Their Evolving Roles in the Global Business Landscape* (pp. 87-119). IGI Global.

6. Andrews, J., Cameron, H & Harris, M., (2008). All change? Managers' experience of organizational change in theory and practice. *Journal of Organizational Change Management,* 21(3), pp.300-314.

7. Bahrain Economic Development Board 2008, Economic Vision 2030. [Online] [Accessed 15 December 2016]
Available at: http://www.bahrainedb.com/economic-vision.asp

8. Balassanian, D., January (2007). Institutional reform and change management: managing change in public sector organizations. In: UNDB (United nation development programme), A UNDP capacity development resource. Bangkok, January 2007.

9. Bezzubetz, J., (2009). Creating sustainable organizational change: a grounded theory approach.ph.D. In management and decision sciences: Walden University

10. Bin Taher, N. A., Krotov, V., & Silva, L. (2015). A framework for leading change in the UAE public sector. *International Journal of Organizational Analysis*, *23*(3), 348-363.

11. Bouckenooghe, D., Devos, G& Broeck, H., (2009).Organizational change questionnaire – climate of change, processes, and readiness: development of a new instrument. *Journal of Psychology*, 143(6), pp.559-599.

12. Bui, C., (2009). Discovering the factors for organizational success: an investigation of learning organization attributes within minority – owned small businesses in New England. Ph.D. of philosophy: Capella University.

13. Carr, A., (2000). Critical theory and the management of change in organizations. Journal of Organizational Change Management, 13(3), pp.208-220.

14. Cellars, T., (2007). Change Management Models: A Look at McKinsey's 7-S Model, Lewin's Change Management Model and Kotter's Eight Step Change Model. [Online] [Accessed 29 December 2016] Available at: http://www.associatedcontent.com/article/237685/change_management_models_a_loo k_at_pg4.html?cat=3

15. Edgehouse, M., et al., (2007). Initiating and leading change: a consideration of four new models. *Proquest Educational Journals*, 36(2), pp. 3-12.

16. Embassy of the Kingdom of Bahrain to the United States. (2007) .Education reform a top priority in Bahrain. [Online] [Accessed 2 March 2017] Available at: http://www.bahrainembassy.org/index.cfm?fuseaction=document.home&id=89

17. Frahm, J & Brown, K., (2007). First steps: linking change communication to change receptivity. *Journal of Organizational Change Management*, 20(3), pp.370-387.

18. Frahm, J., & Brown, K., (2006). Developing communicative competencies for a learning organization. *Journal of Management Development*, 25(3), pp. 201-212

19. Fronda, Y., & Luc Moriceau, J., (2008). I am not your hero: change management and culture shocks in a public sector corporation. *Journal of Organizational Change*, 21(5), pp.589-609.

20. Gilly, A., McMillan, H & Gilley, J., (2009). Organizational change and characteristics of leadership effectiveness. *Journal of Leadership & Organizational Studies*, 16(1), pp.38-47.

21. Glendinning, I., (1991). Managing change and flexibility – attitudes and organizational culture. MBA: *University of London.*

22. Hiatt, J., (2006). *ADKAR: A Model of Change in Business, Government and our Community*. USA. Prosci Research.

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23. Hornstein, H. A. (2015). The integration of project management and organizational change management is now a necessity☆. *International Journal of Project Management*, *33*, 291-298

24. Kane, W., (2008). *The Truth about Managing Change*. UK: Pearson education.

25. Kidwell Jr, R., (2003). Helping older workers cope with continuous quality improvement. *Journal of Management Development*, 22(10), pp.890-905.

26. Kophuting, T. W., & Mutshewa, A. (2017). Analyzing Critical Incidents Stories to Understand Change Management Process in the Adoption of e-Resources at the University of Botswana Library. *International Information & Library Review*, 1-17.

27. Latta, G., (2009). A process model of organizational change in cultural context (OC3 model): the impact of organizational culture on leading change. *Journal of Leadership & Organizational Studies,* 16(3), pp. 19-37.

28. Lennon, J., (2009). Change management models. [Online] [Accessed 14 March 2016] Available at:
http://www.associatedcontent.com/article/1659697/change_management_models_pg3 .html?cat=3

29. Liker, J. & Hoseus, M., (2008). *Toyota Culture*. USA: McGraw-Hill.

30. Liker, K & Meier, D., (2007). *Toyota Talent*. USA: McGraw-Hill.

31. Ministry of Education., (2008). Education reform. (Personal Communication, 2 April 2010)

32. . Robbins, S. Judge, T., (2009). *Organizational Behavior* 13th ed. New Jersey: Pearson education

33. Schroeder, P., (2010). Changing team culture: the perspective of ten successful head coaches. *Journal of Sport Behavior*, 33(1), pp.63-88

34. Somerville, K., (2008). The key drivers of organizational culture change in the public sector: an analysis of the Canadian Federal Government. MBA: Carleton University.

35. Warrilow,S., (2010). ADKAR change model - An evaluation of its strengths and weaknesses. [Online] [Accessed 15 March 2016] Available at: http://www.strategies-for-managing-change.com/index.html

36. White, L., (2000). Changing the "whole system" in the public sector. *Journal of Organizational Change Management*, 13(2), pp. 162-177.

Insert Appendix A

Education is a key component of reform policy in Bahrain & Education and Training
initiatives

Figure 1.1 Education is a key component of reform policy in Bahrain (adopted from EDB

Figure 1.2 Education and training initiatives, (adopted from EDB)

Insert Appendix B

Respondent's categories and overall view of individual questionnaire concerning
key elements

Respondents' gender

Table 4.1 shows that the percentage of male respondents was 45.8%, while the remaining

54.2% were female.

Insert Table 4.1 Respondents' gender

39

Respondents' Age

Table 4.2 shows that the questionnaire covered four age categories. 11.9% respondents between 21-29 of age, 33.9% in the range of 30- 39 of age, about 39% in the range 40- 49 of age, the remaining 15.3% of the respondents are above 50 years.

Insert Table 4.2 Respondents' age

Respondents' qualification

Table 4.3 show that the percentage of the respondents of a B.S. degree 78%, the respondents of High Diploma 11.9%, and respondents of Master degree 10.2% of the total sample.

Insert Table 4.3 Respondents' qualification

Respondents' level of career

Table 4.4 shows the respondents at manager level 1.7%, head of district 5.1%, school managers 3.4%, specialist 18.6%, teachers 64.4%, and others 6.8%.

Insert Table 4.4 Respondents' career

Respondents' level of experience

Table 4.5 illustrate that the questionnaire covered five categories of experience, respondents between 1-5 years experience 16.9%, 5-10 years 15.3%, 10-15 years 16.9%, 15-20 years 11.9%, and the remaining above 20 years 39%.

Insert Table 4.5 Respondents' experience

40

4.2.5 Overall view to individual questionnaire concerning key elements

To ease the analysis the researchers considered the terms (strongly agree and agree) as agree. While the terms (strongly disagree and disagree) as disagree.

Awareness response

The less problematic response was to Q-No.5, "Communication about the change is limited to only those directly concerned with the project" to which 37.3% Agreed. See table 4.7

<center>Insert Table 4.7: Respondents' opinion on Q-No.5</center>

In contrast with the least problematic response Q-No.4 to which 76.3% agreed that "there are logical reasons for change which is visible and the goals are transparent" refer to Table 4.8 .

<center>Insert Table 4.8: Respondents' opinion on Q-No.4</center>

Desire response

Table 4.9 shows the least problematic response was Q- No.15 to which 64.4% agreed that on occasions- I would like to make changes in my job.

<center>Insert Table 4.9: Respondents' opinion on Q-No.15</center>

In addition to Q- No.16, Table 4.10 illustrate that 89.8% agreed with statement indicated the responses constantly seek to improve the way they work.

<center>Insert Table 4.10: Respondents' opinion on Q-No.16</center>

In addition to Q-No.17, Table 4.11 shows that 89.7% agreed with the statement that the responses cooperate effectively in order to improve the work efficiency.

<center>Insert Table 4.11: Respondents' opinion on Q-No.17</center>

<center>41</center>

Knowledge response

The most problematic individual response was Q-No.28 and Table 4.12 illustrate that 42.4% disagree with statement indicated "There are predetermined guidelines for how the system implementation is to be managed and these are followed".

Insert Table 4.12: Respondents' opinion on Q-No.28

In contrast with the least problematic response Q-No.25, Table 4.13 shows that 47.5% agreed with that statement indicated "Training is frequently given with supporting materials creating confidence with the system and the processes".

Insert Table 4.13: Respondents' opinion on Q-No.25

Table 4.14 shows that Q-No23, the responses indicated with 45.8% agreed with the statement "Employees are cost conscious and seek to work efficiently".

Insert Table 4.14: Respondents' opinion on Q-No.23

Ability response

Table 4.15 shows that the least problematic response was Q-No 30 to which72, 9% agreed with the statement "My boss is supportive and helps me in my work".

Insert Table 4.15: Respondents' opinion on Q-No.30

42

Table 4.16 shows that for Q-No32 the responses indicated that 76.3% agreed with statement indicating "During the change I need to put extra effort".

Insert Table 4.16: Respondents' opinion on Q-No.32

Reinforcement response

The less problematic response was Q-No.42, Table 4.17 shows that 38.9% of the responses disagreed with the statement "Effects of change, positive or negative are measurable in quantities term or subjective rating".

Insert Table 4.17: Respondents' opinion on Q-No.42

The least problematic response was with Q-No 43 and Table 4.18 shows that the responses indicated that 50.9% agreed with the statement "During the change, management provided those involved with possible support".

Insert Table 4.18: Respondents' opinion on Q-No.43

Table 4.19 shows that the responses indicated to Q-No 45 with 76.3% agreed to the statement "Change projects create resistance which has to be addressed".

Insert Table 4.19: Respondents' opinion on Q-No.45

Tables and Figures

Insert Table 3.1: Questions relating to Independent Variable – Awareness

	Statement Awareness	Scale				
1	Organization's goals and objectives are clearly stated in our institution.	5	4	3	2	1
2	Organization's priorities are understood by its employees	5	4	3	2	1
3	My roles are clearly identified in my department	5	4	3	2	1
4	There are logical reasons for change which are visible and the goals are transparent	5	4	3	2	1
5	Communication about the change is limited to only those directly concerned with the project.	5	4	3	2	1
6	Efficient Communication exists through multimedia.	5	4	3	2	1
7	The reasons for change are unclear and there are different views of the goals of implementation.	5	4	3	2	1
8	My manager give me appropriate feedback	5	4	3	2	1

Insert Table 3.2: Questions relating to Independent Variable – Desir

	Statement Desire	Scale				
9	Organization's managers are always listening to new ideas.	5	4	3	2	1
10	I am encouraged to develop my full potential.	5	4	3	2	1
11	The process of implementation for the change is flexible.	5	4	3	2	1
12	The process of change is reactive to external environment	5	4	3	2	1
13	My salary is commensurate with the job that I perform.	5	4	3	2	1
14	I feel motivated by the work I do.	5	4	3	2	1
15	On occasions, I would like to make changes in my job.	5	4	3	2	1
16	I constantly seek to improve the way we work.	5	4	3	2	1
17	I cooperate effectively in order to improve the work efficiency.	5	4	3	2	1
18	My manager is supportive and enthusiastic to the change.	5	4	3	2	1
19	The structure of work in organization produces general satisfaction.	5	4	3	2	1
20	I can have more responsibilities during change time.	5	4	3	2	1
21	Change is expected without being linked to incentives.	5	4	3	2	1

<mark>Insert Table3.3:</mark> Questions relating to Independent Variable – Knowledge

Statement Knowledge	Scale				
22	Training is designed to solve specific problems.	5	4	3	2	1
23	Employees are cost conscious and seek to work efficiently.	5	4	3	2	1
24	Training is inadequate leaving unanswered questions about the change.	5	4	3	2	1
25	Training is frequently given with supporting materials creating confidence with the system and the processes.	5	4	3	2	1
26	Key implementation personnel are chosen, put in charge and left unchanged.	5	4	3	2	1
27	Conflicts within the implementation are avoided	5	4	3	2	1
28	There are predetermined guidelines for how the system implementation is to be managed and these are followed.	5	4	3	2	1
29	Gap is wide between current knowledge levels and desired knowledge levels.	5	4	3	2	1

Insert Table 3.4: Questions relating to Independent Variable – Ability

	Statement Ability	Scale				
30	My boss is supportive and helps me in my work.	5	4	3	2	1
31	Results are attained because people are committed to them.	5	4	3	2	1
32	During the change I need to put extra effort.	5	4	3	2	1
33	There are delays in the timescales that are set in the change project.	5	4	3	2	1
34	Project teams have sometimes a lack of understanding of consequence and consistency with regards to the change.	5	4	3	2	1
35	Those concerned with the outcome of the change project take part in planning.	5	4	3	2	1
36	Good ideas for change are hidden and used for personal agendas.	5	4	3	2	1
37	I have all the information and resources I need to do a good job.	5	4	3	2	1

Insert Table 3.5: Questions relating to Independent Variable – Reinforcement

	Statement Reinforcement	Scale				
38	The organization keeps its policies and procedure up-to-date.	5	4	3	2	1
39	The organization constantly reviews their methods and makes improvements.	5	4	3	2	1
40	Performances are regularly reviewed by my manager.	5	4	3	2	1
41	Individual performance review is against agreed standards.	5	4	3	2	1
42	Effects of change, positive or negative are measurable in quantities term or subjective rating.	5	4	3	2	1
43	During the change, management provided those involved with possible support.	5	4	3	2	1
44	Conflicts within the desired change are looked for and try to be solved	5	4	3	2	1
45	Change projects create resistance which has to be addressed.	5	4	3	2	1

Insert Table 4.6 Determination the barriers of change

	N	Minimum	Maximum	Mean	Std. Deviation
Awareness-m	59	1.63	4.50	3.4831	.70880
Desire- m	59	1.46	4.46	3.7262	.60253
Knowledge- m	59	1.25	4.38	2.9831	.64471
Ability- m	59	1.50	4.75	3.3750	.64703
Reinforcement-m	59	1.00	4.75	3.4322	.82339
Valid N (listwise)	59				

Insert Figure 4.1: determination the barriers of change.
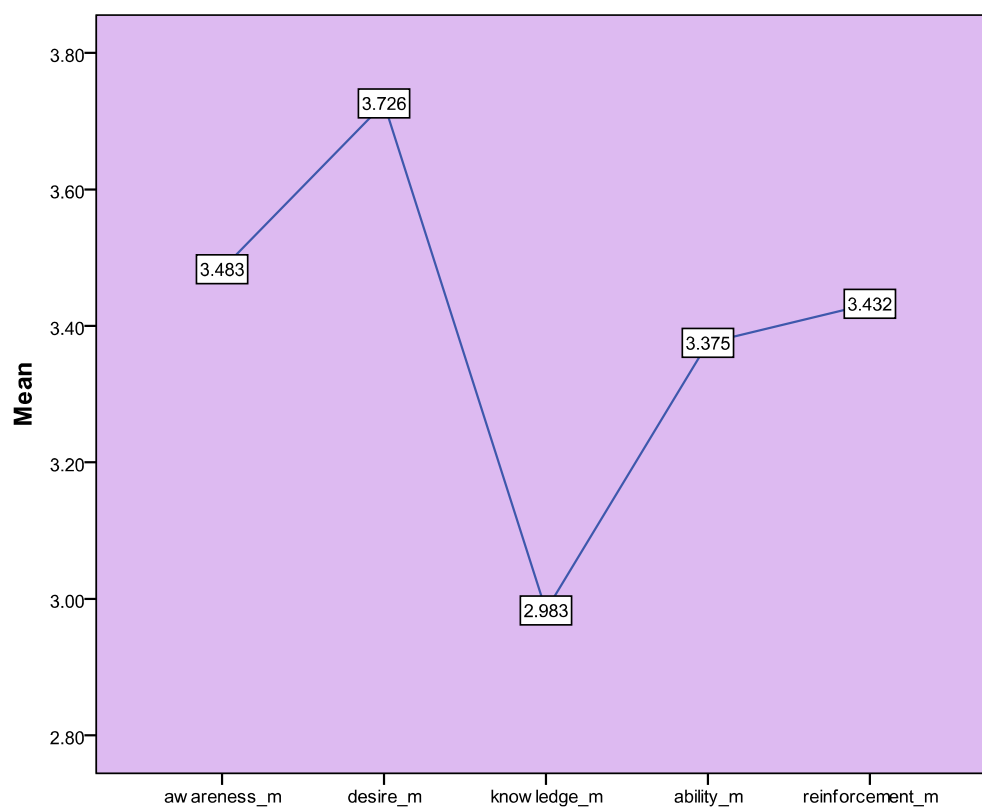
Figure 4.1: determination the barriers of change.

NOTE: Table 4.7 to Table 4.19 are in Appendix B

Insert Table 4.20: Gender group statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Reinforcement_ m	Male	27	3.4028	.67433	.12978
	Female	32	3.4570	.94111	.16637
Ability_ m	Male	27	3.3565	.52886	.10178
	Female	32	3.3906	.74036	.13088
Desire_ m	Male	27	3.7009	.60844	.11709
	Female	32	3.7476	.60640	.10720
Knowledge_ m	Male	27	2.9861	.46942	.09034
	Female	32	2.9805	.76997	.13611
Awareness_ m	Male	27	3.5509	.57099	.10989
	Female	32	3.4258	.81187	.14352

Insert Table 4.21: Independent - samples t-test for gender and ADKAR five key elements

Independent Samples Test

ADKAR		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Awareness	Equal variances assumed	4.90	.031	.672	57	.504	1.001	1.488	-1.980-	3.982
	Equal variances not assumed			.692	55.3	.492	1.001	1.446	-1.896-	3.898
Desire	Equal variances assumed	.084	.772	-.295-	57	.769	-.607-	2.063	-4.739-	3.523
	Equal variances not assumed			-.294-	55.2	.770	-.607-	2.063	-4.743-	3.527
Knowledge	Equal variances assumed	6.85	.011	.033	57	.974	.045	1.359	-2.677-	2.767
	Equal variances not assumed			.035	52.2	.973	.045	1.306	-2.577-	2.667

Ability	Equal variances assumed	3.54	.065	-.200-	57	.842	-.273-	1.363	-3.004-	2.458
	Equal variances not assumed			-.206-	55.5	.838	-.273-	1.326	-2.930-	2.384
Reinforcement	Equal variances assumed	4.19	.045	-.250-	57	.803	-.434-	1.735	-3.909-	3.041
	Equal variances not assumed			-.257-	55.6	.798	-.434-	1.687	-3.815-	2.947

Correlation is significant at the 0.05 *. Level (2-tailed).

Insert Table 4.22: The correlation between qualification and Awareness

ADKAR		Sum of Squares	df	Mean Square	F	Sig.
Awareness	Between groups of qualifications	112.650	2	56.325	1.800	0.175
	Within groups of qualifications	1752.265	56	31.290		
	Total	1864.915	58			

Correlation is significant at the 0.05 *.

Insert Table 4.23: The correlation between experience and Awareness

ADKAR		Sum of Squares	df	Mean square	F	Sig.
Awareness	Between groups of experience	365.780	4	91.445	3.294	0.017
	Within groups of experience	1499.135	54	27.762		
	Total	1864.915	58			

Insert Table 4.24: The correlation between career and Awareness

ADKAR		Sum of Squares	df	Mean Square	F	Sig.
Awareness	Between groups of career	519.442	5	103.888	4.092	0.003
	Within groups of career	1645.473	53	25.386		
	Total	1864.915	58			

Insert Table 4.25: The correlation between age and Desire

		Sum of Squares	df	Mean Square	F	Sig.
Desire	Between Groups	181.037	3	60.346	.983	.408
	Within Groups	3377.505	55	61.409		
	Total	3558.542	58			

Insert Table 4.26: The correlation between qualification and desire to change

ADKAR		Sum of Squares	df	Mean square	F	Sig.
Desire	Between groups of qualifications	273.135	2	136.567	2.328	0.107
	Within groups of qualifications	3285.408	56	58.668		
	Total	3558.542	58			

Insert Table 4.27: The correlation between level of career and desire to change

		Sum of Squares	df	Mean Square	F	Sig.
Desire	Between groups of career	449.365	5	89.873	1.532	.196
	Within groups of career	3109.177	53	58.664		
	Total	3558.542	58			

Insert Table 4.28: The correlation between experience and knowledge about change

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge	Between groups of experience	312.898	4	78.224	3.434	0.014
	Within groups of experience	1230.017	54	22.778		
	Total	1542.915	58			

Insert Table 4.29: The correlation between level of career and knowledge

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge	Between groups of career	432.456	5	86.491	4.1289	.003
	Within groups of career	1110.460	53	20.952		
	Total	1542.915	58			

Insert Table 4.30: The correlation between age and ability to change

		Sum of Squares	df	Mean Square	F	Sig.
Ability	Between Groups	107.997	3	35.999	1.369	.262
	Within Groups	1446.003	55	26.291		
	Total	1554.000	58			

Insert Table 4.31: The correlation between qualification and ability to change

ADKAR		Sum of Squares	df	Mean Square	F	Sig.
Ability	Between groups of qualifications	180.202	2	90.101	3.673	0.032
	Within groups of qualifications	1373.798	56	24.532		
	Total	1554.000	58			

Insert Table 4.32: The correlation between experience and reinforcement

ADKAR		Sum of Squares	df	Mean Square	F	Sig.
Reinforcement	Between groups of experience	159.963	4	39.991	0.916	0.461
	Within groups of experience	2356.681	54	43.642		
	Total	2516.644	58			

Insert Table 4.33: The correlation between qualification and reinforcement

		Sum of Squares	df	Mean Square	F	Sig.
Reinforcement	Between groups of qualifications	153.475	2	76.738	1.818	0.172
	Within groups of qualifications	2363.169	56	42.199		
	Total	2516.644	58			

Education is a key component of reform policy in Bahrain & Education and Training initiatives

Figure 1.1 Education is a key component of reform policy in Bahrain (adopted from EDB)
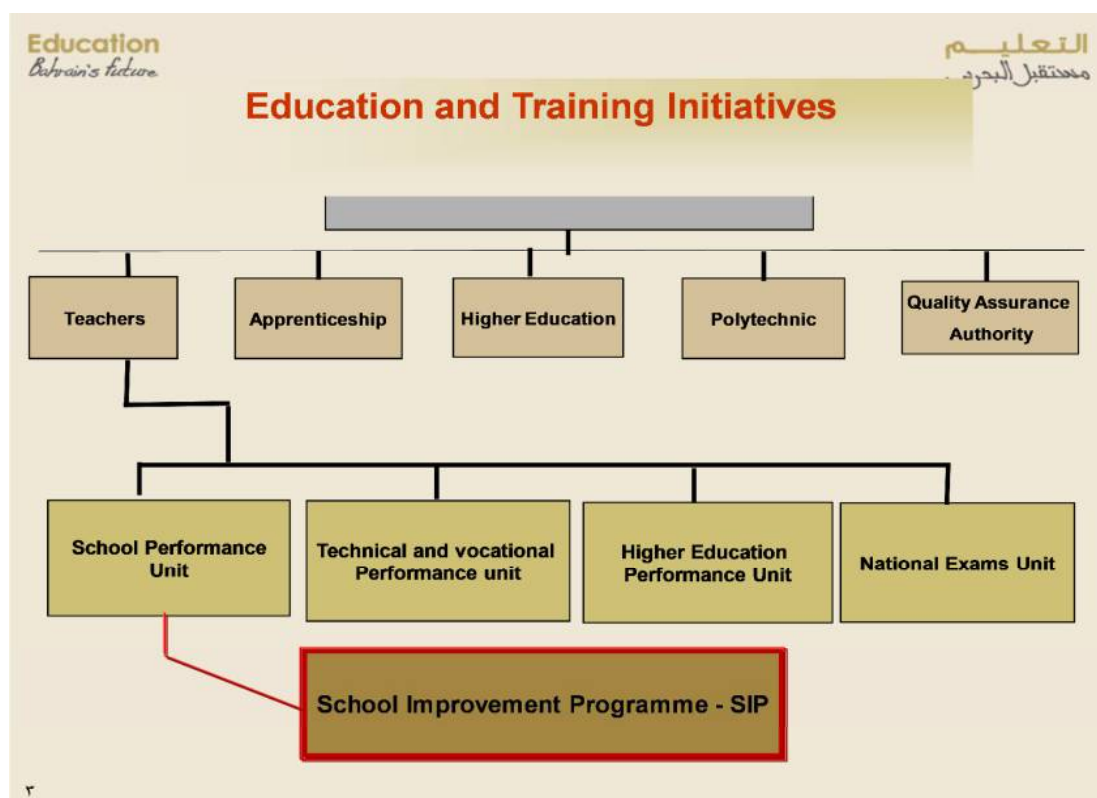
Figure 1.2 Education and training initiatives, (adopted from EDB)

Insert Appendix B

Respondent's categories and overall view of individual questionnaire concerning key elements

Insert Table 4.1 Respondents' gender

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	27	45.8	45.8	45.8
	Female	32	54.2	54.2	100.0
	Total	59	100.0	100.0	

Insert Table 4.2 Respondents' age

Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-29-years	7	11.9	11.9	11.9
	30-39-years	20	33.9	33.9	45.8
	40-49-years	23	39.0	39.0	84.7
	Above-50	9	15.3	15.3	100.0
	Total	59	100.0	100.0	

Insert Table 4.3 Respondents' qualification

Certification		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High Diploma	7	11.9	11.9	11.9
	BS	46	78.0	78.0	89.8
	MD	6	10.2	10.2	100.0
	Total	59	100.0	100.0	

Insert Table 4.4 Respondents' career

	Position	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	1	1.7	1.7	1.7
	Head of district	3	5.1	5.1	6.8
	School manger	2	3.4	3.4	10.2
	Specialist	11	18.6	18.6	28.8
	Teacher	38	64.4	64.4	93.2
	Others	4	6.8	6.8	100.0
	Total	59	100.0	100.0	

Insert Table 4.5 Respondents' experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5-years	10	16.9	16.9	16.9
	5-10-years	9	15.3	15.3	32.2
	10-15-years	10	16.9	16.9	49.2
	15-20-years	7	11.9	11.9	61.0
	Above-20	23	39.0	39.0	100.0
	Total	59	100.0	100.0	

Insert Table 4.7: Respondents' opinion on Q-No.5

	Level of Agreement	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	15.3	15.3	15.3
	Disagree	15	25.4	25.4	40.7
	Neutral	13	22.0	22.0	62.7
	Agree	15	25.4	25.4	88.1
	Strongly agree	7	11.9	11.9	100.0
	Total	59	100.0	100.0	

Insert Table 4.8: Respondents' opinion on Q-No.4

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.4	3.4	3.4
	Disagree	5	8.5	8.5	11.9
	Neutral	7	11.9	11.9	23.7
	Agree	19	32.2	32.2	55.9
	Strongly agree	26	44.1	44.1	100.0
	Total	59	100.0	100.0	

Insert Table 4.9: Respondents' opinion on Q-No.15

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	11.9	11.9	11.9
	Disagree	4	6.8	6.8	18.6
	Neutral	10	16.9	16.9	35.6
	Agree	23	39.0	39.0	74.6
	Strongly agree	15	25.4	25.4	100.0
	Total	59	100.0	100.0	

Insert Table 4.10: Respondents' opinion on Q-No.16

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	6.8	6.8	6.8
	Disagree	1	1.7	1.7	8.5
	Neutral	1	1.7	1.7	10.2
	Agree	18	30.5	30.5	40.7
	Strongly agree	35	59.3	59.3	100.0
	Total	59	100.0	100.0	

Insert Table 4.11: Respondents' opinion on Q-No.17

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	1.7	1.7
	Disagree	3	5.1	5.1	6.8
	Neutral	2	3.4	3.4	10.2
	Agree	19	32.2	32.2	42.4
	Strongly agree	34	57.6	57.6	100.0
	Total	59	100.0	100.0	

==Insert== Table 4.12: Respondents' opinion on Q-No.28

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	10.2	10.2	10.2
	Disagree	19	32.2	32.2	42.4
	Neutral	15	25.4	25.4	67.8
	Agree	13	22.0	22.0	89.8
	Strongly agree	6	10.2	10.2	100.0
	Total	59	100.0	100.0	

==Insert== Table 4.13: Respondents' opinion on Q-No.25

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.4	3.4	3.4
	Disagree	10	16.9	16.9	20.3
	Neutral	19	32.2	32.2	52.5
	Agree	22	37.3	37.3	89.8
	Strongly agree	6	10.2	10.2	100.0
	Total	59	100.0	100.0	

==Insert== Table 4.14: Respondents' opinion on Q-No.23

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	6.8	6.8	6.8
	Disagree	5	8.5	8.5	15.3
	Neutral	23	39.0	39.0	54.2
	Agree	21	35.6	35.6	89.8
	Strongly agree	6	10.2	10.2	100.0
	Total	59	100.0	100.0	

<mark>Insert</mark> Table 4.15: Respondents' opinion on Q-No.30

Level of agreement	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	5	8.5	8.5	8.5
disagree	6	10.2	10.2	18.6
neutral	5	8.5	8.5	27.1
agree	25	42.4	42.4	69.5
strongly agree	18	30.5	30.5	100.0
Total	59	100.0	100.0	

<mark>Insert</mark> Table 4.16: Respondents' opinion on Q-No.32

Level of agreement	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	5	8.5	8.5	8.5
disagree	3	5.1	5.1	13.6
neutral	6	10.2	10.2	23.7
agree	20	33.9	33.9	57.6
strongly agree	25	42.4	42.4	100.0
Total	59	100.0	100.0	

<mark>Insert</mark> Table 4.17: Respondents' opinion on Q-No.42

Level of agreement	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	11	18.6	18.6	18.6
Disagree	12	20.3	20.3	39.0
Neutral	12	20.3	20.3	59.3
Agree	16	27.1	27.1	86.4
Strongly agree	8	13.6	13.6	100.0
Total	59	100.0	100.0	

Insert Table 4.18: Respondents' opinion on Q-No.43

Level of Agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	11.9	11.9	11.9
	Disagree	11	18.6	18.6	30.5
	Neutral	11	18.6	18.6	49.2
	Agree	21	35.6	35.6	84.7
	Strongly agree	9	15.3	15.3	100.0
	Total	59	100.0	100.0	

Insert Table 4.19: Respondents' opinion on Q-No.45

Level of agreement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	6.8	6.8	6.8
	Disagree	3	5.1	5.1	11.9
	Neutral	7	11.9	11.9	23.7
	Agree	23	39.0	39.0	62.7
	Strongly agree	22	37.3	37.3	100.0
	Total	59	100.0	100.0	

Investigating the Barriers in Change Management in
Public Sector Educational Institutions

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Author biographies

1- Biographical notes: Dr. Adel Ismail Al-Alawi

Biographical notes: Dr. Adel Ismail Al-Alawi is an Associate Professor of Management and Information Systems at the University of Bahrain, College of Business Administration, earned his Bachelor and Master degrees (MBA) in Business and Information Systems (USA), a PhD in Management Information Systems (MIS) from University of Leeds, UK. Previously, in his sabbatical leave, he was Head of Business Department at Royal University for Woman in Bahrain, Dean of School of Business at University College of Bahrain. Dr Al-Alawi was the founder of Business Information Systems Department (BIS) and a Chairperson of BIS department at the College of Business in UOB and also one of the founder of College of Information Technology, and Head of BIS Department, where he served UOB for more than 25 years.

Dr Al-Alawi intensively participated in the Board form by a degree from HRH PM the Prince Khalifa bin Salman for the development of Bahrain Internet Exchange (BIX) and substantially contributed in the Committee founded by HRH PM for the Preparation of the Government Program for Parliament.

His research have been published in several Scopus indexed journals such as Journal of Knowledge Management, Journal of Computer Science, Information Technology Journal, Asian Journal of Information Systems, Issues in Information Systems, Research Journal of Business Management, Research Journal of Business Management, Journal of International Women's Studies, International Journal of Business Information Systems and he is also a conference program committee member of IBIMA world conferences from 2004 until today. His main interest of research is in management and information systems (refer to https://www.researchgate.net/profile/Adel_Al-Alawi). Adel is also one of the founders and

board members for Information Systems Audit & Control Association (ISACA, Bahrain Chapter), Bahrain Information Technology Society; Bahrain Academic Society (BITS) and he is the President of ISACA, Bahrain Chapter. Adel is considered as an MIS Authority in the Kingdom of Bahrain.

2- Biographical notes: Ms. Muna A.Mohssin Jassim

Muna holds a Master of Business Administration (MBA) from Arabian Gulf University, the French-Arabian Business School in the Kingdom of Bahrain. Moreover, Muna had an extensive experience extends to more than 30 years in both the education and administrative field where she has served as senior administrative. Muna participated in local, regional and international conferences; she attended several specialized workshops on leadership skills all in education and public sector. She is a very active member of many professional associations.

3- Biographical notes: Dr. Fatema Mohamed Al Malki

Dr. Fatema Mohamed Al-Malki is an Assistant professor of Philosophy in Gifted Education at the University of Bahrain, Bahrain Teachers College, Director of Managerial Training Office, and previous she was the Director of Department of Information Data Analysis and Statistics in the University of Bahrain.   Fatima holds a PhD. In Special Education from Arabian Gulf University- Kingdom of Bahrain 2013, MSc. in Science Curriculum Development from Bahrain University in 2001 and a BSc. in Chemistry and Education from the University of Bahrain in 1992. Additionally, she also hold a Post Graduate Certificate Academic Practice (PCAP) from York St John University in Teaching and Learning, and a Diploma in Governmental Leadership Program from Bahrain Institute of Public Administration, (BIPA) in Kingdom of Bahrain. Moreover, Fatema had an extensive experience extends to 25 years in the field of education, science and administrative field where she has served in the academic and administrative field. Fatema participated in local, regional and international conferences; she attended several specialized workshops on leadership skills. Fatima organized a series of workshops and seminars on topics related to teaching and learning, classroom management, lesson planning, innovation and cooperative teaching strategy, and self-esteem workshop. She is very active member of Bahrain Training and Development Society. Her area of research interest is innovation, creativity, strategic management, women studies, e-learning, teaching and learning.

4- Biographical notes: Dr. Arpita Anshu Mehrotra

Dr. Arpita Anshu Mehrotra earned her Bachelor and Master degrees in Commerce (India) and holds a Ph.D. in Commerce from Lucknow University, India. She is an Assistant Professor of Accounting, Finance and Management at the Royal University For Women (RUW), Kingdom of Bahrain. Dr. Arpita is the Head of Banking & Finance Department at the College of Business &

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