

## The impact of ICT in leadership in Kuwait Schools

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### Keywords

ICT; leadership; teachers; school; Kuwait

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### Abstract

*The role of teachers is very vital concerning the integration of information and communication technology (ICT) in schools. Also, teachers that are motivated reflect higher levels of the use of ICT their classroom. The efficiency of a range of non-instructional activities of teachers which include the preparation of administrative reports, distribution of textbooks, grading and student's attendance can increase through the use of information and communications technologies (ICTs). The effectiveness of teachers in carrying out their responsibilities increases with the use of ICT, especially if they are supported and well-motivated. The productivity of fundamental instructional responsibilities which include writing up comments on the papers and reports of students, developing quizzes and examinations and preparing class outlines and lesson plans are greatly improved by ICT. The use of ICT can furthermore, be applied in the quick identification of resources about education, including digital materials and collaborative projects. Therefore, this project aims at studying how ICT can impact the leadership skills of teachers in Kuwait schools and produce a recommendation on how they should integrate and use the ICT in schools to improve the leadership skills of teachers in Kuwait.*

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### Introduction

The past decade has experienced rapid growth in the area of information and communication technology (ICT) use. This growth has brought about widespread impacts on the daily activities of human beings and also on the society (Uluyol, and Şahin, 2016). As such, the number of rising interests, focus and investment on the use of IC in education worldwide, is not new. Not only is there endeavours regarding the use of ICT for the improvement of education but. There is also the emergence of the knowledge economy that has likewise resulted in an increased emphasis on education. Much production of some blueprint on ICT in education has been in existence in several countries (Pelgrum and Anderson, 1999). What such blueprints demonstrate is that the embedding of ICT innovations has increased in the educational sector, within a broader structure of education reforms. The purpose of such reforms is for the development of the abilities of students in critical thinking, information seeking and analysis, problem-solving, self-learning and also, communication ability, the ability to collaborate and learn, and abilities that were not considered to be of much importance in the older school curriculum.

There is evidence to prove that ICT industries are the mainstay of several nation's developments. A similar trend is also being found in Kuwait, which is a developing country. The total expenditure of ICT in Kuwait shows that an increasing number of local firms are including ICT in the running of their businesses. The Kuwait government has given precedence to ICT as a significant national issue and therefore, set up new agencies and policy projects to speed up its implementation and in so doing, transform the country into a developed and knowledge-based country (Tipton, 2002). Also, it speeds up the society's quality of life and economic development (Lu, 2001).

Fiske and Hammond (1997) in the argument concerning technology's possible role in education stated that instructional technology is perceived as a key to the quality of education, as the new millennium proceeds. Several instructors are of the view that the use of a computer for instructional purposes are effective in improving teaching and learning. On the contrary, the responsibilities of a teacher can be transformed from being a giver of information to a mediator,

resource and technology manager, mentor, co-learner, coach, guide, counsellor and facilitator to students, by using computer technologies (Jonassen et al., 1999). The arguments of Attaran and Vanlaar (2001) indicated that technology has succeeded in ensuring schools' record keeping time reduces as a result of technology as well as simplify administrative duties. Furthermore, a professional band is created between teachers and administrators because of computer networking.

However, it provides teachers with useful techniques for enhancing successful instructions. Moreover, students can meet the necessary educational requirements through the use of a computer. Its use also satisfies an instructional need by personalising the material to the learner's level of competence. In this manner, the use of computer offers an active collaborative learning environment and makes it possible for there to be flexibility that is currently not available in the traditional classroom (Arokiasamy et al., 2015).

Also, the statement made by Otto and Albion (2004) shows that it is impossible for ICT to fully integrate into teaching and learning, even though it is prevalent in schools in recent times. According to this thought, Sheingold and Hadley (1990) drew attention to the fact that integrating technology does not only involve assisting people in the use of a computer. It, however, involves assisting teachers in the integration of technology as a learning tool. It is necessary for technology to be as transparent a tool as a pencil in an ideal teaching and learning setting. Consequently, the integration of technology in classrooms revolves around teaching and learning and not around technology (Mills & Tincher, 2002).

### Literature Review

The process of implementing ICT in schools is complicated, and it requires a conceptual and academic change. The process requires the teachers' leadership ability as they are the ones that have been delegated to assist with ICT's dissemination within the organisational culture (Halverson & Smith, 2009; Kaniuka, 2012). From the research literature, it is obvious that it is not all the time that the integration of ICT into teaching pedagogy is according to expectations, even with its great intrinsic educational potential (Peeraer & Petegem, 2012). The teachers' skills and philosophies, as partners in change creation, are among the significant factors that affect the efficacy of the implementation of ICT in schools and the successful integration of the educational change (Borko, 2004; Brinkerhof, 2006). The researches that have been conducted on the implementation of ICT in schools propose that it is the knowledge and behaviours of teachers towards the change that are the major factors that decide its success or failure (Giles & Hargreaves, 2006; Hattie, 2009). It also comprises the views of the teachers concerning their obligations as leaders of this change (Buckner & McDowelle, 2000; Crowther et al., 2002). Most times, studies on the leadership of teachers examine their impact beyond the school parameters (York-Barr & Duke, 2004). From such researches, there is an emphasis on the perception of leadership as being part of a project that aims at creating programs for excellent teachers' professional development and career paths (Stronge et al., 2011), while attempting to influence their professionalism while supporting other teachers and to improve the school (York Barr & Duke, 2004).

Regarding this situation, teachers endeavours in leadership are considered to be for the improvement and development of the school as part of an overall, system-wide change, and not just for improving a class or an individual's level (Katzenmeyer & Moller, 2001). It is necessary for the teacher taking on the duties of a leader to manage change, contribute to it, and learn from it (Cochran-Smith, 2003), and at the same time, deal with the uncertainties that come along with it. It can do so by reacting to sudden and unpredictable circumstances (Shulman, 2005). Regarding an uncertain circumstance, for example, the case of ICT implementation in teaching, there is a movement of the emphasis from the necessity of knowledge of the content and educational expertise to a need for the capability of leadership and the capacity to handle change (MacDiarmid & Clevenger-Bright, 2008). In line with this context, the teacher in a leadership position has the responsibility of helping pilot the change in the school, to ensure it creates a culture that considers ICT to be an inseparable aspect of the setting of the school and its lifestyle (Shamir-Inbal et al., 2009). On the other hand, existing researches

that have investigated teachers in leadership positions regarding ICT implementation in schools are very few (e.g., Kwok-Wing & Pratt, 2004).

### **Teachers in leadership positions**

In line with this broad definition, the research currently being carried out selected teachers that their superintendent has identified to be excellent leading teachers. The processes of change are part of teachers' development at the forefront of leadership. Teachers that take on leadership roles and can lead and handle change, as a result of their sense of empowerment (Demebele & Schwillie, 2006; Muijs & Harris, 2003). The cause of this sense of empowerment is the process determined by the leading teachers themselves on a personal level, whereas, the relationships, circumstances and ways of achieving such sense of empowerment are provided by the organisation (Hargreaves, 2005; Sandy, 2010).

Research on the topic of leadership involves teachers' methods of influencing beyond the classroom. It also investigates leading teachers; attributes, their behaviours, and the earliest circumstances that made it possible for their ability to influence within the school (Darling Hammond & Youngs, 2002; Stronge et al., 2011). Teachers in leadership positions have three identified techniques (Little, 2010). The first technique perceives these teachers to be among the project to create a platform for the career and professional development for teachers, to reward excellent teachers. Furthermore, it perceives that as using their influence to support teachers that are still beginners and to ensure that there are improvements in the school. The second technique perceives teachers in leadership positions as the ones managing the public affairs of the institution, the ones who have the responsibility of advancing programmes that are determined by external factors, and which mostly involves improving teaching and learning according to the improved academic achievements attained by students (Murphy, 2005; York-Barr & Duke, 2004). The third technique perceives teachers that undertake leadership responsibilities as part of a system-wide reform (Cunningham, 2009), in which the teachers' responsibilities are connected with the policy of the school vis-à-vis the reform, as long as such reforms usually involve creating new professional responsibilities for teachers (Avidov-Ungar, 2018).

### **Style of Leadership and integration of ICT at schools**

The definition of integration of ICT into education according to Eib and Mehlinger (1998) states that it is a process that involves the frequent application of instructional technologies including such software and computers to support teaching and learning across levels and topics. Several studies have been dedicated to ICT's integration in schools. Such investigation also studied its impacts on student learning and achievement, and impediments which stop it from being used successfully (Becker, 1993; Butzin, 1992; Kozma & Croninger, 1992). Even though some academics have pointed out the advantages of ICT integration into education (Holinga, 1999; Taylor, 1992), the discovery made by others shows that ICT's application in the classroom presented little or no positive improvement in the achievement of students (Slavin, 1991; Stevens, 1992). However, to Picciano (1998), the advantages of the integration of ICT on the achievements of students vary from grade to grade.

The proposition of Baily (1997) states that the application of ICT should be centred around teaching and learning because of its possible use in the classroom. To Levinson (1990), ICT not only provides support to teaching and learning, but it is possible also, to use it to resolve common problems in schools such as scarcity of teachers and high costs of education. New solutions that could deal with the variety of needs emanating from the classroom in this era of information could be created by technology (Krajcik et al., 1998).

It is necessary for principals to integrate ICT into their day-to-day practice in this era of information. They should also ensure the availability of positive and consistent leadership for the use of technology in the process of teaching and learning. Hope et al. (2000) stated that the comprehending the technologies and their applications for task accomplishments are part of technology leadership. The arguments of Gibson (2002) regarding a research that studied administrators' responsibilities technology's integration into three United States school districts' learning environment, states that it

is mandatory for the school principals to channel their energies on ten groups of technology: existing practice, resources, curriculum, planning, staff development, impediments, support, communications, staff issues and implementation. Along these lines, it is necessary for principals to understand the new technologies' capabilities, to be proficient in their use, and be able to promote a school culture that encourages the school to explore new methods in teaching, learning and management (Schiller, 2003). For that reason, leaders that can spearhead the process of change and support a learning community for the integration of technology are required in schools.

Fullan (2003) states that it is the support of school leaders that ensures the success of large-scale change or school reform endeavours. Also, Schiller's argument points at the significant role of principals in facilitating pedagogical change (p. 4). According to the conclusion he reached on his research on the elementary school principal as a facilitator of change for ICT, Schiller (2003) states that principals that adopt an active technique towards innovation can encourage an environment in which both their staff and students can greatly benefit. Therefore, the awareness of principals, their comprehension and ICT use are crucial to being able to use computers in the school effectively (Smith et al., 1999). It is pertinent for a school administrator to be conversant with ICT and know what to look for in the classroom if there must be effective supervision, assessment or support for a classroom teacher (Fleit, 2000). Hope et al. (2000) support this idea. According to their observation, it is necessary for school leaders to use technology personally. They should also create awareness on the use of technology, and they should model the practice to the school staff.

In the same way, Stegall (1998) believes that principals have to use computers, they have to look for help and advice from professionals, they have to form a technology committee, visit other schools, deliberate on concepts and employ and train teachers that are knowledgeable about technology. Consequently, it is necessary for a school to get a leader that is conscious of technology's potentials and its future development, and that also knows the possible ways in which the school can integrate this technology into teaching and learning. This is relevant for successful ICT development within the school.

As a result of ICT's great potential to affect education, the exploration of the factors that affect the effectiveness of the endeavours of ICT is necessary. According to several investigators, the success of any innovation in education is majorly determined by effective leadership (Bennett, 1996; Fullan, 1993). Becker (1993) has a contrary opinion that leadership is more significant for ICT's successful integration in schools today. To Rieber and Welliver (1998) effective leadership is necessary for the enhancement of the transformation in the system of education nowadays. Such leadership is successful because it leverages on ICT's potentials. Others believe that leaders play a key role in the success or failure of integration efforts (Salzano, 1992). Lockard et al. (1990) support the view which states that leadership plays a significant role in ICT integration efforts, Their explanation states that the integration of ICT is a huge task that involves contemplating on several problems and making many decisions. Dede (1992) supports this view by pointing out that likely impact leadership can have on the success of ICT integration is evident since they provide support, make decisions, influence and model behaviour.

### **Research Methodology**

The main area of concentration of this project is on the primary and secondary research for information gathering and providing recommendations on ways in which ICT affects the leadership in schools.

### **Primary Research**

The major use of the mixed methodology technique in the primary research to collect responses to provide schools with an appropriate recommendation. A mixed methodology is a technique which utilises quantitative and qualitative research techniques for information gather (Bryman, 2017). The major benefit of using the mixed methodology is because of its ability to gather quantitative and qualitative data (Bryman, 2017).

### Quantitative Research

The major focus of quantitative research is to gather quantifiable data. It is possible to use several techniques to gather information. Such techniques include the distribution of questionnaire, online survey, and so on (McCusker, and Gunaydin, 2015). Quantitative research's major advantage is its easy way of gathering information. Another advantage it has is that it can also analyse the results in graphical formats including tables, line graphs and pie chart (Shaw, 2017). However, its disadvantage includes its inability to give a detailed response concerning the research (Shaw, 2017).

**Methods:** The online survey is the technique that this project will use for quantitative research. It is the SurveyMonkey that will be used to create the online survey. After creating the online survey, the link will be shared amongst people to gather their responses. Survey Monkey was selected primarily because it free and it can auto-generate response analyses.

**Participants:** The teachers in the Kuwaiti schools make up the respondents of the online survey. The online survey technique was selected primarily because arranging to meet all the teachers face-to-face is difficult. Besides, this research intends to gather a minimum of 50 responses.

### Qualitative Research

The major focus of qualitative research is to gather descriptive data including observations, expressions and perceptions (Parker, 2017). Using several techniques for information gathering is possible. Examples of such techniques include observation, focus group and interviews (Parker, 2017). Quantitative research's major advantage is its ability to provide detailed responses concerning the research (Woodgate et al., 2016). Nevertheless, its major disadvantage includes its time-wasting characteristics, and it is expensive to conduct (Woodgate et al., 2016).

**Method:** This project will use interviews and focus group for the qualitative research.

**Participants:** The head of teachers in Kuwait will make up the participants of this interview. Furthermore, the focus group will be conducted among the head teachers in Kuwait schools.

### Analysis

This section will discuss qualitative and quantitative research's response analysis. The analyses for the responses obtained from the survey would be done using graphical representations such as graphs and charts. Besides, the data would also be analysed using the tabular format. Nonetheless, the qualitative analysis of the responses will be done using content analysis that classifies, summarises and tabulates the received data (Graneheim et al., 2017).

### Outcomes and Discussion

The secondary research provides the general impact of information communication technology (ICT) in the school section can. On the other hand, the primary research derives ICT's actual use and how it affects schools' leadership and ways it can be used to improve the leadership skills. Nevertheless, the research is constrained to the leadership of teachers in Kuwait school. Besides, a clear recommendation on the use of ICT to improve the leadership skills of teachers in Kuwait school is provided in this project.

### Conclusion

This project aims at providing a recommendation of the use the ICT to improve the leadership skills of the teachers in Kuwait schools. The research questions identified in this research project that will be used to solve the objectives of this project are linked to the following table

The research questions that will be used to solve the objectives are linked

No	Research Questions	Objectives
1	What are the benefits of using ICT in schools?	Objective 1
2	How will the use of ICT affect the leadership in school?	Objective 2 and 3

## Risk Assessment

The risks that can be faced during the project was identified, in the following table.

Risk	Impact of the project	Mitigation plan
The researcher can fall sick during the project	Medium	When the time plan is made, the reasonable time frame is provided for any unavoidable circumstances.
Getting responses for the primary research	High	Request for appointments from the participants and giving them the flexibility to choose the location and time

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Leaders in schools are challenged by the integrating of technology into education. This paper will review the issues faced by school leaders to effectively implement technology to satisfy these learners. School organisation through Information and Communication Technology (ICT) and its use in teaching and learning is a requirement of educational institutions initiated by governments at state and federal level (MCEETYA, 2000, NSW BOS, 2004). ICT reforms are a new area of challenge for school leaders (Gurr, 2004). Effective school leadership is associated with successful adaptation of reforms, (Harris, 2003). Principals must acknowledge the pedagogical use of ICT in education and be prepared to lead these reforms. School technology leadership: Incidence and impact on: Teaching, learning, and computing 1998 survey, report no. 6. Irvine, CA: Center for Research on Information, Technology, and Organizations at University of California. Google Scholar. Aydin, E. (2005). Challenges facing school leadership in promoting ICT integration in instruction in the public schools of Bahrain. *Education and Information Technologies*, 20 (2), 303-318. Article Google Scholar. ICT is the innovation which includes gathering, processing, storing and presenting information and also it involves collaboration and communication. The ICT can be used in different ways and spheres depending on purposes and aims. However, its role is rising and it takes great position in education system too. As Stephen reports the use of ICT reasserts the productivity of teaching and learning foreign languages. Therefore, some scientists mention about positive effects of using it and its impact is highly dependent on the way it is used (the teachers' motivation and their savoir-faire) Factors Influencing Information and Communication Technology Implementation in Government Secondary Schools in Kuwait. Submitted by Saad Shaji Saad Alajmi to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Education In September 2011. Over the last few decades, Information Communication Technology (ICT) has become increasingly important in all organisations in modern societies including schools. Expectation about ICT and its role in developing and transforming the educational process through its inclusion in the daily school environment is increasing in many developed and developing countries.